LASL SHOCK HUGONIOT DATA

LOS ALAMOS SERIES ON DYNAMIC MATERIAL PROPERTIES

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Editor

UNIVERSITY OF CALIFORNIA PRESS
Berkeley · Los Angeles · London

University of California Press
Berkeley and Los Angeles, California

University of California Press, Ltd.
London, England

ISBN 0-520-04008-2
Series ISBN: 0-520-04007-4
Library of Congress Catalog Card Number: 79-65760
Printed in the United States of America

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INTRODUCTION

I. BACKGROUND

During and after World War II, there was a need for equation-of-state data at the Los Alamos Scientific Laboratory (LASL) and its predecessor, the Manhattan Project. This need was met at the time primarily by determining isothermal compressibilities through use of P. W. Bridgman's[1] method and calculating the states off the isotherms from known thermodynamic relations for isentropes and reflected shock states. A serious deficiency in this approach, however, was the lack of equations of state at much higher pressures than those obtainable from isothermal compressibility experiments. To extend the equations of state from 10 to 50 GPa in pressure, Walsh and Christian[2] and Goranson et al.[3] developed a technique for determining the locus of single-shocked states (the Hugoniot locus) within this pressure regime and, again using thermodynamic relations, for calculating states off the Hugoniot.

Many scientists and technicians have been involved in determination of Hugoniot data at LASL since then. This volume is a compendium of the data they have accumulated from over 5000 experiments.

II. SHOCK-WAVE PARAMETERS

Determining the Hugoniot locus of a substance requires no direct measurements of the thermodynamic parameters, pressure (P), specific volume (V), density (ρ), and specific internal energy (E), behind the shock front. Instead, the shock-wave parameters, shock velocity (U_s) and mass velocity (U_p) or free-surface velocity (U_{fs}), are determined directly or indirectly. The relationship of U_s and U_p to P, V, and E can be determined by applying the Rankine-Hugoniot relations that result from the required conservation of mass, momentum, and energy across a shock front. In media originally at rest, whose initial states are indicated by subscript zeros, these relations are

mass conservation $V/V_0 = (U_s - U_p)/U_s$,

momentum conservation $P - P_0 = \rho_0 U_s U_p$,

energy conservation $E - E_0 = 1/2 (P + P_0) (V_0 - V)$.

The value of U_{fs} is the combined velocity imparted to a mass by an initial shock transit (U_p) and a subsequent isentropic rarefaction wave that releases the mass to ambient conditions (U_r). Thus,

$$U_{fs} = U_p + U_r \ .$$

The value of U_r can be derived as

$$U_r = \int_0^P (-\partial V/\partial P)_S^{1/2} dP \ ,$$

in which the integration is along an isentrope. The ratio of U_r to U_p is approximately unity for low-pressure shocks, and it increases with increasing shock strength. In practice, pairs of U_s and U_p values are determined from pairs of U_s and U_{fs} values by iteration. First, U_p is approximated by 1/2 U_{fs} and the isentropes are calculated using a fit of the resulting U_s vs U_p Hugoniot. A new ratio of U_r to U_p (as a function of U_{fs}) is then determined using these isentropes, and the values of U_p are redetermined, as before. One or two iterations are enough for convergence of the U_p values.

III. THE DATA TABLES

The data tables are presented in ten sections according to the type of material they cover. The materials are elements; alloys; minerals and compounds; rocks and mixtures of minerals; plastics; other synthetics; woods; liquids; aqueous solutions; and high explosives (undetonated), high-explosive simulants, and propellants.

Each table gives the name of the substance in the first one or two lines and the average of the sample densities in the following line. If longitudinal and shear wave velocities (V_L and V_S) in the isotropic and near-isotropic substances were measured, they are listed next. Reference numbers of publications (if any) that contain these Hugoniot data also are given. Next, values of ρ_0, U_s, U_p, P, V, ρ, and V/V_0 are tabulated in order of increasing U_p value. The rightmost column indicates the experimental technique used in obtaining the data shown in each line. The three-letter abbreviations that stand for the techniques are explained in Table I. The symbol following each abbreviation is the plotting symbol used to represent

TABLE I

EXPERIMENT TYPES

Experiment	Abb	Symb	Parameters Measured: Specimen	Parameters Measured: Standard	Transit Time Instrumentation	Shock Energy Source
Sound speed	SSP	×	V_L, V_S	---	Transducer and oscilloscope	---
Impedance match	IM1	○	U_s	U_s	Flash gap and smear camera	HE[a]
	IM2	□	U_s	U_s	Pins and oscilloscope	HE
	IM3	△	U_s	U_{proj}	Pins, oscilloscope, and flash x ray	ARLG gun[b]
	IM4	▽	U_s	U_{fs}	Pins and oscilloscope	HE
	IM5	◇	U_s	U_s, U_{fs}	Pins and oscilloscope	HE
Shock and free surface velocities	SF1	⊕	U_s, U_{fs}	---	Flash gap and smear camera	HE
	SF2	⊗	U_s, U_{fs}	---	Pins and oscilloscope	HE
Shock and particle velocities	SP1	⊞	U_s, U_D[c]	---	Flash gap and smear camera	HE
	SP2	⊠	U_s, U_{proj}[d]	---	Pins and oscilloscope	Propellant-driven air gun
	SP3	⊠	U_s, U_{proj}[d]	---	Pins, oscilloscope, and flash x ray	ARLG gun
Wedge	WDG	◈	U_s	U_{fs}	Light bomb and smear camera	HE
Quartz impact	QZI	+	P	U_{proj}	Quartz crystal and oscilloscope	Propellant-driven air gun

[a]HE = high explosive.
[b]ARLG = accelerated reservoir light-gas gun.
[c]U_D = velocity of an explosively accelerated driver plate.
[d]Sometimes this projectile is an impedance standard.

that line of data in the figures. If longitudinal and shear wave velocities are given at the top of a data table, the first entry in the second column of the table is the bulk sound velocity (C_b) obtained from the relationship in isotropic, homogeneous media,

$$C_b = \sqrt{V_L^2 - 4/3\ V_S^2}\ .$$

The corresponding value of U_p is always zero because the bulk sound velocity is the sound velocity on the zero-pressure isentrope and is identical to the shock velocity at zero pressure (ignoring elastic strength effects) because of the second-order contact of the isentrope and Hugoniot at this point. The figure at the bottom left of the first page of each data table shows the variation of shock velocity (U_s) with particle velocity (U_p) along the Hugoniot. The corresponding pressure (P) and specific volume (V) are plotted in the right-hand figure. The initial specific volume and the specific volume of the bulk velocity point are indicated by the symbol x. If the data in the U_s vs U_p plot seem to justify a linear least-squares fit, the fit is plotted and the coefficients are shown in the upper left part of the figure. The corresponding pressure and specific volume fit is shown in the adjacent figure. If a linear U_s vs U_p fit is not justified, no curves are shown in the plots.

IV. EXPERIMENT TYPES

The experiments used in obtaining the data are classified according to the shock-wave parameters measured, the instrumentation used to determine the transit times, and the energy source used to produce the shock. Table I relates the abbreviations and symbols used in the data tables and figures to these classifications.

V. IMPEDANCE STANDARDS

The Hugoniot data generally were obtained by the impedance-match technique, in which the specimens are shocked through base plates whose equations of state are known. The base plate materials are impedance standards whose Hugoniots have been determined in detail. The coefficients C_0, S, and Q in the Hugoniot relation

$$U_s = C_0 + SU_p + QU_p^2$$

were found by the method of least squares. Table II lists the values of these coefficients along with the initial density and Grüneisen parameter (γ) used in determining the states off the Hugoniot.

The Hugoniot data presented here may not agree exactly with those shown in the references because the impedance standards have been redetermined. The data in this volume have been reanalyzed using the latest Hugoniot parameters for the standards.

VI. HUGONIOT DATA FROM REFLECTED-SHOCK EXPERIMENTS

Hugoniot data on a few substances were obtained using reflected shocks (see the Contents). The substance was subjected to a single shock, and when the shock wave reflected off higher impedance samples (impedance standards) on its face second shocks were formed which were centered on the state of the first shock. The tables in which these data are reported list the parameters of the single-shock state, U_{p1}, V_1, and P_1, and those of the reflected-shock state, U_{p2}, V_2, and P_2, for each impedance standard used. The impedance standards are reported, as are the symbols that represent the single and reflected-shock states in the pressure vs particle velocity and pressure vs specific volume plots. Curves have been faired in to assist in identifying the reflected-shock loci. Table II shows the equations of state of these impedance standards.

TABLE II

IMPEDANCE STANDARD EQUATIONS OF STATE

Standard	ρ_0 (g/cm³)	C_0 (km/s)	S	Q (s/km)	γ
Magnesium AZ31B	1.775	4.516	1.256	0	1.43
Aluminum 2024	2.785	5.328	1.338	0	2.00
Aluminum 1100	2.714	5.392	1.341	0	2.25
Aluminum 921-T	2.833	5.041	1.420	0	2.10
Copper	8.93	3.940	1.489	0	1.96
Iron	7.85	3.574	1.920	−0.068	1.69
Uranium-3 wt% Molybdenum	18.45	2.565	1.531	0	2.03
Gold	19.24	3.056	1.572	0	2.97
Platinum	21.44	3.633	1.472	0	2.40

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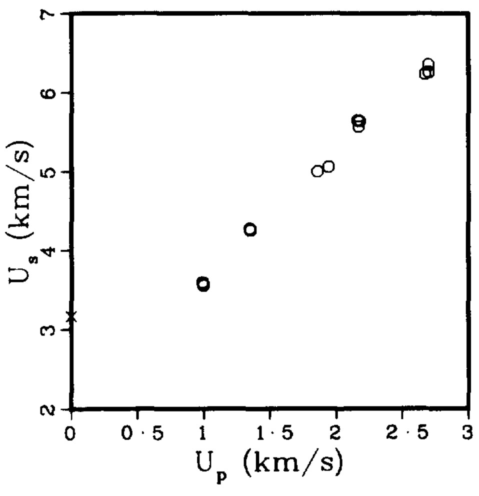
ELEMENTS

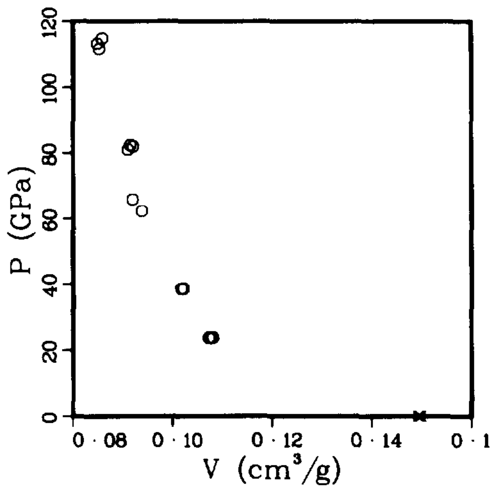
ANTIMONY

Average ρ_0 = 6.698 g/cm^3.

References 4, 5, 6

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.677	3.166	0.000	0.000	.1498	6.677	1.000	ssp ×
6.700	3.590	.989	23.788	.1081	9.248	.725	im1 o
6.700	3.565	.994	23.742	.1076	9.290	.721	im1 o
6.700	3.548	.997	23.700	.1073	9.319	.719	im1 o
6.700	4.277	1.348	38.628	.1022	9.784	.685	im1 o
6.700	4.251	1.354	38.564	.1017	9.831	.681	im1 o
6.700	5.002	1.859	62.301	.0938	10.663	.628	im1 o
6.700	5.060	1.943	65.872	.0919	10.876	.616	im1 o
6.700	5.653	2.165	82.000	.0921	10.859	.617	im1 o
6.700	5.569	2.172	81.042	.0910	10.984	.610	im1 o
6.700	5.640	2.181	82.416	.0915	10.925	.613	im1 o
6.700	6.235	2.672	111.621	.0853	11.725	.571	im1 o
6.700	6.353	2.698	114.841	.0859	11.646	.575	im1 o
6.700	6.259	2.699	113.183	.0849	11.780	.569	im1 o



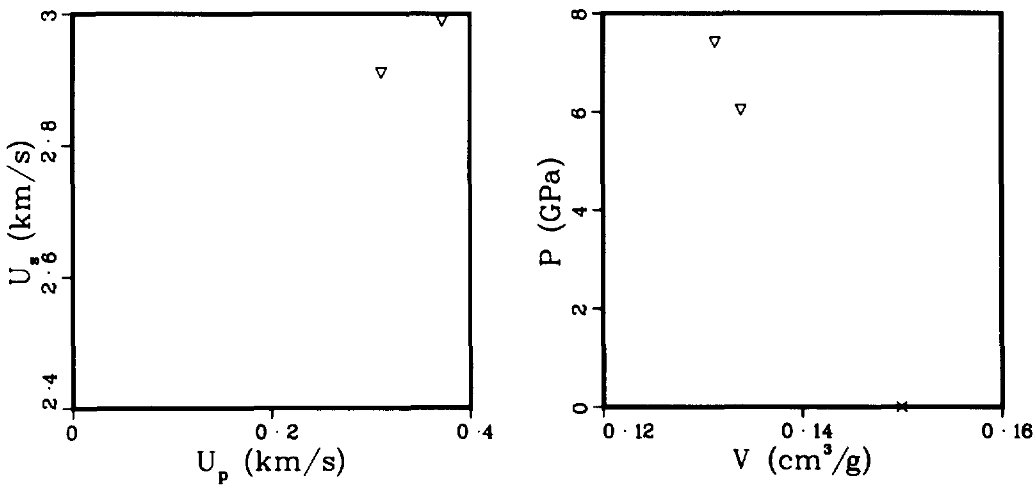


ANTIMONY , fine-grain , chill-cast

Average ρ_0 = 6.670 g/cm^3 .

Reference 7

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.670	2.910	.311	6.036	.1339	7.468	.893	im4 ▽
6.670	2.989	.372	7.416	.1313	7.618	.876	im4 ▽

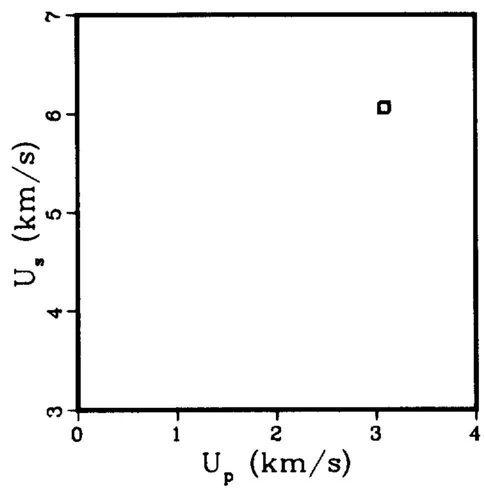


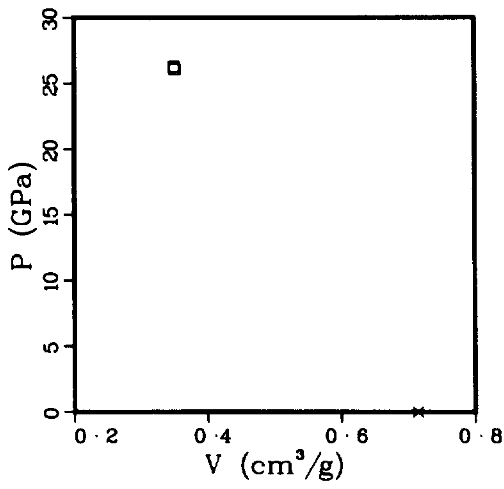
ARGON , liquid

Average ρ_0 = 1.400 g/cm^3.

Reference 8

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.400	6.052	3.075	26.054	.3514	2.846	.492	im2
1.400	6.069	3.093	26.280	.3503	2.855	.490	im2

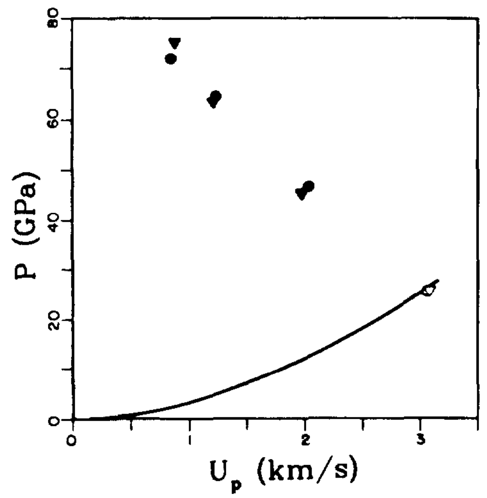


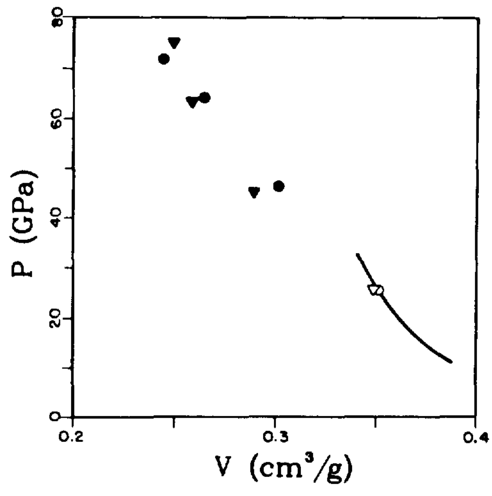


ARGON, liquid, reflected-shock data
ρ_0 = 1.400 g/cm^3.

Initial Shock			Reflected Shock			
U_{p1} (km/s)	V_1 (cm^3/g)	P_1 (GPa)	U_{p2} (km/s)	V_2 (cm^3/g)	P_2 (GPa)	Std.[a]
3.05	0.351	25.6 ○	2.02	0.301	46.5 ●	Al
			1.22	0.264	64.3 ●	Cu
			0.84	0.244	71.9 ●	Au
3.07	0.349	25.8 □	1.97	0.289	45.1 ■	Al
			1.21	0.258	63.4 ■	Cu
			0.87	0.249	75.3 ■	Au

[a]Standards used for reflected-shock measurements were 2024 aluminum alloy (Al), copper (Cu), and gold (Au).



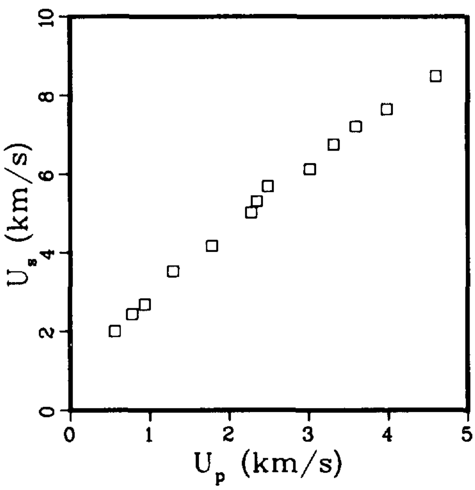


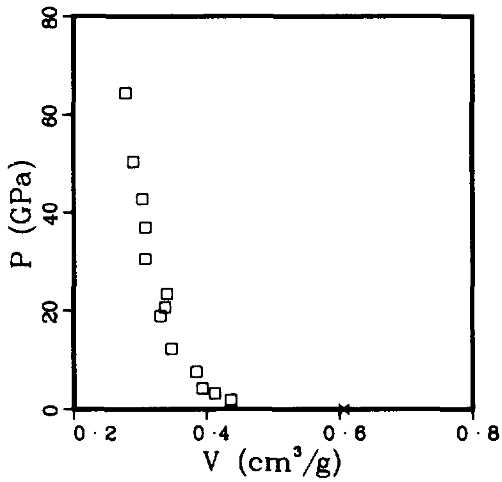
ARGON , solid , T_0 = 75 K

Average ρ_0 = 1.650 g/cm^3 .

References 9 , 10

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.650	2.000	.560	1.848	.4364	2.292	.720	im2 □
1.650	2.440	.780	3.140	.4123	2.425	.680	im2 □
1.650	2.680	.940	4.157	.3935	2.541	.649	im2 □
1.650	3.530	1.290	7.514	.3846	2.600	.635	im2 □
1.650	4.170	1.780	12.247	.3474	2.879	.573	im2 □
1.650	5.020	2.280	18.885	.3308	3.023	.546	im2 □
1.650	5.310	2.350	20.590	.3378	2.960	.557	im2 □
1.650	5.690	2.490	23.377	.3408	2.934	.562	im2 □
1.650	6.130	3.020	30.546	.3075	3.252	.507	im2 □
1.650	6.750	3.320	36.976	.3080	3.247	.508	im2 □
1.650	7.210	3.600	42.827	.3035	3.295	.501	im2 □
1.650	7.650	3.990	50.364	.2900	3.449	.478	im2 □
1.650	8.490	4.600	64.439	.2777	3.601	.458	im2 □





BARIUM

Average ρ_0 = 3.705 g/cm^3.

Sound velocities longitudinal 2.16 km/s.
shear 1.28 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.661	1.575	0.000	0.000	.2731	3.661	1.000	ssp ×
3.721	2.092	.521	4.056	.2018	4.955	.751	im1 o
3.692	2.066	.524	3.997	.2022	4.947	.746	im1 o
3.677	2.116	.608	4.731	.1938	5.160	.713	im1 o
3.716	2.251	.703	5.880	.1851	5.404	.688	im1 o
3.714	2.194	.709	5.777	.1822	5.487	.677	im1 o
3.746	2.334	.819	7.161	.1733	5.771	.649	im1 o
3.729	2.266	.828	6.997	.1702	5.876	.635	im1 o
3.639	2.216	.850	6.854	.1694	5.903	.616	im1 o
3.729	2.291	.883	7.544	.1648	6.068	.615	im1 o
3.729	2.252	.888	7.457	.1624	6.157	.606	im1 o
3.667	2.566	1.080	10.162	.1579	6.332	.579	im1 o
3.675	2.508	1.088	10.028	.1541	6.491	.566	im1 o
3.610	2.522	1.144	10.415	.1514	6.607	.546	im1 o
3.738	2.585	1.187	11.470	.1447	6.912	.541	im1 o
3.740	2.536	1.195	11.334	.1414	7.073	.529	im1 o
3.690	2.993	1.462	16.147	.1386	7.214	.512	im1 o
3.727	3.003	1.465	16.397	.1374	7.277	.512	im1 o
3.703	2.999	1.469	16.314	.1378	7.258	.510	im1 o
3.697	3.664	1.841	24.938	.1346	7.431	.498	im1 o

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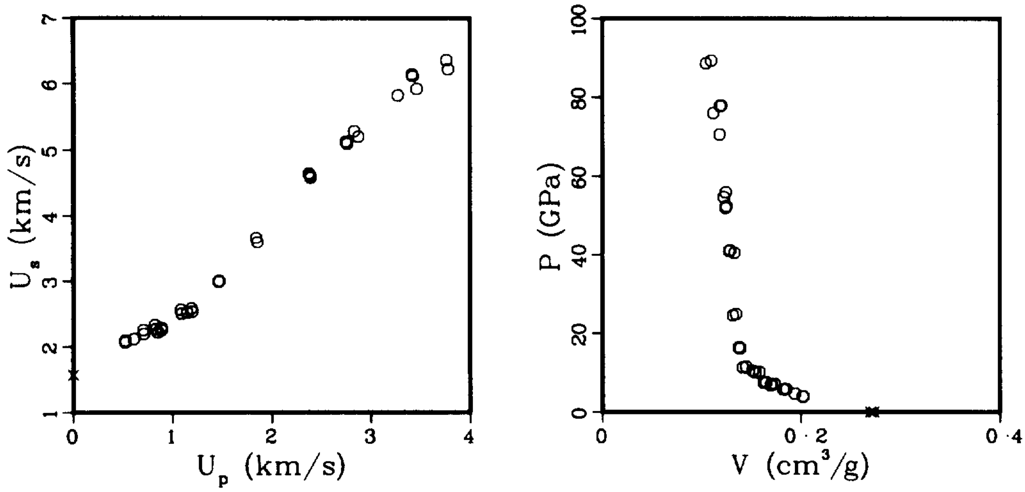

BARIUM
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ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.688	3.596	1.855	24.601	.1313	7.617	.484	im1 o
3.674	4.641	2.373	40.462	.1330	7.518	.489	im1 o
3.737	4.605	2.387	41.078	.1289	7.759	.482	im1 o
3.742	4.577	2.392	40.968	.1276	7.839	.477	im1 o
3.722	5.130	2.747	52.451	.1248	8.013	.465	im1 o
3.692	5.098	2.761	51.967	.1242	8.054	.458	im1 o
3.738	5.287	2.830	55.929	.1243	8.043	.465	im1 o
3.660	5.204	2.874	54.740	.1223	8.175	.448	im1 o
3.707	5.824	3.272	70.641	.1182	8.460	.438	im1 o
3.709	6.152	3.414	77.900	.1200	8.334	.445	im1 o
3.714	6.121	3.424	77.839	.1186	8.429	.441	im1 o
3.707	5.922	3.464	76.045	.1120	8.931	.415	im1 o
3.730	6.367	3.763	89.367	.1096	9.120	.409	im1 o
3.767	6.230	3.780	88.711	.1044	9.579	.393	im1 o

BERYLLIUM , sintered

Average ρ_0 = 1.850 g/cm^3 .

Sound velocities longitudinal 13.15 km/s .
shear 8.97 km/s .

References 6 , 11 , 12 , 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.851	8.102	0.000	0.000	.5402	1.851	1.000	ssp ×
1.850	8.584	.484	7.686	.5101	1.961	.944	im1 o
1.850	8.673	.494	7.926	.5098	1.962	.943	im1 o
1.850	8.599	.496	7.890	.5094	1.963	.942	im1 o
1.850	8.591	.502	7.978	.5090	1.965	.942	im1 o
1.850	8.779	.685	11.125	.4984	2.007	.922	im1 o
1.851	9.042	.884	14.795	.4874	2.052	.902	im1 o
1.851	9.006	.885	14.753	.4872	2.053	.902	im1 o
1.850	9.055	.930	15.579	.4850	2.062	.897	im1 o
1.850	9.022	.932	15.556	.4847	2.063	.897	im1 o
1.850	9.052	.937	15.691	.4846	2.064	.896	im1 o
1.850	9.035	1.018	17.016	.4796	2.085	.887	im1 o
1.850	9.050	1.018	17.044	.4797	2.084	.888	im1 o
1.850	9.416	1.248	21.740	.4689	2.133	.867	im1 o
1.850	9.393	1.337	23.233	.4636	2.157	.858	im1 o
1.850	9.365	1.339	23.199	.4633	2.159	.857	im1 o
1.850	9.962	1.753	32.307	.4454	2.245	.824	im1 o
1.850	9.936	1.754	32.241	.4451	2.247	.823	im1 o
1.851	10.000	1.762	32.615	.4451	2.247	.824	im1 o

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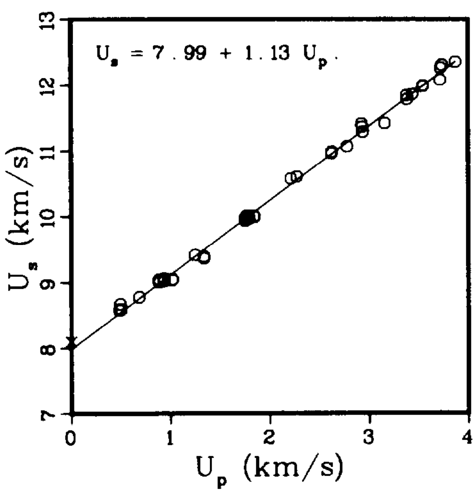
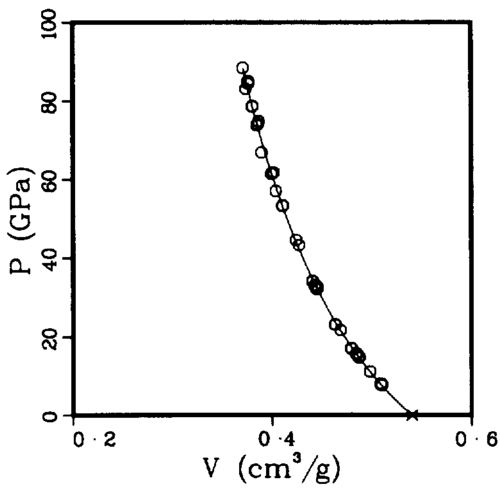




BERYLLIUM , sintered
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.851	9.983	1.763	32.578	.4448	2.248	.823	im1 o
1.851	9.966	1.764	32.541	.4446	2.249	.823	im1 o
1.850	10.014	1.773	32.846	.4448	2.248	.823	im1 o
1.850	9.966	1.777	32.763	.4442	2.251	.822	im1 o
1.850	9.975	1.796	33.143	.4432	2.256	.820	im1 o
1.850	10.006	1.845	34.153	.4409	2.268	.816	im1 o
1.850	9.992	1.846	34.124	.4407	2.269	.815	im1 o
1.850	10.578	2.213	43.307	.4275	2.339	.791	im1 o
1.851	10.604	2.274	44.634	.4244	2.356	.786	im1 o
1.851	10.983	2.624	53.345	.4112	2.432	.761	im1 o
1.851	10.960	2.626	53.274	.4108	2.434	.760	im1 o
1.853	11.066	2.781	57.025	.4040	2.475	.749	im1 o
1.850	11.413	2.925	61.759	.4020	2.488	.744	im1 o
1.851	11.364	2.932	61.674	.4009	2.495	.742	im1 o
1.851	11.287	2.940	61.423	.3995	2.503	.740	im1 o
1.855	11.418	3.161	66.951	.3898	2.565	.723	im1 o
1.851	11.844	3.380	74.101	.3861	2.590	.715	im1 o
1.851	11.784	3.386	73.856	.3850	2.597	.713	im1 o
1.835	11.862	3.440	74.878	.3869	2.585	.710	im1 o
1.851	11.985	3.544	78.621	.3805	2.628	.704	im1 o
1.851	11.990	3.544	78.654	.3806	2.628	.704	im1 o
1.851	12.079	3.718	83.128	.3740	2.674	.692	im1 o
1.851	12.266	3.721	84.483	.3764	2.657	.697	im1 o
1.851	12.312	3.737	85.164	.3763	2.658	.696	im1 o
1.851	12.355	3.871	88.526	.3710	2.696	.687	im1 o

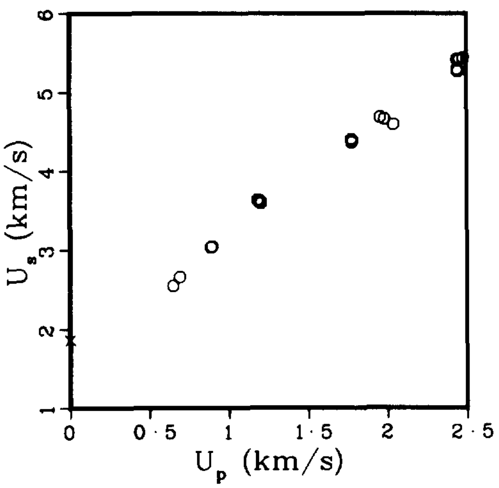
BISMUTH

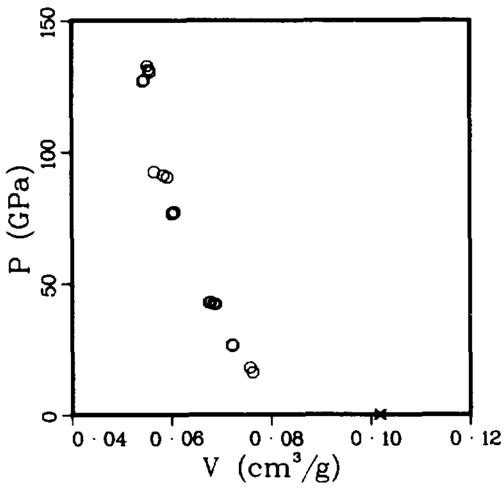
Average ρ_0 = 9.836 g/cm^3.

Sound velocities longitudinal 2.49 km/s.
shear 1.43 km/s.

References 4, 6, 11, 12

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
9.808	1.864	0.000	0.000	.1020	9.808	1.000	ssp ×
9.790	2.554	.648	16.202	.0762	13.118	.746	im1 o
9.790	2.664	.690	17.996	.0757	13.212	.741	im1 o
9.790	3.038	.886	26.351	.0724	13.821	.708	im1 o
9.790	3.047	.894	26.668	.0722	13.855	.707	im1 o
9.790	3.638	1.183	42.134	.0689	14.508	.675	im1 o
9.790	3.615	1.193	42.221	.0684	14.612	.670	im1 o
9.860	3.624	1.199	42.843	.0679	14.735	.669	im1 o
9.860	3.598	1.204	42.713	.0675	14.819	.665	im1 o
9.860	4.411	1.772	77.069	.0607	16.481	.598	im1 o
9.860	4.365	1.775	76.394	.0602	16.617	.593	im1 o
9.860	4.388	1.779	76.970	.0603	16.583	.595	im1 o
9.860	4.692	1.953	90.352	.0592	16.891	.584	im1 o
9.860	4.669	1.980	91.152	.0584	17.120	.576	im1 o
9.860	4.601	2.037	92.410	.0565	17.693	.557	im1 o
9.860	5.424	2.439	130.439	.0558	17.916	.550	im1 o
9.860	5.294	2.441	127.417	.0547	18.296	.539	im1 o
9.860	5.266	2.445	126.951	.0543	18.406	.536	im1 o
9.860	5.425	2.456	131.373	.0555	18.016	.547	im1 o
9.860	5.439	2.478	132.892	.0552	18.112	.544	im1 o



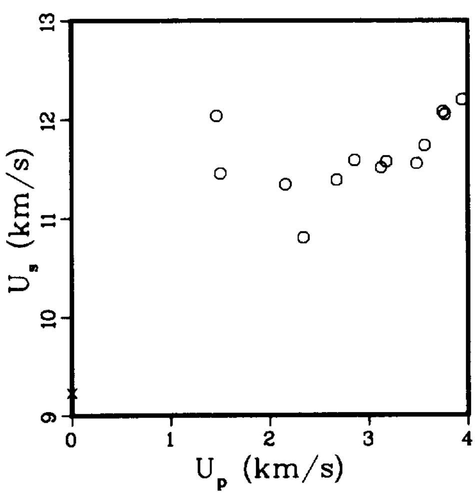


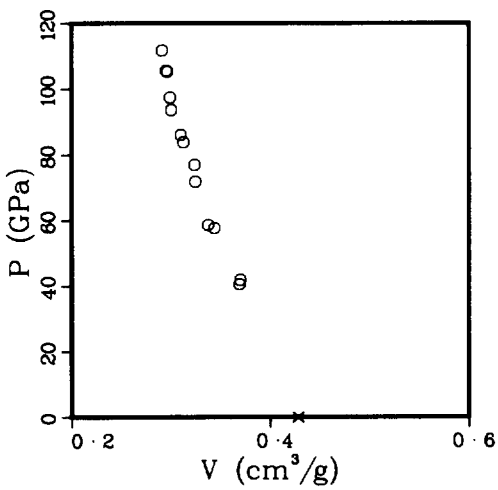
BORON

Average ρ_0 = 2.338 g/cm^3.

Sound velocities longitudinal 13.90 km/s.
shear 9.00 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.334	9.231	0.000	0.000	.4284	2.334	1.000	ssp ×
2.375	12.037	1.465	41.881	.3698	2.704	.878	im1 o
2.354	11.453	1.504	40.548	.3690	2.710	.869	im1 o
2.356	11.342	2.160	57.719	.3436	2.910	.810	im1 o
2.322	10.805	2.340	58.709	.3374	2.964	.783	im1 o
2.357	11.387	2.677	71.848	.3245	3.081	.765	im1 o
2.327	11.591	2.858	77.087	.3238	3.089	.753	im1 o
2.331	11.514	3.124	83.845	.3126	3.199	.729	im1 o
2.341	11.577	3.177	86.102	.3099	3.226	.726	im1 o
2.326	11.557	3.482	93.602	.3004	3.329	.699	im1 o
2.328	11.739	3.563	97.371	.2992	3.343	.696	im1 o
2.326	12.079	3.749	105.331	.2965	3.373	.690	im1 o
2.326	12.051	3.770	105.675	.2954	3.385	.687	im1 o
2.324	12.200	3.942	111.767	.2913	3.433	.677	im1 o





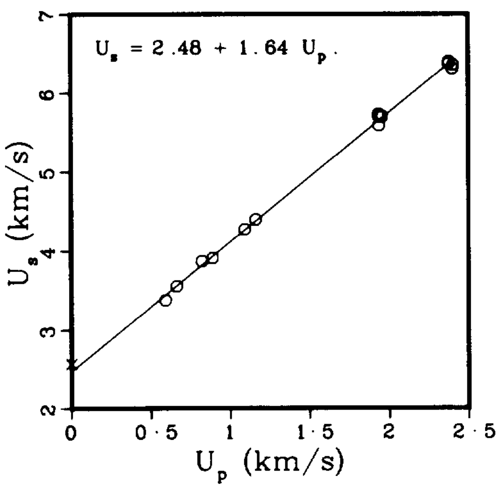
CADMIUM

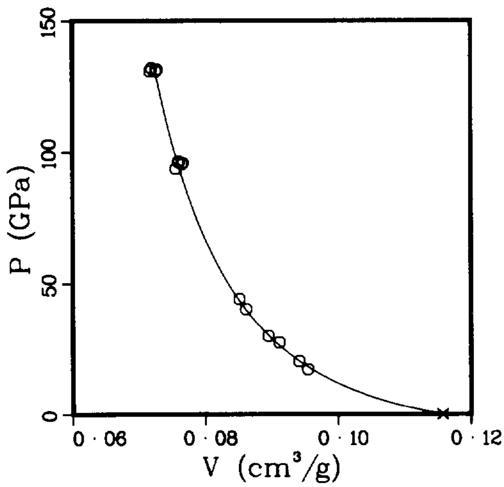
Average ρ_0 = 8.639 g/cm^3.

Sound velocities	longitudinal	3.20 km/s.
	shear	1.65 km/s.

References 4, 6, 11, 12

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
8.642	2.571	0.000	0.000	.1157	8.642	1.000	ssp	×
8.640	3.380	.593	17.317	.0954	10.478	.825	im1	o
8.640	3.556	.664	20.401	.0941	10.624	.813	im1	o
8.640	3.871	.823	27.526	.0911	10.973	.787	im1	o
8.626	3.910	.891	30.051	.0895	11.172	.772	im1	o
8.640	4.272	1.092	40.306	.0862	11.607	.744	im1	o
8.640	4.397	1.162	44.144	.0852	11.743	.736	im1	o
8.640	5.711	1.935	95.479	.0765	13.068	.661	im1	o
8.640	5.732	1.936	95.879	.0766	13.046	.662	im1	o
8.640	5.589	1.939	93.632	.0756	13.230	.653	im1	o
8.640	5.696	1.953	96.114	.0761	13.148	.657	im1	o
8.640	5.701	1.959	96.494	.0760	13.163	.656	im1	o
8.640	6.376	2.377	130.946	.0726	13.776	.627	im1	o
8.640	6.403	2.378	131.556	.0728	13.745	.629	im1	o
8.640	6.311	2.401	130.919	.0717	13.946	.620	im1	o
8.640	6.357	2.405	132.093	.0720	13.898	.622	im1	o





CALCIUM

Average ρ_0 = 1.547 g/cm^3.

Sound velocities longitudinal 4.39 km/s.
shear 2.49 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.536	3.317	0.000	0.000	.6510	1.536	1.000	ssp ×
1.536	4.273	.548	3.597	.5675	1.762	.872	im1 o
1.538	4.139	.553	3.520	.5633	1.775	.866	im1 o
1.537	4.156	.644	4.114	.5498	1.819	.845	im1 o
1.537	4.342	.753	5.025	.5378	1.859	.827	im1 o
1.564	4.516	.874	6.173	.5156	1.939	.806	im1 o
1.550	4.471	.879	6.092	.5183	1.929	.803	im1 o
1.538	4.355	.897	6.008	.5163	1.937	.794	im1 o
1.543	4.768	1.165	8.571	.4897	2.042	.756	im1 o
1.539	4.716	1.169	8.485	.4887	2.046	.752	im1 o
1.535	4.733	1.224	8.893	.4830	2.070	.741	im1 o
1.580	4.921	1.270	9.874	.4696	2.130	.742	im1 o
1.544	5.005	1.272	9.830	.4831	2.070	.746	im1 o
1.583	5.084	1.624	13.070	.4299	2.326	.681	im1 o
1.553	5.089	1.633	12.906	.4373	2.287	.679	im1 o
1.536	5.015	1.634	12.587	.4389	2.278	.674	im1 o
1.558	5.657	2.114	18.632	.4020	2.488	.626	im1 o
1.537	5.605	2.128	18.332	.4036	2.478	.620	im1 o
1.537	5.834	2.221	19.915	.4029	2.482	.619	im1 o
1.535	5.838	2.471	22.143	.3757	2.662	.577	im1 o

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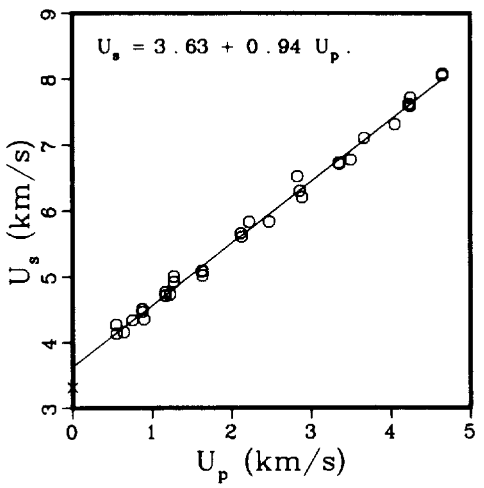

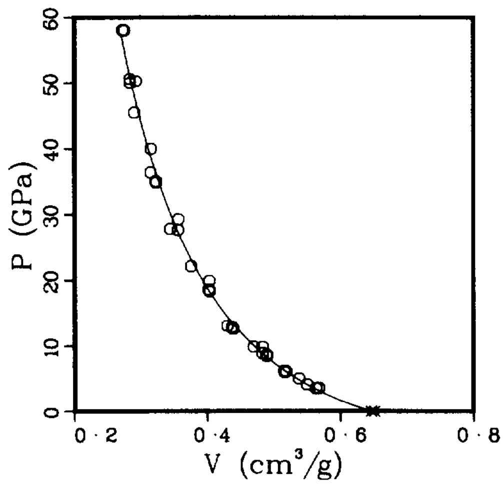

CALCIUM
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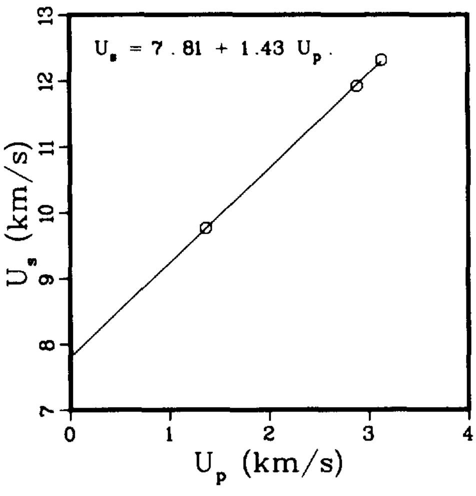
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.589	6.519	2.827	29.284	.3564	2.806	.566	im1 ○
1.536	6.302	2.857	27.655	.3559	2.810	.547	im1 ○
1.554	6.205	2.886	27.828	.3442	2.905	.535	im1 ○
1.556	6.726	3.348	35.039	.3228	3.098	.502	im1 ○
1.548	6.708	3.356	34.849	.3228	3.098	.500	im1 ○
1.536	6.772	3.499	36.396	.3147	3.178	.483	im1 ○
1.536	7.105	3.666	40.008	.3151	3.173	.484	im1 ○
1.536	7.311	4.053	45.514	.2901	3.447	.446	im1 ○
1.573	7.618	4.226	50.641	.2831	3.533	.445	im1 ○
1.536	7.713	4.246	50.303	.2926	3.417	.450	im1 ○
1.553	7.590	4.246	50.049	.2837	3.525	.441	im1 ○
1.552	8.052	4.648	58.085	.2724	3.671	.423	im1 ○
1.544	8.082	4.650	58.026	.2750	3.636	.425	im1 ○

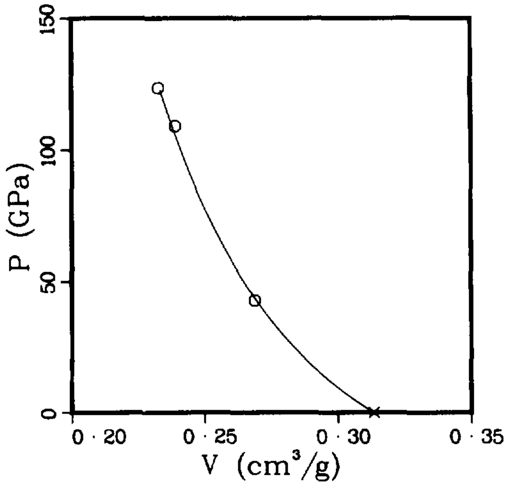
CARBON , diamond , pressed

Average ρ_0 = 3.191 g/cm^3 .

References 6 , 14

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.200	9.764	1.364	42.618	.2688	3.720	.860	im1 o
3.170	11.923	2.889	109.192	.2390	4.184	.758	im1 o
3.203	12.314	3.133	123.571	.2328	4.296	.746	im1 o

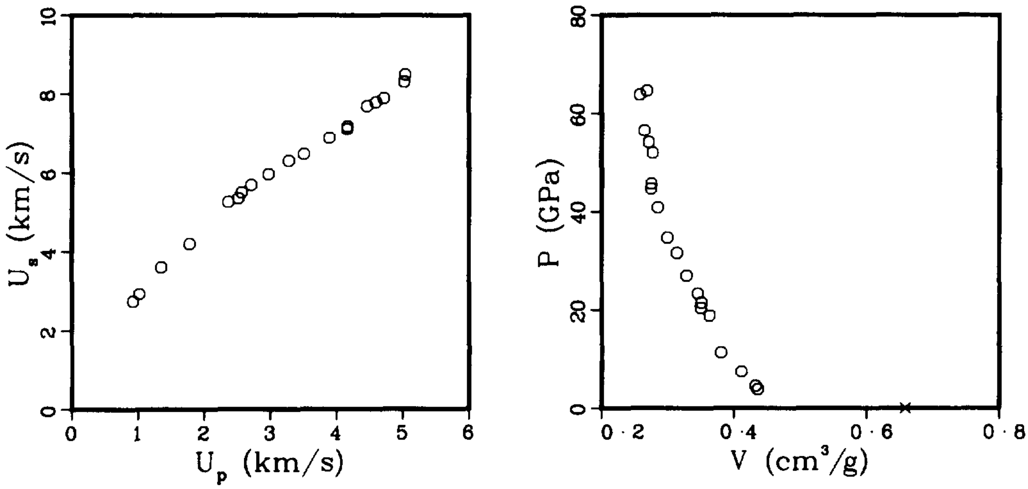




CARBON , fibers woven three-dimensionally

Average ρ_0 = 1.519 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.518	2.733	.924	3.833	.4360	2.293	.662	iml o
1.510	2.933	1.018	4.509	.4324	2.313	.653	iml o
1.520	3.608	1.353	7.420	.4112	2.432	.625	iml o
1.515	4.198	1.781	11.327	.3800	2.631	.576	iml o
1.518	5.264	2.361	18.866	.3633	2.753	.551	iml o
1.515	5.357	2.516	20.419	.3501	2.857	.530	iml o
1.524	5.505	2.563	21.503	.3507	2.852	.534	iml o
1.520	5.693	2.707	23.425	.3451	2.898	.525	iml o
1.527	5.965	2.968	27.034	.3290	3.039	.502	iml o
1.527	6.307	3.282	31.608	.3141	3.184	.480	iml o
1.528	6.472	3.509	34.701	.2996	3.338	.458	iml o
1.525	6.885	3.893	40.875	.2850	3.509	.435	iml o
1.512	7.110	4.159	44.711	.2745	3.643	.415	iml o
1.527	7.181	4.166	45.682	.2750	3.637	.420	iml o
1.511	7.695	4.467	51.938	.2776	3.602	.419	iml o
1.509	7.793	4.602	54.118	.2714	3.685	.409	iml o
1.518	7.887	4.720	56.510	.2645	3.780	.402	iml o
1.527	8.305	5.029	63.776	.2583	3.871	.394	iml o
1.509	8.486	5.041	64.552	.2690	3.717	.406	iml o

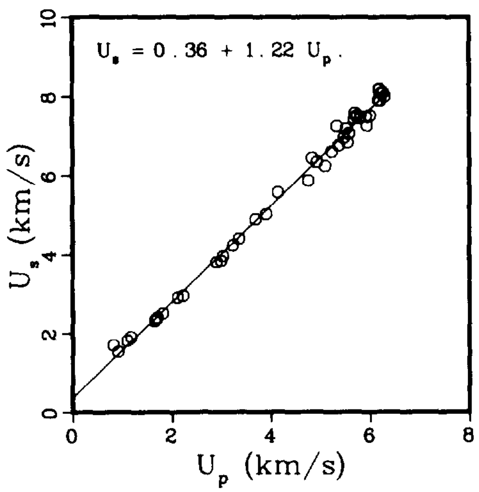


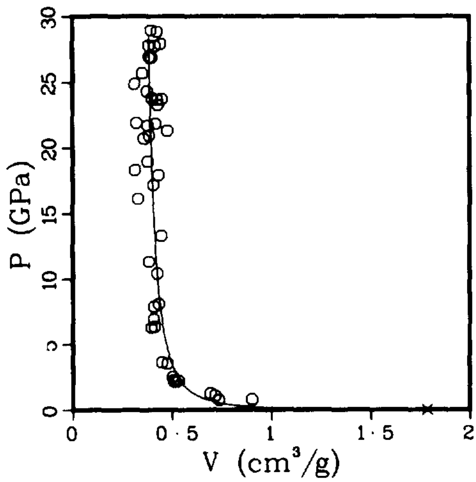
CARBON, foamed, ρ_0 = 0.56 g/cm^3.

Average ρ_0 = 0.560 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.577	1.701	.815	.800	.9027	1.108	.521	im1	o
.550	1.530	.911	.767	.7356	1.359	.405	im1	o
.550	1.810	1.096	1.091	.7172	1.394	.394	im1	o
.550	1.903	1.177	1.232	.6936	1.442	.382	im1	o
.550	2.318	1.658	2.114	.5177	1.932	.285	im1	o
.570	2.342	1.665	2.223	.5071	1.972	.289	im1	o
.550	2.399	1.699	2.242	.5305	1.885	.292	im1	o
.550	2.504	1.812	2.495	.5025	1.990	.276	im1	o
.570	2.910	2.119	3.515	.4769	2.097	.272	im1	o
.550	2.954	2.224	3.613	.4493	2.226	.247	im1	o
.577	3.806	2.899	6.366	.4130	2.421	.238	im1	o
.550	3.833	2.996	6.316	.3970	2.519	.218	im1	o
.577	3.962	3.035	6.938	.4055	2.466	.234	im1	o
.577	4.234	3.235	7.903	.4089	2.445	.236	im1	o
.550	4.397	3.351	8.104	.4325	2.312	.238	im1	o
.577	4.890	3.691	10.414	.4249	2.353	.245	im1	o
.577	5.023	3.910	11.332	.3840	2.604	.222	im1	o
.577	5.573	4.140	13.313	.4456	2.244	.257	im1	o
.577	5.868	4.759	16.113	.3275	3.053	.189	im1	o
.577	6.440	4.829	17.944	.4335	2.307	.250	im1	o
.550	6.341	4.925	17.176	.4060	2.463	.223	im1	o
.577	6.229	5.098	18.323	.3147	3.178	.182	im1	o

(Continued)





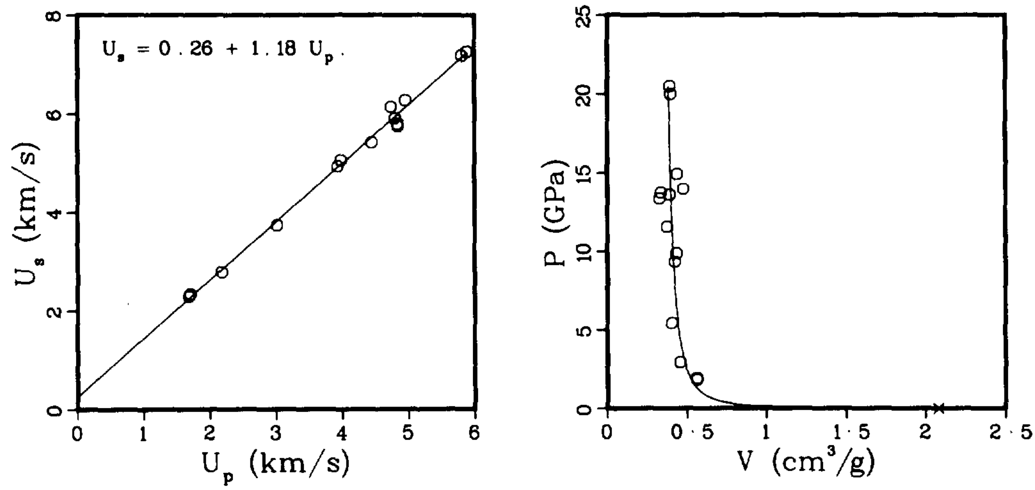
CARBON , foamed , ρ_0 = 0.56 g/cm^3 .
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.550	6.598	5.230	18.979	.3770	2.653	.207	iml	o
.550	7.249	5.341	21.294	.4786	2.090	.263	iml	o
.570	6.756	5.372	20.687	.3594	2.782	.205	iml	o
.550	6.949	5.476	20.929	.3854	2.595	.212	iml	o
.550	7.181	5.526	21.825	.4190	2.386	.230	iml	o
.577	6.830	5.555	21.892	.3235	3.091	.187	iml	o
.550	7.060	5.582	21.675	.3806	2.627	.209	iml	o
.550	7.443	5.685	23.272	.4294	2.329	.236	iml	o
.550	7.573	5.699	23.737	.4499	2.223	.247	iml	o
.550	7.502	5.739	23.680	.4273	2.340	.235	iml	o
.550	7.450	5.809	23.802	.4005	2.497	.220	iml	o
.550	7.468	5.923	24.328	.3762	2.659	.207	iml	o
.577	7.253	5.945	24.880	.3125	3.200	.180	iml	o
.570	7.501	6.003	25.666	.3504	2.854	.200	iml	o
.550	7.908	6.176	26.862	.3982	2.511	.219	iml	o
.570	8.169	6.190	28.823	.4250	2.353	.242	iml	o
.550	8.190	6.191	27.887	.4438	2.253	.244	iml	o
.550	7.882	6.202	26.886	.3875	2.580	.213	iml	o
.550	8.087	6.234	27.728	.4166	2.400	.229	iml	o
.570	8.093	6.271	28.928	.3950	2.532	.225	iml	o
.550	8.003	6.306	27.757	.3855	2.594	.212	iml	o

CARBON , foamed , $\rho_0 = 0.48$ g/cm^3 .

Average $\rho_0 = 0.481$ g/cm^3 .

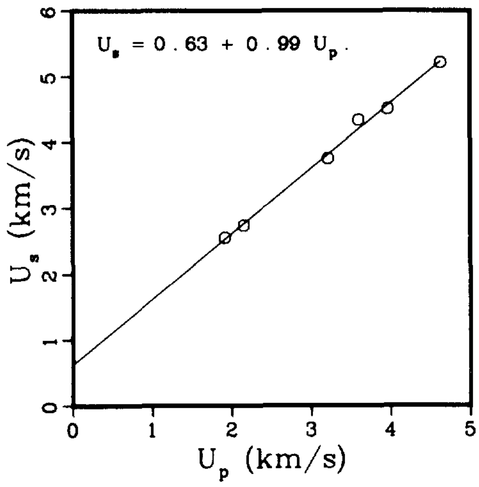
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.470	2.294	1.687	1.819	.5630	1.776	.265	im1 o
.480	2.340	1.706	1.916	.5645	1.772	.271	im1 o
.480	2.790	2.179	2.918	.4562	2.192	.219	im1 o
.480	3.746	3.019	5.428	.4043	2.473	.194	im1 o
.480	4.940	3.934	9.328	.4243	2.357	.204	im1 o
.490	5.064	3.981	9.878	.4365	2.291	.214	im1 o
.480	5.422	4.448	11.576	.3742	2.672	.180	im1 o
.480	6.145	4.736	13.969	.4777	2.093	.229	im1 o
.480	5.908	4.797	13.604	.3918	2.553	.188	im1 o
.490	5.796	4.840	13.746	.3366	2.971	.165	im1 o
.480	5.748	4.847	13.373	.3266	3.062	.157	im1 o
.480	6.280	4.954	14.933	.4399	2.273	.211	im1 o
.480	7.177	5.806	20.001	.3980	2.513	.191	im1 o
.480	7.259	5.886	20.509	.3941	2.538	.189	im1 o

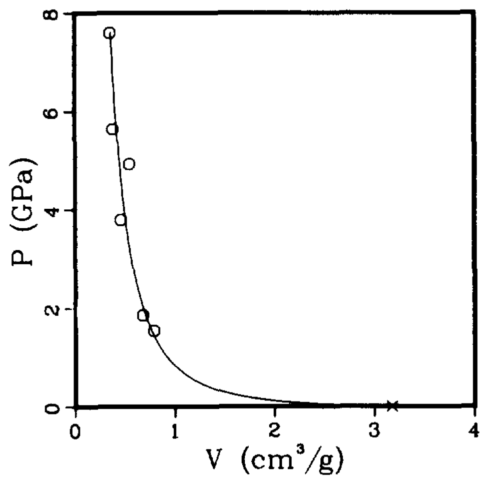


CARBON , foamed , ρ_0 = 0.32 g/cm^3 .

Average ρ_0 = 0.315 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.315	2.551	1.918	1.541	.7877	1.269	.248	im1 ○
.315	2.736	2.153	1.856	.6765	1.478	.213	im1 ○
.315	3.753	3.211	3.796	.4585	2.181	.144	im1 ○
.315	4.345	3.602	4.930	.5429	1.842	.171	im1 ○
.315	4.511	3.970	5.641	.3807	2.627	.120	im1 ○
.315	5.210	4.631	7.600	.3528	2.834	.111	im1 ○

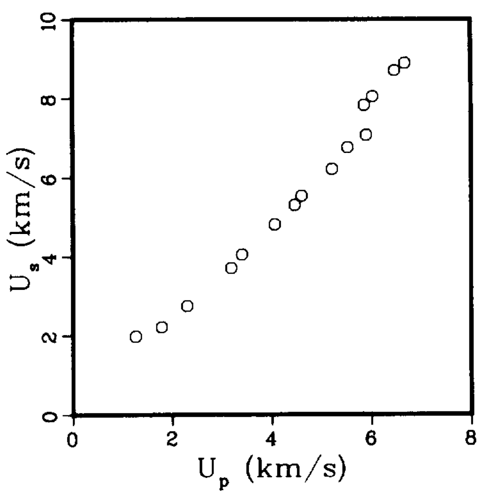


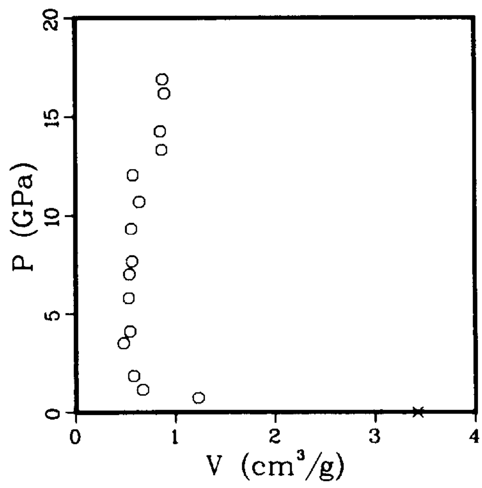


CARBON, foamed, ρ_0 = 0.29 g/cm^3.

Average ρ_0 = 0.292 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.295	1.979	1.262	.737	1.2281	.814	.362	im1 ○
.292	2.217	1.783	1.154	.6704	1.492	.196	im1 ○
.292	2.763	2.295	1.852	.5801	1.724	.169	im1 ○
.296	3.713	3.185	3.500	.4804	2.082	.142	im1 ○
.297	4.055	3.399	4.094	.5447	1.836	.162	im1 ○
.297	4.822	4.059	5.813	.5328	1.877	.158	im1 ○
.296	5.312	4.462	7.016	.5406	1.850	.160	im1 ○
.301	5.541	4.599	7.670	.5648	1.771	.170	im1 ○
.288	6.213	5.213	9.328	.5589	1.789	.161	im1 ○
.286	6.766	5.524	10.689	.6418	1.558	.184	im1 ○
.290	7.831	5.862	13.313	.8670	1.153	.251	im1 ○
.288	7.080	5.902	12.034	.5777	1.731	.166	im1 ○
.294	8.046	6.029	14.262	.8527	1.173	.251	im1 ○
.287	8.708	6.469	16.167	.8959	1.116	.257	im1 ○
.284	8.899	6.679	16.880	.8784	1.138	.249	im1 ○

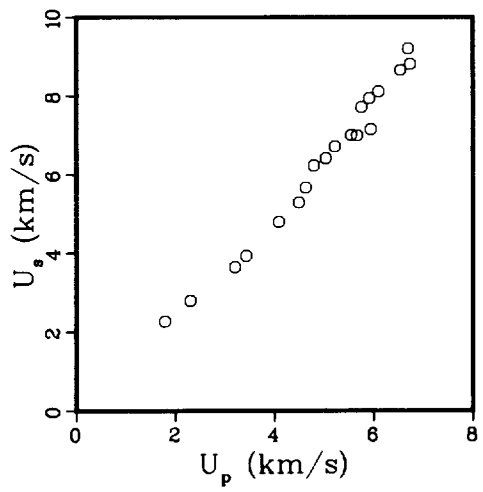


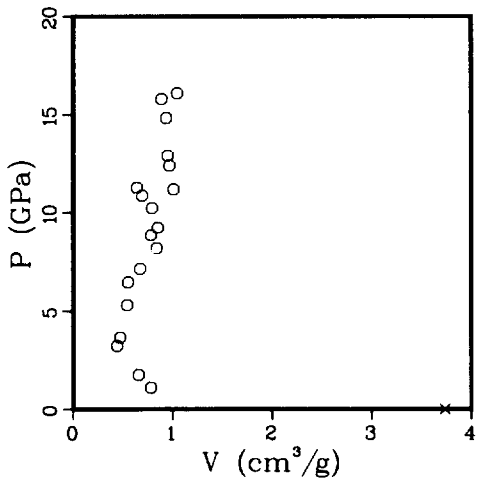


CARBON, foamed, ρ_0 = 0.27 g/cm^3.

Average ρ_0 = 0.268 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.273	2.271	1.786	1.107	.7823	1.278	.214	im1	o
.272	2.802	2.301	1.754	.6574	1.521	.179	im1	o
.276	3.646	3.202	3.222	.4412	2.266	.122	im1	o
.271	3.929	3.427	3.649	.4715	2.121	.128	im1	o
.271	4.793	4.089	5.311	.5420	1.845	.147	im1	o
.272	5.288	4.494	6.464	.5520	1.812	.150	im1	o
.272	5.669	4.630	7.139	.6738	1.484	.183	im1	o
.274	6.226	4.793	8.176	.8400	1.190	.230	im1	o
.274	6.410	5.035	8.843	.7829	1.277	.215	im1	o
.263	6.723	5.219	9.228	.8506	1.176	.224	im1	o
.263	7.012	5.549	10.233	.7933	1.261	.209	im1	o
.274	7.000	5.669	10.873	.6940	1.441	.190	im1	o
.252	7.718	5.756	11.195	1.0088	.991	.254	im1	o
.264	7.943	5.911	12.395	.9690	1.032	.256	im1	o
.265	7.159	5.944	11.277	.6404	1.561	.170	im1	o
.261	8.113	6.100	12.917	.9507	1.052	.248	im1	o
.262	8.663	6.538	14.839	.9362	1.068	.245	im1	o
.261	9.212	6.694	16.095	1.0473	.955	.273	im1	o
.266	8.822	6.734	15.802	.8898	1.124	.237	im1	o

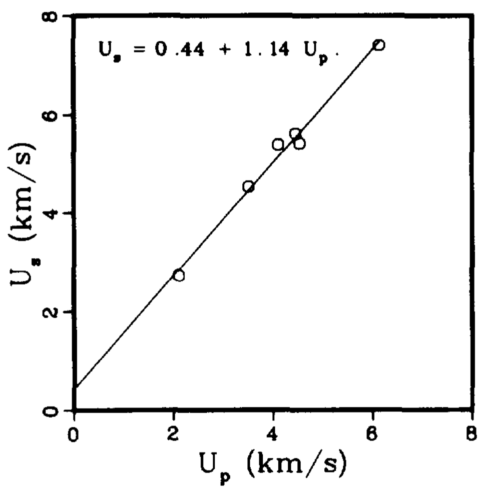


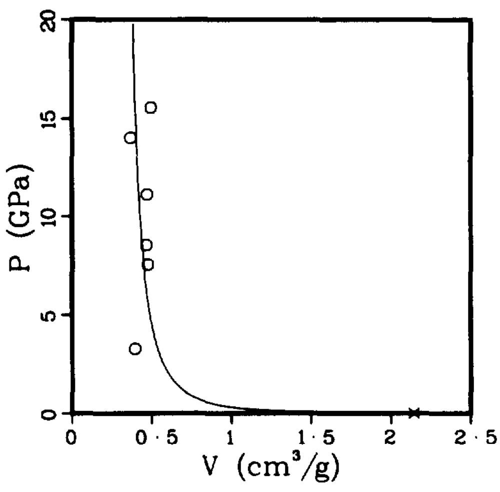


CARBON, graphite, powdered, unpressed

Average ρ_0 = 0.466 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.570	2.728	2.114	3.287	.3949	2.533	.225	iml o
.474	4.535	3.514	7.554	.4750	2.105	.225	iml o
.504	5.385	4.102	11.133	.4727	2.115	.238	iml o
.561	5.609	4.454	14.015	.3671	2.724	.206	iml o
.348	5.412	4.535	8.541	.4657	2.148	.162	iml o
.342	7.401	6.147	15.559	.4954	2.018	.169	iml o





CARBON , graphite , pyrolytic , ρ_0 = 2.21 g/cm^3 .

Average ρ_0 = 2.208 g/cm^3 .

References 5 , 6 , 14

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.203	5.110	.409	4.604	.4176	2.395	.920	im1 o
2.203	5.071	.410	4.580	.4172	2.397	.919	im1 o
2.203	5.092	.410	4.599	.4174	2.396	.919	im1 o
2.202	4.726	.417	4.340	.4141	2.415	.912	im1 o
2.201	5.072	.545	6.084	.4055	2.466	.893	im1 o
2.203	5.059	.549	6.119	.4047	2.471	.891	im1 o
2.203	5.085	.557	6.240	.4042	2.474	.890	im1 o
2.202	5.139	.579	6.552	.4030	2.482	.887	im1 o
2.203	5.473	.743	8.958	.3923	2.549	.864	im1 o
2.203	6.086	.855	11.463	.3902	2.563	.860	im1 o
2.203	5.959	.862	11.316	.3883	2.576	.855	im1 o
2.203	5.924	.864	11.276	.3877	2.579	.854	im1 o
2.197	5.995	.981	12.921	.3807	2.627	.836	im1 o
2.232	6.098	1.010	13.747	.3738	2.675	.834	im1 o
2.202	6.316	1.022	14.214	.3806	2.627	.838	im1 o
2.222	6.666	1.308	19.374	.3617	2.764	.804	im1 o
2.222	6.680	1.310	19.444	.3618	2.764	.804	im1 o
2.203	6.655	1.331	19.514	.3631	2.754	.800	im1 o
2.203	6.621	1.334	19.458	.3625	2.759	.799	im1 o
2.203	6.561	1.339	19.354	.3613	2.768	.796	im1 o
2.203	6.910	1.459	22.210	.3581	2.793	.789	im1 o

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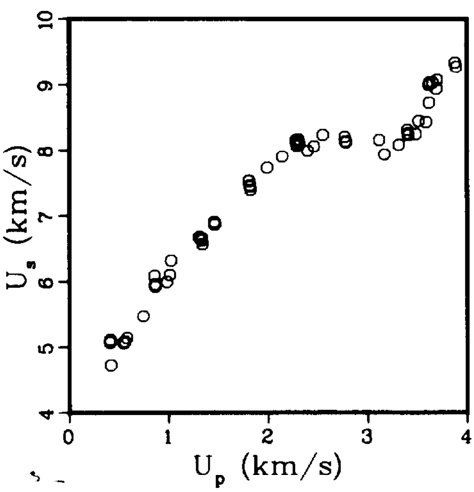
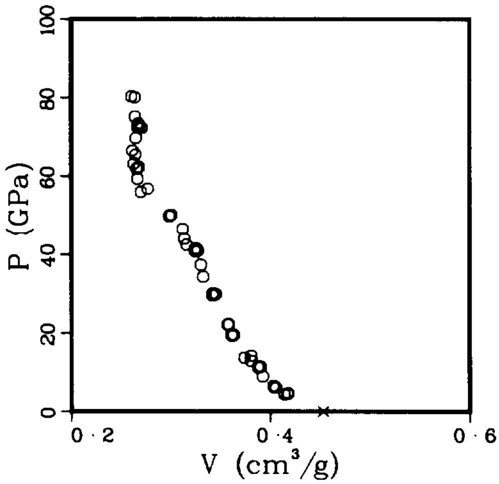




CARBON , graphite , pyrolytic , ρ_0 = 2.21 g/cm^3 .
(Continued)

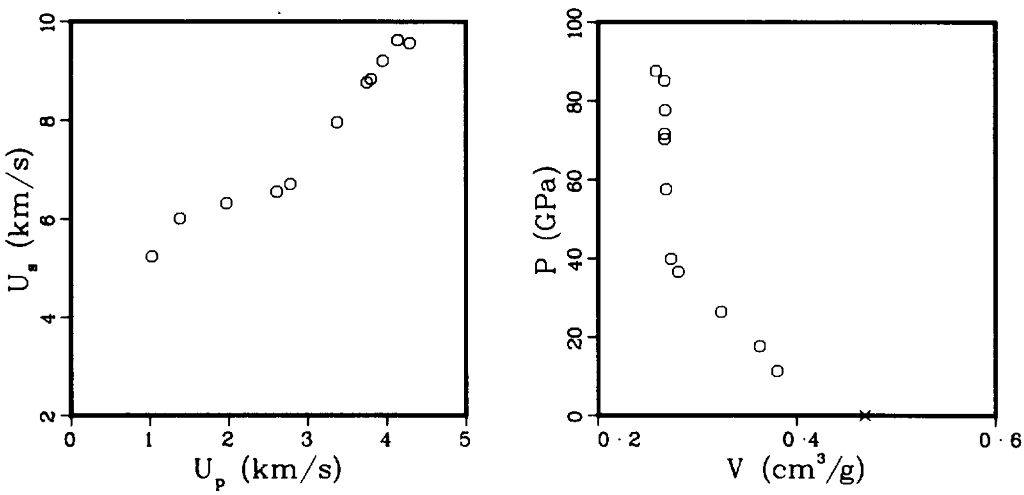
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.203	6.875	1.462	22.143	.3574	2.798	.787	iml o
2.203	6.873	1.462	22.136	.3574	2.798	.787	iml o
2.221	7.531	1.805	30.191	.3423	2.921	.760	iml o
2.201	7.533	1.808	29.977	.3453	2.896	.760	iml o
2.203	7.465	1.817	29.881	.3434	2.912	.757	iml o
2.203	7.445	1.819	29.834	.3430	2.915	.756	iml o
2.203	7.394	1.823	29.695	.3420	2.924	.753	iml o
2.233	7.735	1.990	34.372	.3326	3.006	.743	iml o
2.207	7.905	2.142	37.370	.3303	3.027	.729	iml o
2.203	8.160	2.280	40.986	.3271	3.057	.721	iml o
2.203	8.122	2.284	40.867	.3263	3.065	.719	iml o
2.203	8.071	2.290	40.717	.3251	3.076	.716	iml o
2.203	8.169	2.305	41.481	.3258	3.069	.718	iml o
2.203	8.120	2.310	41.322	.3248	3.079	.716	iml o
2.203	8.095	2.313	41.248	.3242	3.084	.714	iml o
2.216	7.992	2.398	42.469	.3159	3.166	.700	iml o
2.215	8.063	2.463	43.988	.3136	3.189	.695	iml o
2.213	8.238	2.551	46.507	.3119	3.206	.690	iml o
2.203	8.208	2.771	50.106	.3007	3.326	.662	iml o
2.203	8.141	2.780	49.858	.2989	3.345	.659	iml o
2.203	8.124	2.782	49.790	.2985	3.350	.658	iml o
2.231	8.161	3.119	56.788	.2769	3.611	.618	iml o
2.224	7.940	3.171	55.995	.2701	3.703	.601	iml o
2.212	8.088	3.316	59.325	.2667	3.749	.590	iml o
2.203	8.314	3.401	62.292	.2682	3.728	.591	iml o
2.203	8.262	3.408	62.030	.2667	3.750	.588	iml o
2.203	8.238	3.412	61.922	.2659	3.761	.586	iml o
2.196	8.252	3.487	63.189	.2629	3.803	.577	iml o
2.206	8.451	3.516	65.548	.2647	3.778	.584	iml o
2.197	8.435	3.591	66.547	.2614	3.826	.574	iml o
2.227	9.000	3.619	72.536	.2685	3.725	.598	iml o
2.208	8.730	3.621	69.798	.2650	3.773	.585	iml o
2.210	9.035	3.624	72.362	.2710	3.690	.599	iml o
2.225	9.036	3.657	73.524	.2675	3.738	.595	iml o
2.202	8.941	3.695	72.747	.2665	3.753	.587	iml o
2.242	9.076	3.700	75.289	.2642	3.785	.592	iml o
2.212	9.338	3.880	80.144	.2642	3.784	.584	iml o
2.227	9.274	3.892	80.382	.2606	3.837	.580	iml o

CARBON , graphite , pressed , ρ_0 = 2.13 g/cm^3 .

Average ρ_0 = 2.134 g/cm^3 .

References 5 , 6 , 14

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.113	5.235	1.026	11.349	.3805	2.628	.804	im1 o
2.123	6.013	1.380	17.617	.3629	2.755	.770	im1 o
2.123	6.320	1.972	26.459	.3241	3.086	.688	im1 o
2.143	6.551	2.607	36.599	.2809	3.560	.602	im1 o
2.141	6.704	2.779	39.888	.2735	3.657	.585	im1 o
2.146	7.960	3.370	57.567	.2687	3.722	.577	im1 o
2.142	8.762	3.748	70.343	.2672	3.743	.572	im1 o
2.134	8.836	3.801	71.672	.2670	3.745	.570	im1 o
2.135	9.208	3.948	77.614	.2676	3.737	.571	im1 o
2.136	9.627	4.138	85.091	.2669	3.746	.570	im1 o
2.136	9.566	4.290	87.657	.2582	3.873	.552	im1 o

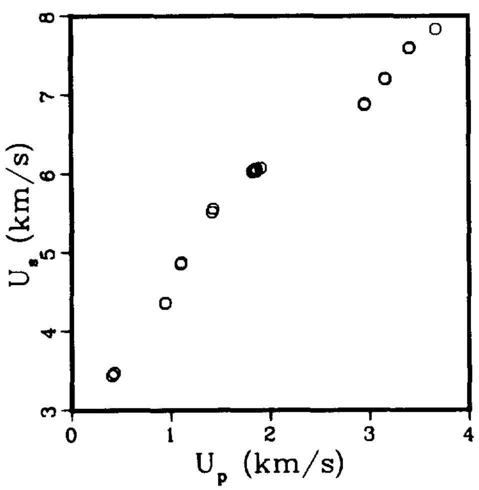


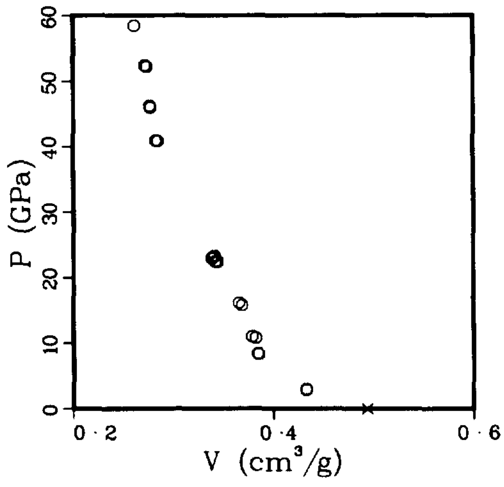
CARBON , graphite , pressed , ρ_0 = 2.03 g/cm^3 .

Average ρ_0 = 2.026 g/cm^3 .

Reference 14

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.037	3.437	.405	2.835	.4331	2.309	.882	im1 o
2.026	3.470	.425	2.988	.4331	2.309	.878	im1 o
2.037	4.362	.945	8.397	.3846	2.600	.783	im1 o
2.031	4.356	.946	8.369	.3854	2.594	.783	im1 o
2.023	4.854	1.098	10.782	.3825	2.614	.774	im1 o
2.040	4.878	1.106	11.006	.3791	2.638	.773	im1 o
2.014	5.513	1.415	15.711	.3691	2.709	.743	im1 o
2.031	5.558	1.426	16.097	.3660	2.732	.743	im1 o
2.037	6.028	1.828	22.446	.3420	2.924	.697	im1 o
2.026	6.040	1.830	22.394	.3440	2.907	.697	im1 o
2.012	6.034	1.854	22.508	.3443	2.904	.693	im1 o
2.040	6.068	1.862	23.049	.3398	2.943	.693	im1 o
2.042	6.036	1.865	22.987	.3384	2.955	.691	im1 o
2.009	6.076	1.909	23.303	.3414	2.929	.686	im1 o
2.015	6.874	2.954	40.916	.2830	3.533	.570	im1 o
2.003	6.896	2.956	40.830	.2852	3.506	.571	im1 o
2.031	7.211	3.160	46.280	.2766	3.615	.562	im1 o
2.016	7.197	3.170	45.994	.2775	3.603	.560	im1 o
2.028	7.593	3.402	52.386	.2722	3.674	.552	im1 o
2.013	7.605	3.409	52.188	.2741	3.648	.552	im1 o
2.032	7.835	3.672	58.461	.2615	3.824	.531	im1 o





CARBON , graphite , ZTA, ρ_0 = 1.95 g/cm^3 .

Average ρ_0 = 1.948 g/cm^3 .

References 6 , 14

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.956	4.087	.945	7.554	.3930	2.544	.769	im1 o
1.943	4.389	1.119	9.543	.3835	2.608	.745	im1 o
1.949	5.284	1.487	15.314	.3687	2.712	.719	im1 o
1.960	5.856	1.829	20.993	.3509	2.850	.688	im1 o
1.952	5.814	1.836	20.837	.3505	2.853	.684	im1 o
1.948	5.996	2.067	24.143	.3364	2.973	.655	im1 o
1.947	6.040	2.189	25.742	.3275	3.054	.638	im1 o
1.943	6.024	2.193	25.668	.3273	3.055	.636	im1 o
1.950	6.141	2.348	28.117	.3167	3.157	.618	im1 o
1.957	6.413	2.705	33.948	.2955	3.385	.578	im1 o
1.948	6.324	2.754	33.927	.2898	3.451	.565	im1 o
1.940	6.285	2.763	33.689	.2889	3.462	.560	im1 o
1.941	6.433	2.909	36.323	.2822	3.543	.548	im1 o
1.951	6.868	3.104	41.592	.2809	3.560	.548	im1 o
1.946	6.926	3.193	43.035	.2770	3.610	.539	im1 o
1.941	6.910	3.198	42.893	.2768	3.613	.537	im1 o
1.943	7.337	3.493	49.795	.2696	3.709	.524	im1 o
1.928	7.355	3.499	49.617	.2719	3.677	.524	im1 o
1.945	7.495	3.553	51.795	.2704	3.698	.526	im1 o
1.955	8.381	3.924	64.294	.2720	3.676	.532	im1 o
1.948	8.396	3.988	65.225	.2695	3.710	.525	im1 o

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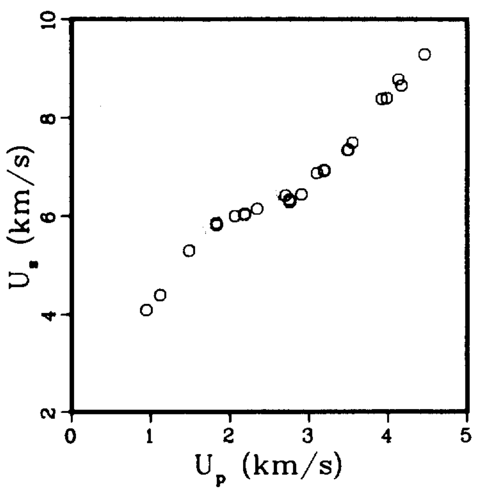
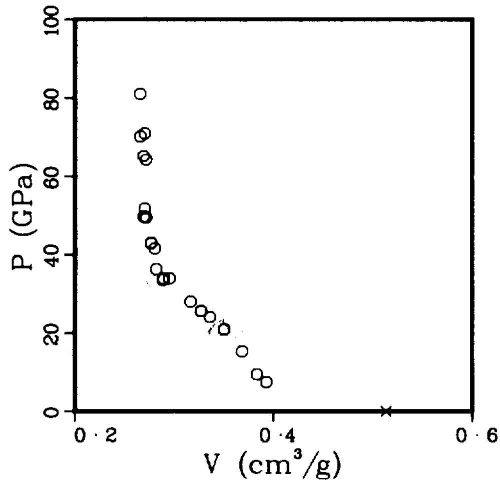




CARBON, graphite, ZTA, ρ_0 = 1.95 g/cm^3.
(Continued)

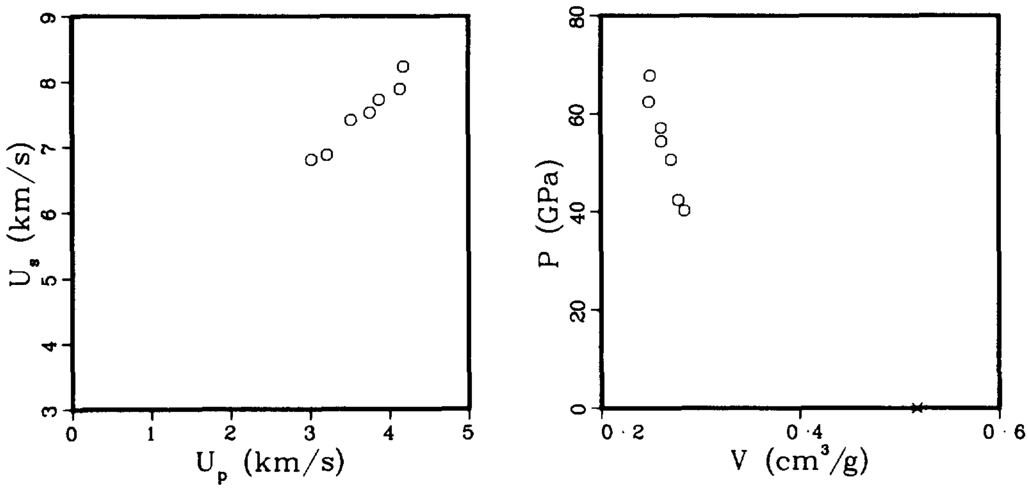
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.957	8.781	4.133	71.023	.2705	3.697	.529	im1	o
1.946	8.654	4.173	70.276	.2661	3.758	.518	im1	o
1.954	9.292	4.464	81.051	.2659	3.761	.520	im1	o

CARBON , graphite , pressed , ρ_0 = 1.93 g/cm^3 .

Average ρ_0 = 1.934 g/cm^3 .

Reference 6

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.962	6.809	3.015	40.278	.2840	3.521	.557	im1 o
1.919	6.879	3.212	42.401	.2778	3.600	.533	im1 o
1.942	7.413	3.520	50.674	.2704	3.698	.525	im1 o
1.921	7.526	3.760	54.360	.2605	3.839	.500	im1 o
1.909	7.722	3.876	57.137	.2609	3.833	.498	im1 o
1.912	7.888	4.140	62.439	.2485	4.024	.475	im1 o
1.970	8.230	4.181	67.787	.2497	4.004	.492	im1 o

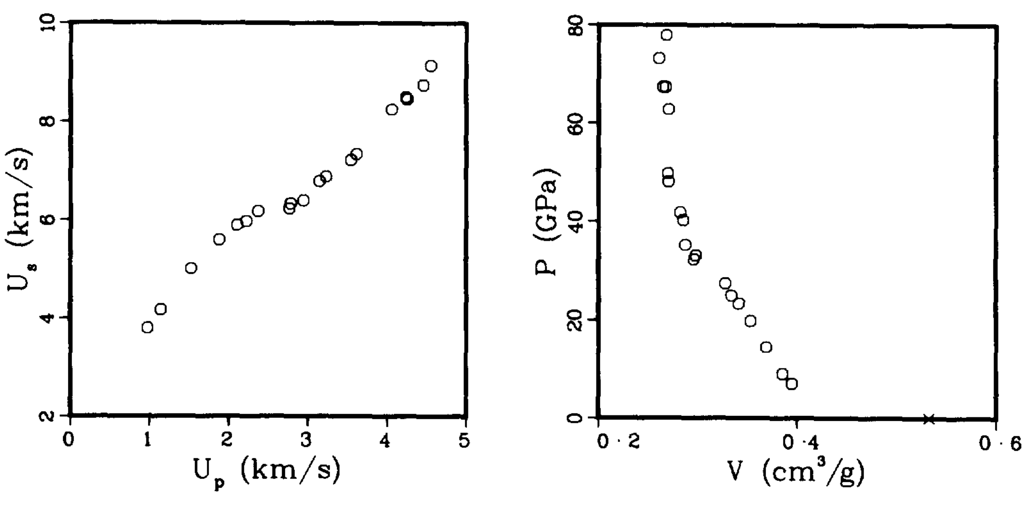


CARBON , graphite , pressed , ρ_0 = 1.88 g/cm^3 .

Average ρ_0 = 1.878 g/cm^3 .

References 6 , 14

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.881	3.795	.977	6.974	.3948	2.533	.743	iml o
1.881	4.173	1.147	9.003	.3855	2.594	.725	iml o
1.882	5.002	1.530	14.403	.3688	2.711	.694	iml o
1.878	5.596	1.882	19.778	.3534	2.830	.664	iml o
1.882	5.891	2.103	23.316	.3417	2.927	.643	iml o
1.881	5.972	2.222	24.960	.3338	2.996	.628	iml o
1.878	6.177	2.372	27.516	.3280	3.049	.616	iml o
1.877	6.231	2.766	32.350	.2963	3.375	.556	iml o
1.881	6.332	2.783	33.147	.2980	3.356	.560	iml o
1.874	6.392	2.947	35.301	.2876	3.477	.539	iml o
1.881	6.792	3.151	40.256	.2850	3.509	.536	iml o
1.877	6.884	3.236	41.813	.2823	3.542	.530	iml o
1.881	7.228	3.545	48.197	.2709	3.692	.510	iml o
1.878	7.345	3.616	49.879	.2703	3.699	.508	iml o
1.878	8.249	4.058	62.865	.2705	3.696	.508	iml o
1.871	8.501	4.238	67.407	.2680	3.731	.501	iml o
1.874	8.457	4.256	67.451	.2651	3.773	.497	iml o
1.877	8.741	4.462	73.207	.2608	3.834	.490	iml o
1.873	9.139	4.551	77.901	.2680	3.731	.502	iml o



CARBON , graphite , ATJ , ρ_0 = 1.77 g/cm^3 .

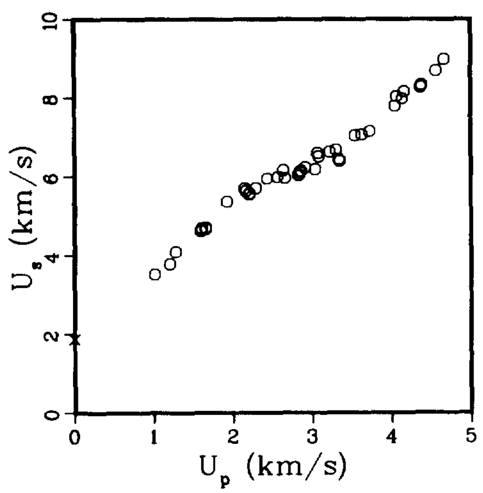
Average ρ_0 = 1.768 g/cm^3 .

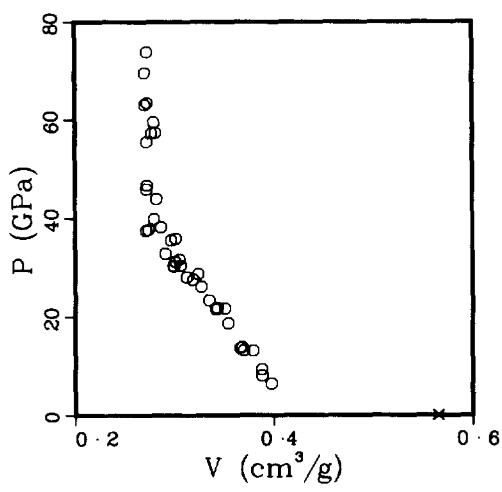
Sound velocities longitudinal 2.56 km/s .
shear 1.52 km/s .

References 6 , 14

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.770	1.864	0.000	0.000	.5650	1.770	1.000	ssp	×
1.791	3.515	1.012	6.371	.3976	2.515	.712	im1	o
1.756	3.777	1.203	7.979	.3881	2.577	.681	im1	o
1.775	4.090	1.274	9.249	.3879	2.578	.689	im1	o
1.768	4.619	1.597	13.042	.3701	2.702	.654	im1	o
1.732	4.686	1.605	13.026	.3796	2.634	.657	im1	o
1.759	4.704	1.656	13.702	.3684	2.715	.648	im1	o
1.759	4.671	1.659	13.631	.3666	2.728	.645	im1	o
1.807	5.364	1.930	18.707	.3543	2.823	.640	im1	o
1.774	5.689	2.149	21.688	.3508	2.851	.622	im1	o
1.792	5.622	2.166	21.822	.3430	2.915	.615	im1	o
1.759	5.557	2.209	21.592	.3425	2.920	.602	im1	o
1.759	5.540	2.211	21.546	.3416	2.927	.601	im1	o
1.785	5.697	2.291	23.298	.3349	2.986	.598	im1	o
1.805	5.945	2.431	26.086	.3275	3.054	.591	im1	o
1.792	5.986	2.563	27.493	.3191	3.134	.572	im1	o
1.767	6.159	2.632	28.644	.3241	3.086	.573	im1	o
1.773	5.956	2.656	28.047	.3125	3.200	.554	im1	o
1.776	6.042	2.827	30.335	.2996	3.338	.532	im1	o

(Continued)





CARBON , graphite , ATJ , ρ_0 = 1.77 g/cm^3 .
(Continued)

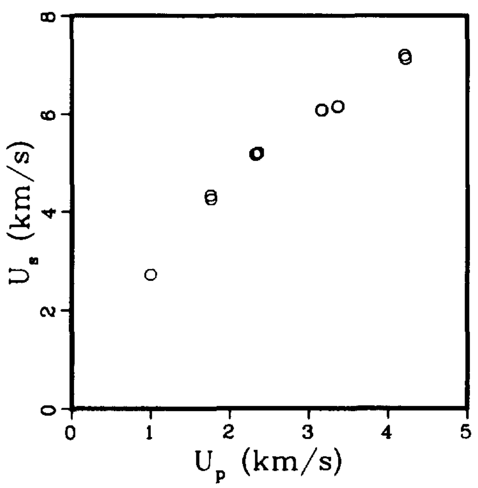
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.775	6.031	2.829	30.285	.2991	3.343	.531	im1 o
1.748	6.116	2.843	30.394	.3062	3.266	.535	im1 o
1.778	6.145	2.857	31.215	.3009	3.323	.535	im1 o
1.748	6.233	2.909	31.694	.3051	3.278	.533	im1 o
1.751	6.188	3.037	32.906	.2908	3.439	.509	im1 o
1.773	6.598	3.069	35.902	.3017	3.315	.535	im1 o
1.775	6.512	3.080	35.601	.2969	3.368	.527	im1 o
1.792	6.625	3.223	38.263	.2866	3.490	.514	im1 o
1.808	6.679	3.304	39.898	.2795	3.578	.505	im1 o
1.757	6.440	3.336	37.747	.2743	3.645	.482	im1 o
1.757	6.395	3.343	37.562	.2716	3.682	.477	im1 o
1.762	7.042	3.540	43.924	.2822	3.543	.497	im1 o
1.788	7.063	3.626	45.791	.2722	3.674	.487	im1 o
1.756	7.140	3.723	46.678	.2725	3.669	.479	im1 o
1.763	7.787	4.048	55.573	.2724	3.672	.480	im1 o
1.758	8.036	4.066	57.442	.2810	3.559	.494	im1 o
1.737	7.973	4.138	57.308	.2769	3.611	.481	im1 o
1.753	8.159	4.161	59.514	.2795	3.577	.490	im1 o
1.743	8.270	4.369	62.977	.2706	3.695	.472	im1 o
1.739	8.332	4.376	63.405	.2730	3.663	.475	im1 o
1.754	8.689	4.566	69.588	.2705	3.696	.475	im1 o
1.761	8.974	4.667	73.754	.2725	3.669	.480	im1 o

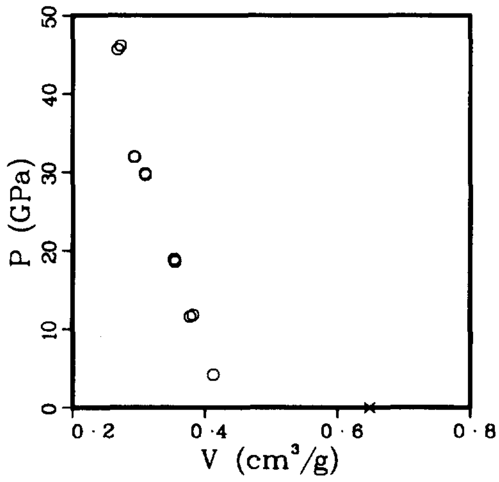
CARBON , graphite , PT 0178 , ρ_0 = 1.54 g/cm^3 .

Average ρ_0 = 1.542 g/cm^3 .

References 6 , 14

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.536	2.724	.998	4.176	.4125	2.424	.634	im1 o
1.556	4.328	1.753	11.805	.3824	2.615	.595	im1 o
1.550	4.249	1.762	11.604	.3776	2.648	.585	im1 o
1.550	5.172	2.328	18.663	.3548	2.819	.550	im1 o
1.545	5.165	2.331	18.601	.3551	2.816	.549	im1 o
1.544	5.199	2.361	18.952	.3535	2.828	.546	im1 o
1.554	6.083	3.156	29.834	.3096	3.230	.481	im1 o
1.540	6.073	3.166	29.610	.3108	3.217	.479	im1 o
1.546	6.147	3.364	31.969	.2928	3.415	.453	im1 o
1.540	6.157	3.367	31.925	.2942	3.398	.453	im1 o
1.526	7.186	4.205	46.111	.2718	3.679	.415	im1 o
1.520	7.116	4.220	45.645	.2677	3.735	.407	im1 o



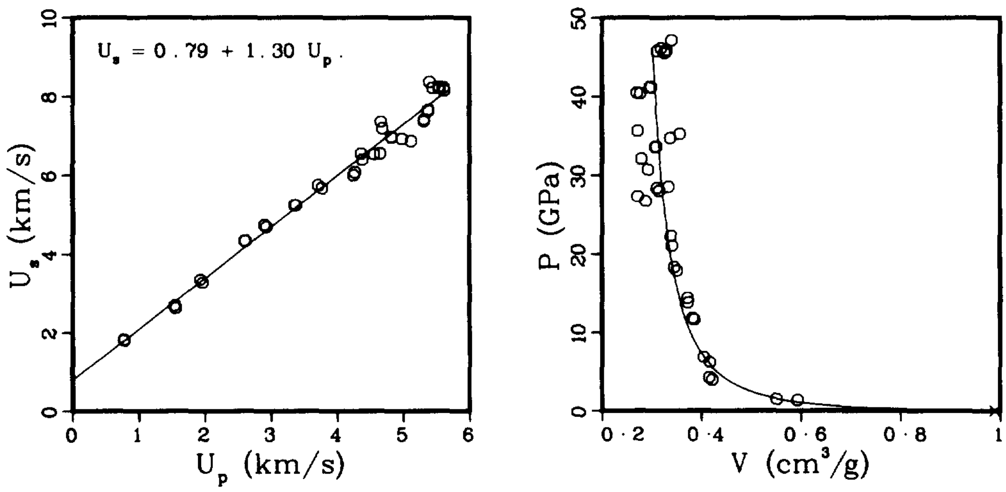


CARBON , graphite , ρ_0 = 1.0 g/cm³ .

Average ρ_0 = 1.011 g/cm³ .

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp	
1.046	1.822	.772	1.471	.5509	1.815	.576	im1	o
.955	1.799	.780	1.340	.5931	1.686	.566	im1	o
1.026	2.688	1.541	4.250	.4159	2.404	.427	im1	o
.960	2.623	1.560	3.928	.4221	2.369	.405	im1	o
1.051	3.351	1.928	6.790	.4040	2.475	.425	im1	o
.960	3.271	1.963	6.164	.4165	2.401	.400	im1	o
1.045	4.339	2.605	11.812	.3824	2.615	.400	im1	o
1.027	4.330	2.614	11.624	.3859	2.591	.396	im1	o
1.045	4.737	2.899	14.351	.3713	2.693	.388	im1	o
1.005	4.685	2.927	13.782	.3734	2.678	.375	im1	o
1.044	5.242	3.354	18.355	.3450	2.899	.360	im1	o
1.013	5.235	3.375	17.898	.3507	2.851	.355	im1	o
1.043	5.747	3.717	22.280	.3387	2.953	.353	im1	o
.983	5.674	3.772	21.038	.3410	2.932	.335	im1	o
1.072	5.999	4.251	27.338	.2718	3.679	.291	im1	o
1.029	6.074	4.276	26.726	.2877	3.476	.296	im1	o
1.000	6.546	4.360	28.541	.3339	2.995	.334	im1	o
1.000	6.396	4.381	28.021	.3150	3.174	.315	im1	o
1.032	6.531	4.555	30.701	.2932	3.411	.303	im1	o
.933	6.546	4.649	28.393	.3106	3.220	.290	im1	o
1.026	7.356	4.665	35.208	.3566	2.805	.366	im1	o
1.031	7.182	4.685	34.691	.3372	2.965	.348	im1	o

(Continued)



CARBON, graphite, ρ_0 = 1.0 g/cm^3.
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.000	6.975	4.821	33.626	.3088	3.238	.309	im1 o
1.000	6.960	4.823	33.568	.3070	3.257	.307	im1 o
1.033	6.922	4.979	35.602	.2717	3.680	.281	im1 o
.913	6.865	5.118	32.078	.2787	3.588	.254	im1 o
1.034	7.370	5.313	40.488	.2699	3.705	.279	im1 o
1.024	7.415	5.317	40.372	.2763	3.619	.283	im1 o
1.000	7.665	5.378	41.222	.2984	3.352	.298	im1 o
1.000	7.638	5.382	41.108	.2954	3.386	.295	im1 o
1.044	8.372	5.395	47.154	.3406	2.936	.356	im1 o
1.026	8.221	5.439	45.877	.3298	3.032	.338	im1 o
1.000	8.246	5.537	45.658	.3285	3.044	.329	im1 o
1.000	8.223	5.541	45.564	.3262	3.066	.326	im1 o
1.000	8.231	5.605	46.135	.3190	3.134	.319	im1 o
1.000	8.151	5.617	45.784	.3109	3.217	.311	im1 o

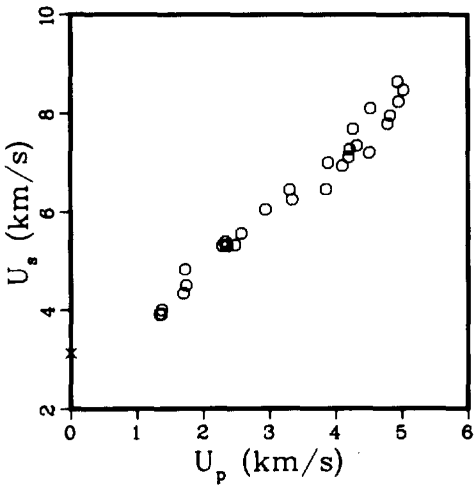
CARBON , vitreous

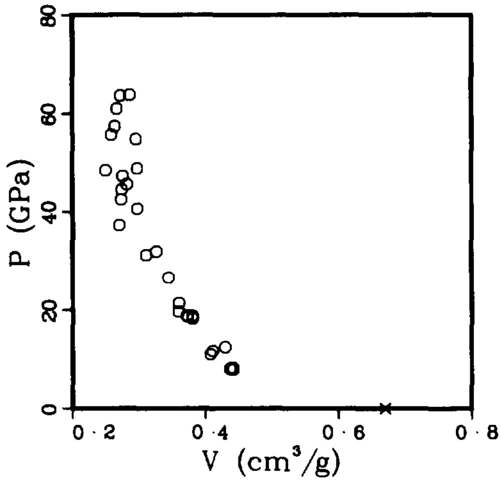
Average ρ_0 = 1.492 g/cm^3.

Sound velocities longitudinal 4.59 km/s.
shear 2.91 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.492	3.127	0.000	0.000	.6702	1.492	1.000	ssp ×
1.492	3.915	1.338	7.815	.4412	2.267	.658	iml o
1.493	3.919	1.364	7.981	.4367	2.290	.652	iml o
1.493	4.006	1.371	8.200	.4406	2.270	.658	iml o
1.492	4.338	1.701	11.009	.4074	2.454	.608	iml o
1.494	4.831	1.730	12.486	.4296	2.327	.642	iml o
1.492	4.500	1.741	11.689	.4109	2.433	.613	iml o
1.492	5.310	2.297	18.198	.3803	2.629	.567	iml o
1.491	5.390	2.335	18.765	.3801	2.631	.567	iml o
1.494	5.322	2.365	18.804	.3719	2.689	.556	iml o
1.488	5.307	2.365	18.676	.3726	2.684	.554	iml o
1.483	5.325	2.488	19.648	.3593	2.784	.533	iml o
1.492	5.563	2.575	21.372	.3600	2.778	.537	iml o
1.492	6.052	2.942	26.565	.3444	2.903	.514	iml o
1.492	6.458	3.311	31.903	.3266	3.062	.487	iml o
1.492	6.248	3.347	31.201	.3112	3.213	.464	iml o
1.492	6.468	3.861	37.260	.2701	3.702	.403	iml o
1.492	7.005	3.894	40.698	.2977	3.360	.444	iml o
1.492	6.938	4.108	42.524	.2734	3.658	.408	iml o
1.492	7.114	4.203	44.611	.2743	3.646	.409	iml o

(Continued)





CARBON , vitreous
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.492	7.273	4.211	45.695	.2822	3.544	.421	iml o
1.494	7.683	4.264	48.944	.2979	3.357	.445	iml o
1.492	7.345	4.320	47.342	.2760	3.623	.412	iml o
1.492	7.204	4.513	48.507	.2504	3.994	.374	iml o
1.492	8.100	4.531	54.758	.2953	3.386	.441	iml o
1.492	7.791	4.789	55.668	.2583	3.872	.385	iml o
1.492	7.959	4.829	57.344	.2636	3.794	.393	iml o
1.492	8.643	4.945	63.768	.2868	3.487	.428	iml o
1.493	8.241	4.957	60.990	.2669	3.747	.398	iml o
1.492	8.477	5.031	63.630	.2725	3.670	.407	iml o

CERIUM

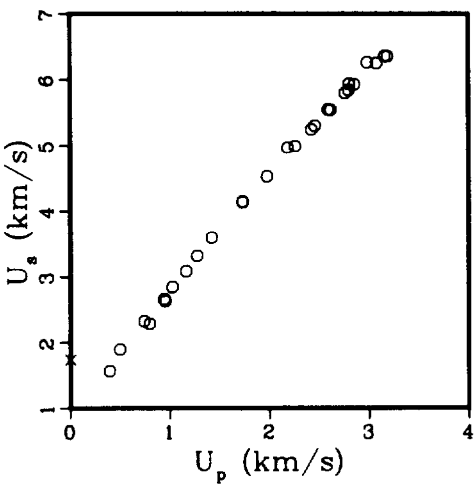
Average ρ_0 = 6.743 g/cm^3.

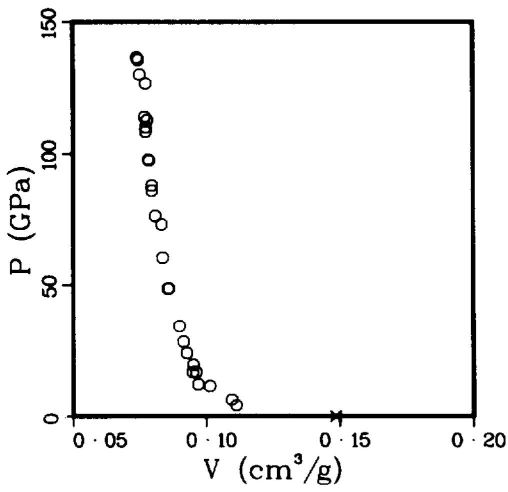
Sound velocities longitudinal 2.33 km/s.
shear 1.34 km/s.

Reference 15

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
6.731	1.742	0.000	0.000	.1486	6.731	1.000	ssp	×
6.735	1.571	.394	4.169	.1112	8.990	.749	iml	o
6.736	1.898	.498	6.367	.1095	9.132	.738	iml	o
6.727	2.326	.740	11.579	.1014	9.866	.682	iml	o
6.732	2.287	.795	12.240	.0969	10.319	.652	iml	o
6.730	2.667	.941	16.890	.0962	10.399	.647	iml	o
6.726	2.636	.954	16.914	.0949	10.541	.638	iml	o
6.734	2.850	1.025	19.672	.0951	10.516	.640	iml	o
6.719	3.086	1.164	24.135	.0927	10.788	.623	iml	o
6.734	3.318	1.275	28.488	.0914	10.937	.616	iml	o
6.726	3.596	1.421	34.369	.0899	11.120	.605	iml	o
6.773	4.149	1.733	48.699	.0860	11.631	.582	iml	o
6.778	4.135	1.735	48.627	.0856	11.678	.580	iml	o
6.730	4.528	1.979	60.307	.0836	11.955	.563	iml	o
6.724	4.970	2.187	73.086	.0833	12.008	.560	iml	o
6.759	4.992	2.262	76.322	.0809	12.359	.547	iml	o
6.750	5.245	2.425	85.854	.0797	12.555	.538	iml	o
6.732	5.302	2.460	87.805	.0796	12.559	.536	iml	o
6.770	5.549	2.593	97.411	.0787	12.709	.533	iml	o

(Continued)





CERIUM
(Continued)

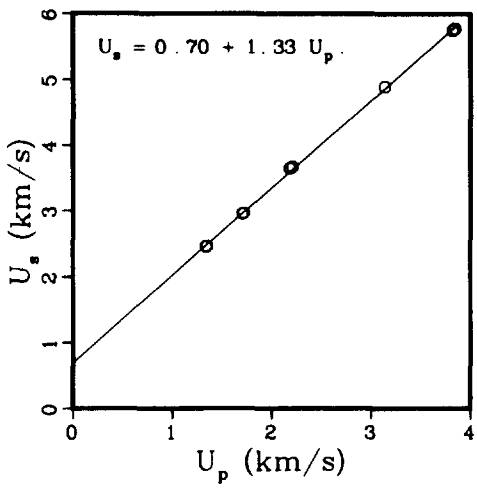
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.739	5.542	2.618	97.776	.0783	12.773	.528	iml o
6.764	5.797	2.765	108.418	.0773	12.932	.523	iml o
6.731	5.842	2.801	110.142	.0773	12.931	.521	iml o
6.772	5.937	2.805	112.776	.0779	12.837	.528	iml o
6.731	5.926	2.858	114.000	.0769	13.001	.518	iml o
6.771	6.268	2.986	126.728	.0773	12.931	.524	iml o
6.756	6.256	3.080	130.178	.0751	13.308	.508	iml o
6.750	6.362	3.161	135.744	.0745	13.416	.503	iml o
6.732	6.359	3.191	136.603	.0740	13.513	.498	iml o

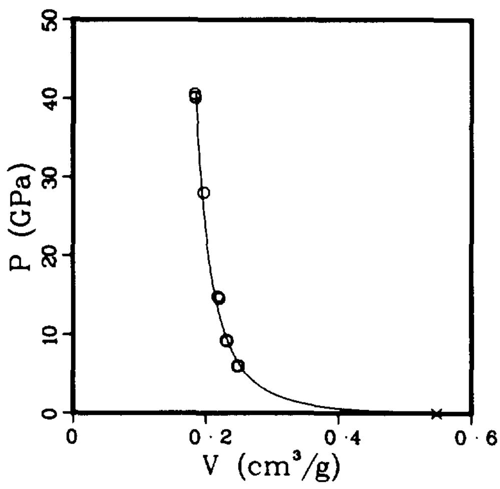
CESIUM

Average ρ_0 = 1.826 g/cm^3.

References 6, 16

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.826	2.463	1.342	6.036	.2493	4.012	.455	iml o
1.826	2.459	1.349	6.057	.2472	4.045	.451	iml o
1.826	2.958	1.704	9.204	.2322	4.307	.424	iml o
1.826	2.962	1.716	9.281	.2304	4.341	.421	iml o
1.826	3.651	2.182	14.547	.2203	4.538	.402	iml o
1.826	3.674	2.210	14.826	.2182	4.582	.398	iml o
1.826	4.894	3.137	28.034	.1966	5.086	.359	iml o
1.826	5.752	3.821	40.133	.1838	5.439	.336	iml o
1.826	5.777	3.846	40.571	.1831	5.463	.334	iml o



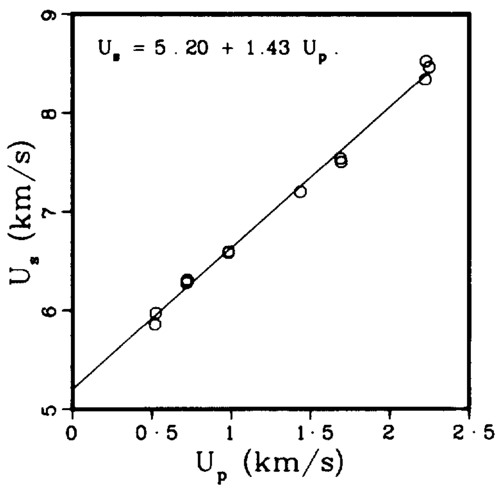


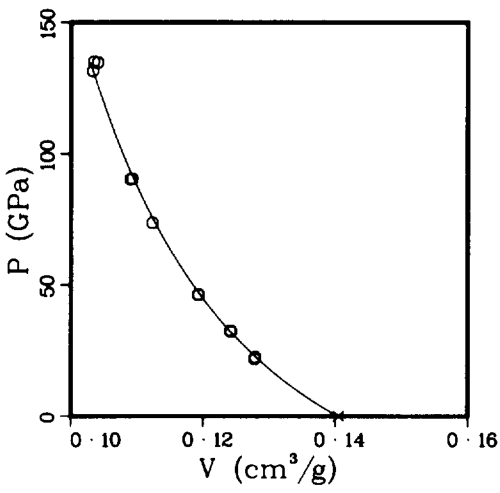
CHROMIUM

Average ρ_0 = 7.119 g/cm^3.

References 4, 6, 11, 12, 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.130	5.852	.519	21.655	.1278	7.824	.911	iml o
7.130	5.971	.524	22.308	.1279	7.816	.912	iml o
7.130	6.281	.718	32.155	.1242	8.050	.886	iml o
7.130	6.279	.719	32.189	.1242	8.052	.885	iml o
7.130	6.305	.722	32.457	.1242	8.052	.885	iml o
7.130	6.294	.723	32.446	.1241	8.055	.885	iml o
7.130	6.580	.983	46.118	.1193	8.382	.851	iml o
7.130	6.594	.984	46.263	.1193	8.381	.851	iml o
7.123	7.199	1.437	73.687	.1124	8.899	.800	iml o
7.100	7.541	1.689	90.431	.1093	9.149	.776	iml o
7.100	7.502	1.694	90.230	.1090	9.171	.774	iml o
7.100	8.339	2.223	131.617	.1033	9.681	.733	iml o
7.100	8.527	2.227	134.826	.1041	9.610	.739	iml o
7.100	8.467	2.248	135.140	.1035	9.666	.734	iml o





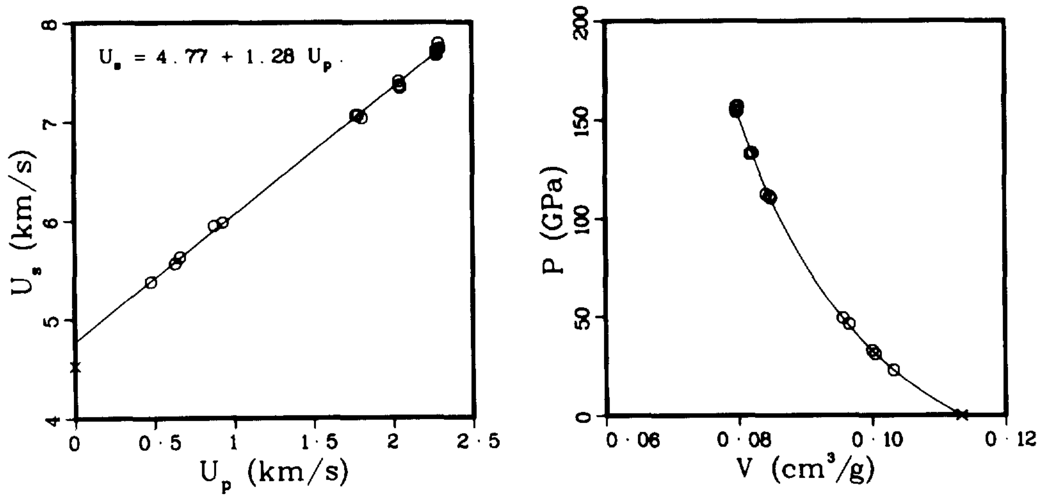
COBALT

Average ρ_0 = 8.820 g/cm^3.

Sound velocities longitudinal 5.73 km/s.
shear 3.04 km/s.

References 4, 5, 6, 11, 12

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
8.821	4.529	0.000	0.000	.1134	8.821	1.000	ssp ×
8.820	5.380	.482	22.872	.1032	9.688	.910	iml o
8.820	5.565	.632	31.021	.1005	9.950	.886	iml o
8.820	5.628	.662	32.861	.1000	9.996	.882	iml o
8.820	5.947	.879	46.106	.0966	10.350	.852	iml o
8.820	5.980	.933	49.210	.0957	10.450	.844	iml o
8.820	7.064	1.770	110.279	.0850	11.769	.749	iml o
8.820	7.064	1.785	111.213	.0847	11.802	.747	iml o
8.820	7.035	1.810	112.308	.0842	11.875	.743	iml o
8.820	7.407	2.039	133.207	.0822	12.170	.725	iml o
8.820	7.365	2.045	132.842	.0819	12.210	.722	iml o
8.820	7.341	2.048	132.603	.0817	12.233	.721	iml o
8.820	7.717	2.274	154.777	.0800	12.505	.705	iml o
8.820	7.696	2.277	154.560	.0798	12.526	.704	iml o
8.820	7.672	2.278	154.146	.0797	12.545	.703	iml o
8.820	7.789	2.289	157.252	.0801	12.491	.706	iml o
8.820	7.736	2.297	156.728	.0797	12.545	.703	iml o



COPPER

Average ρ_0 = 8.924 g/cm^3.

Sound velocities longitudinal 4.76 km/s.
shear 2.33 km/s.

References 4, 5, 6, 11, 12, 13, 17

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
8.929	3.927	0.000	0.000	.1120	8.929	1.000	ssp	×
8.920	4.314	.210	8.081	.1067	9.376	.951	im1	○
8.925	4.215	.211	7.938	.1064	9.395	.950	im1	○
8.900	4.217	.223	8.369	.1064	9.397	.947	im1	○
8.928	4.341	.281	10.891	.1048	9.546	.935	im1	○
8.925	4.352	.282	10.953	.1048	9.543	.935	im1	○
8.920	4.321	.286	11.023	.1047	9.552	.934	im1	○
8.920	4.350	.289	11.214	.1047	9.555	.934	im1	○
8.925	4.378	.301	11.761	.1043	9.584	.931	im1	○
8.930	4.303	.302	11.605	.1041	9.604	.930	im1	○
8.930	4.316	.312	12.025	.1039	9.626	.928	im1	○
8.925	4.512	.395	15.906	.1022	9.781	.912	im1	○
8.928	4.501	.398	15.994	.1021	9.794	.912	im1	○
8.930	4.477	.406	16.232	.1018	9.821	.909	sp1	⊞
8.925	4.532	.407	16.462	.1020	9.806	.910	im1	○
8.925	4.494	.409	16.405	.1018	9.819	.909	im1	○
8.931	4.566	.413	16.842	.1018	9.819	.910	sp1	⊞
8.933	4.471	.434	17.334	.1011	9.893	.903	im1	○
8.933	4.501	.439	17.651	.1010	9.898	.902	im1	○

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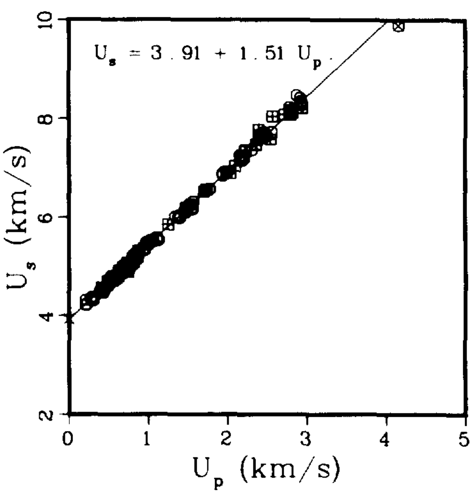

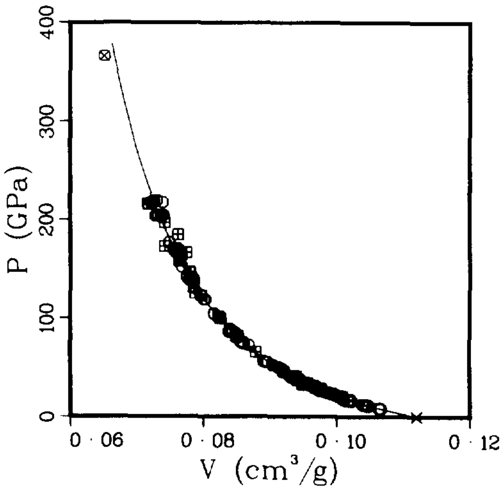

COPPER
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ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
8.923	4.599	.483	19.821	.1003	9.970	.895	im1	○
8.923	4.594	.483	19.799	.1003	9.971	.895	im1	○
8.890	4.717	.484	20.296	.1009	9.906	.897	sf2	⊠
8.900	4.713	.488	20.470	.1007	9.928	.896	im1	○
8.900	4.687	.490	20.440	.1006	9.939	.895	im1	○
8.899	4.712	.522	21.889	.0999	10.008	.889	im1	○
8.924	4.732	.522	22.043	.0997	10.030	.890	im1	○
8.925	4.802	.531	22.758	.0997	10.035	.889	im1	○
8.920	4.746	.535	22.649	.0995	10.053	.887	im1	○
8.925	4.704	.538	22.587	.0992	10.078	.886	im1	○
8.900	4.711	.549	23.018	.0993	10.074	.883	im1	○
8.930	4.769	.562	23.934	.0988	10.123	.882	im1	○
8.918	4.713	.576	24.210	.0984	10.160	.878	im1	○
8.930	4.801	.609	26.110	.0978	10.227	.873	im1	○
8.930	4.792	.610	26.103	.0977	10.233	.873	im1	○
8.923	4.807	.618	26.508	.0977	10.239	.871	im1	○
8.923	4.798	.618	26.458	.0976	10.242	.871	im1	○
8.930	4.765	.620	26.382	.0974	10.266	.870	im1	○
8.928	4.886	.624	27.220	.0977	10.235	.872	sp1	⊞
8.930	4.910	.637	27.930	.0975	10.261	.870	sp1	⊞
8.933	4.854	.662	28.705	.0967	10.344	.864	im1	○
8.930	5.011	.679	30.384	.0968	10.330	.864	im1	○
8.930	4.995	.680	30.332	.0967	10.337	.864	im1	○
8.900	5.009	.689	30.716	.0969	10.319	.862	im1	○
8.900	4.955	.709	31.267	.0963	10.386	.857	im1	○
8.918	5.039	.728	32.715	.0959	10.424	.856	im1	○
8.930	4.909	.732	32.089	.0953	10.495	.851	sp1	⊞
8.930	5.067	.737	33.348	.0957	10.450	.855	sp1	⊞
8.930	4.888	.744	32.475	.0949	10.533	.848	sp1	⊞
8.924	5.061	.749	33.828	.0955	10.474	.852	im1	○
8.930	4.939	.757	33.388	.0948	10.546	.847	im1	○
8.933	5.067	.786	35.577	.0946	10.573	.845	im1	○
8.925	5.077	.787	35.661	.0947	10.562	.845	im1	○
8.925	5.066	.788	35.629	.0946	10.569	.844	im1	○
8.933	5.195	.800	37.126	.0947	10.559	.846	im1	○
8.933	5.180	.807	37.342	.0945	10.582	.844	im1	○
8.930	5.055	.816	36.835	.0939	10.649	.839	im1	○
8.930	5.055	.816	36.835	.0939	10.649	.839	im1	○
8.921	5.239	.832	38.885	.0943	10.605	.841	im1	○
8.918	5.238	.832	38.865	.0943	10.602	.841	im1	○
8.933	5.222	.832	38.811	.0941	10.626	.841	im1	○
8.930	5.185	.846	39.172	.0937	10.671	.837	sp1	⊞
8.930	5.223	.864	40.298	.0935	10.700	.835	im1	○

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COPPER
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
8.930	5.215	.865	40.283	.0934	10.706	.834	im1	○
8.933	5.154	.868	39.963	.0931	10.742	.832	im1	○
8.897	5.318	.870	41.163	.0940	10.637	.836	sf2	⊠
8.933	5.326	.940	44.723	.0922	10.848	.824	im1	○
8.930	5.329	.942	44.828	.0922	10.847	.823	im1	○
8.933	5.332	.945	45.011	.0921	10.857	.823	im1	○
8.930	5.362	.952	45.584	.0921	10.858	.822	sp1	⊞
8.930	5.473	.979	47.848	.0920	10.875	.821	im1	○
8.930	5.471	.980	47.879	.0919	10.879	.821	im1	○
8.899	5.442	.995	48.186	.0918	10.890	.817	im1	○
8.900	5.442	1.008	48.821	.0915	10.923	.815	im1	○
8.918	5.515	1.026	50.462	.0913	10.956	.814	im1	○
8.924	5.501	1.059	51.987	.0905	11.052	.807	im1	○
8.930	5.528	1.062	52.426	.0905	11.054	.808	im1	○
8.925	5.580	1.110	55.280	.0898	11.141	.801	im1	○
8.925	5.526	1.116	55.041	.0894	11.184	.798	im1	○
8.930	5.531	1.132	55.912	.0891	11.228	.795	im1	○
8.930	5.840	1.254	65.398	.0879	11.372	.785	sp1	⊞
8.930	6.010	1.345	72.185	.0869	11.505	.776	im1	○
8.929	5.982	1.382	73.817	.0861	11.612	.769	im1	○
8.930	6.028	1.395	75.093	.0861	11.619	.769	im1	○
8.930	6.018	1.396	75.022	.0860	11.627	.768	im1	○
8.924	5.981	1.403	74.884	.0858	11.659	.765	im1	○
8.928	6.120	1.464	79.992	.0852	11.735	.761	im1	○
8.928	6.084	1.469	79.793	.0850	11.770	.759	im1	○
8.930	6.187	1.480	81.770	.0852	11.738	.761	sp1	⊞
8.930	6.184	1.496	82.614	.0849	11.780	.758	im1	○
8.920	6.250	1.519	84.684	.0849	11.784	.757	im1	○
8.900	6.252	1.554	86.469	.0844	11.844	.751	im1	○
8.900	6.188	1.559	85.859	.0841	11.897	.748	im1	○
8.900	6.156	1.564	85.689	.0838	11.931	.746	im1	○
8.930	6.310	1.573	88.636	.0841	11.895	.751	im1	○
8.930	6.511	1.707	99.250	.0826	12.103	.738	sp1	⊞
8.928	6.552	1.736	101.550	.0823	12.146	.735	sp1	⊞
8.928	6.563	1.777	104.122	.0817	12.243	.729	im1	○
8.928	6.558	1.777	104.043	.0817	12.246	.729	im1	○
8.930	6.875	1.939	119.042	.0804	12.438	.718	im1	○
8.930	6.839	1.943	118.663	.0802	12.474	.716	im1	○
8.930	6.913	1.990	122.849	.0797	12.540	.712	sp1	⊞
8.918	6.916	2.005	123.662	.0796	12.559	.710	im1	○
8.930	6.885	2.037	125.241	.0789	12.682	.704	sp1	⊞
8.930	7.033	2.100	131.890	.0785	12.732	.701	sp1	⊞
8.928	7.241	2.161	139.704	.0786	12.726	.702	im1	○

(Continued)

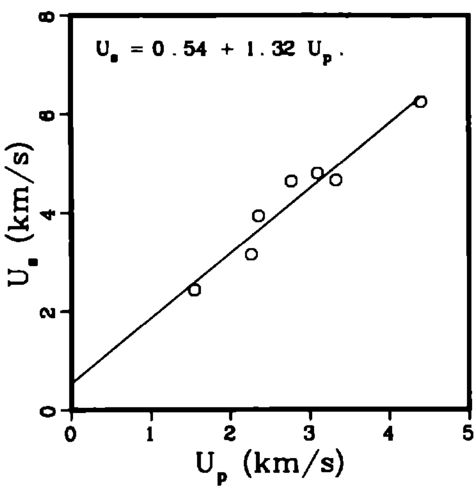
COPPER
(Continued)

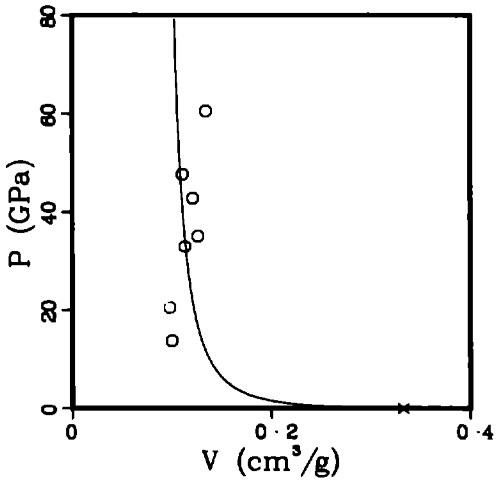
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
8.918	7.232	2.171	140.019	.0785	12.744	.700	im1 ○
8.928	7.144	2.177	138.853	.0779	12.841	.695	im1 ○
8.900	7.176	2.180	139.229	.0782	12.784	.696	im1 ○
8.900	7.203	2.182	139.881	.0783	12.768	.697	im1 ○
8.900	7.232	2.193	141.152	.0783	12.773	.697	im1 ○
8.929	7.174	2.208	141.437	.0775	12.899	.692	im1 ○
8.918	7.330	2.229	145.707	.0780	12.815	.696	sp1 ⊞
8.933	7.354	2.234	146.759	.0779	12.831	.696	sp1 ⊞
8.929	7.360	2.313	152.004	.0768	13.021	.686	im1 ○
8.928	7.463	2.368	157.779	.0765	13.077	.683	sp1 ⊞
8.930	7.468	2.369	157.987	.0765	13.079	.683	sp1 ⊞
8.929	7.587	2.390	161.909	.0767	13.035	.685	im1 ○
8.931	7.776	2.395	166.327	.0775	12.906	.692	sp1 ⊞
8.924	7.655	2.415	164.976	.0767	13.037	.685	im1 ○
8.929	7.654	2.425	165.731	.0765	13.070	.683	im1 ○
8.924	7.603	2.461	166.977	.0758	13.195	.676	im1 ○
8.931	7.725	2.465	170.065	.0762	13.116	.681	im1 ○
8.928	7.667	2.476	169.485	.0758	13.186	.677	im1 ○
8.928	7.652	2.478	169.290	.0757	13.204	.676	im1 ○
8.929	7.679	2.485	170.386	.0758	13.201	.676	im1 ○
8.929	7.650	2.489	170.016	.0756	13.235	.675	im1 ○
8.934	7.577	2.551	172.685	.0742	13.469	.663	sp1 ⊞
8.924	7.729	2.560	176.572	.0749	13.344	.669	im1 ○
8.927	8.044	2.569	184.477	.0762	13.116	.681	sp1 ⊞
8.932	8.084	2.723	196.618	.0742	13.469	.663	sp1 ⊞
8.929	8.228	2.784	204.534	.0741	13.495	.662	im1 ○
8.929	8.170	2.790	203.530	.0737	13.559	.659	im1 ○
8.929	8.164	2.791	203.454	.0737	13.567	.658	im1 ○
8.929	8.142	2.812	204.432	.0733	13.640	.655	im1 ○
8.929	8.103	2.817	203.815	.0731	13.687	.652	im1 ○
8.929	8.092	2.819	203.683	.0730	13.703	.652	im1 ○
8.929	8.076	2.821	203.424	.0729	13.722	.651	im1 ○
8.930	8.470	2.877	217.608	.0739	13.524	.660	im1 ○
8.929	8.415	2.922	219.552	.0731	13.679	.653	im1 ○
8.929	8.347	2.931	218.448	.0727	13.761	.649	im1 ○
8.929	8.322	2.935	218.091	.0725	13.794	.647	im1 ○
8.929	8.279	2.941	217.408	.0722	13.848	.645	im1 ○
8.930	8.213	2.942	215.772	.0719	13.914	.642	sp1 ⊞
8.930	8.215	2.946	216.118	.0718	13.923	.641	sp1 ⊞
8.895	9.890	4.161	366.050	.0651	15.355	.579	sf2 ⊗

COPPER, powdered, unpressed

Average ρ_0 = 3.007 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.628	2.432	1.549	13.667	.1001	9.992	.363	iml o
2.870	3.152	2.265	20.490	.0981	10.199	.281	iml o
3.550	3.939	2.357	32.959	.1131	8.839	.402	iml o
3.329	4.641	2.770	42.796	.1211	8.258	.403	iml o
3.206	4.802	3.097	47.679	.1107	9.029	.355	iml o
2.263	4.662	3.330	35.132	.1263	7.921	.286	iml o
2.202	6.248	4.400	60.536	.1343	7.445	.296	iml o





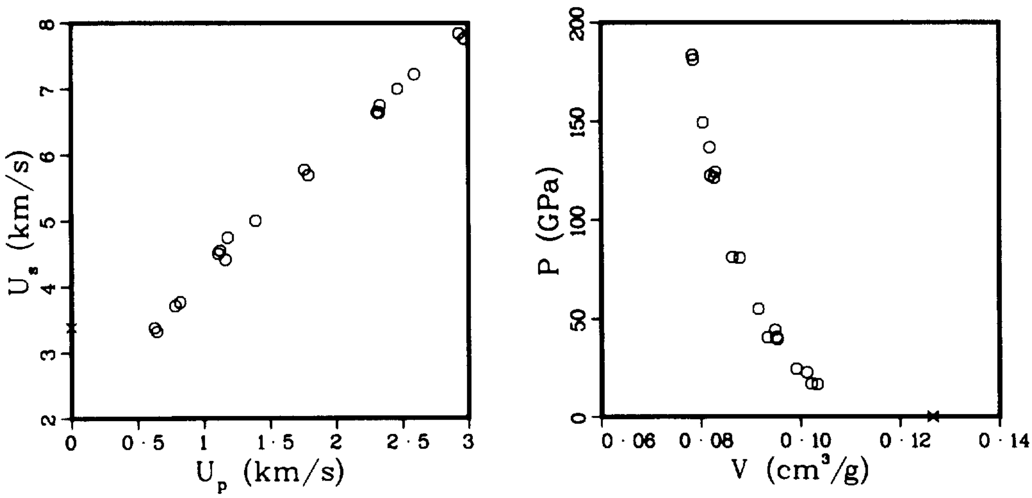
COPPER , sintered , ρ_0 = 7.9 g/cm^3 .

Average ρ_0 = 7.900 g/cm^3 .

Sound velocities longitudinal 4.23 km/s .
shear 2.19 km/s .

References 13 , 17 , 18 , 19

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.903	3.391	0.000	0.000	.1265	7.903	1.000	ssp ×
7.877	3.381	.627	16.698	.1034	9.670	.815	iml ○
7.885	3.324	.646	16.931	.1022	9.787	.806	iml ○
7.790	3.715	.784	22.689	.1013	9.874	.789	iml ○
7.890	3.771	.821	24.427	.0991	10.086	.782	iml ○
7.897	4.501	1.110	39.454	.0954	10.482	.753	iml ○
7.908	4.551	1.124	40.452	.0952	10.502	.753	iml ○
7.876	4.408	1.165	40.446	.0934	10.705	.736	iml ○
7.914	4.750	1.182	44.433	.0949	10.536	.751	iml ○
7.880	5.005	1.393	54.939	.0916	10.919	.722	iml ○
7.910	5.776	1.762	80.503	.0879	11.382	.695	iml ○
7.932	5.688	1.792	80.850	.0864	11.580	.685	iml ○
7.881	6.647	2.313	121.167	.0827	12.087	.652	iml ○
7.927	6.637	2.326	122.374	.0819	12.204	.650	iml ○
7.894	6.753	2.332	124.315	.0829	12.058	.655	iml ○
7.915	7.006	2.467	136.801	.0819	12.217	.648	iml ○
7.968	7.229	2.593	149.359	.0805	12.425	.641	iml ○
7.995	7.843	2.929	183.662	.0784	12.760	.627	iml ○
7.866	7.764	2.969	181.322	.0785	12.737	.618	iml ○



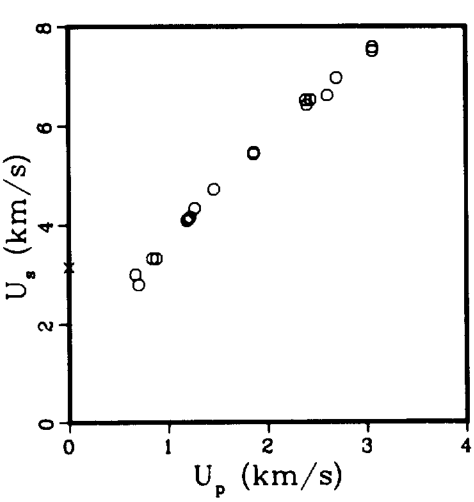
COPPER, sintered, ρ_0 = 7.3 g/cm^3.

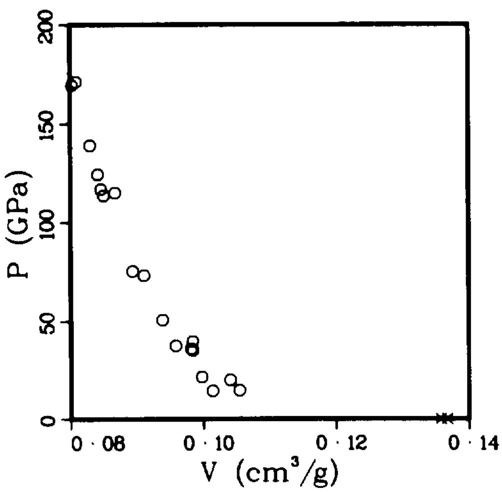
Average ρ_0 = 7.315 g/cm^3.

Sound velocities longitudinal 3.95 km/s.
shear 2.07 km/s.

References 5, 13, 17, 18, 19

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.365	3.145	0.000	0.000	.1358	7.365	1.000	ssp ×
7.368	2.997	.669	14.773	.1054	9.485	.777	iml o
7.384	2.789	.701	14.436	.1014	9.863	.749	iml o
7.182	3.318	.839	19.993	.1040	9.613	.747	iml o
7.364	3.316	.880	21.489	.0998	10.024	.735	iml o
7.208	4.088	1.188	35.006	.0984	10.161	.709	iml o
7.201	4.118	1.207	35.792	.0982	10.187	.707	iml o
7.364	4.151	1.221	37.323	.0959	10.433	.706	iml o
7.193	4.333	1.267	39.489	.0984	10.165	.708	iml o
7.354	4.717	1.461	50.680	.0939	10.654	.690	iml o
7.216	5.436	1.864	73.118	.0911	10.982	.657	iml o
7.372	5.471	1.867	75.300	.0894	11.191	.659	iml o
7.489	6.523	2.390	116.753	.0846	11.820	.634	iml o
7.366	6.423	2.401	113.596	.0850	11.763	.626	iml o
7.219	6.526	2.440	114.951	.0867	11.530	.626	iml o
7.201	6.617	2.607	124.221	.0842	11.883	.606	iml o
7.384	6.977	2.701	139.151	.0830	12.048	.613	iml o
7.376	7.510	3.063	169.671	.0803	12.456	.592	iml o
7.374	7.590	3.063	171.432	.0809	12.363	.596	iml o





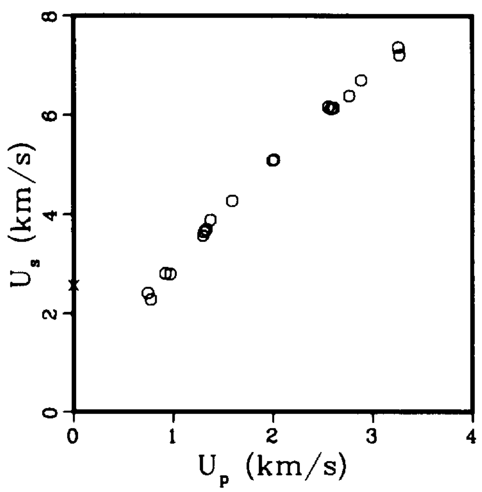
COPPER, sintered, ρ_0 = 6.3 g/cm^3.

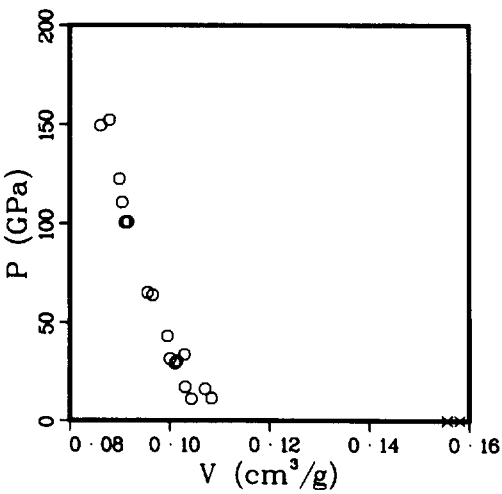
Average ρ_0 = 6.326 g/cm^3.

Sound velocities longitudinal 3.30 km/s.
shear 1.80 km/s.

References 13, 17, 18, 19

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
6.428	2.563	0.000	0.000	.1556	6.428	1.000	ssp	×
6.372	2.409	.745	11.436	.1084	9.225	.691	iml	o
6.322	2.280	.776	11.185	.1043	9.584	.660	iml	o
6.270	2.804	.921	16.192	.1071	9.337	.672	iml	o
6.325	2.792	.971	17.147	.1031	9.698	.652	iml	o
6.290	3.565	1.298	29.106	.1011	9.891	.636	iml	o
6.309	3.645	1.311	30.148	.1015	9.853	.640	iml	o
6.395	3.692	1.329	31.378	.1001	9.992	.640	iml	o
6.279	3.886	1.373	33.501	.1030	9.710	.647	iml	o
6.300	4.271	1.591	42.810	.0996	10.040	.627	iml	o
6.278	5.081	1.999	63.765	.0966	10.350	.607	iml	o
6.332	5.102	2.014	65.064	.0956	10.462	.605	iml	o
6.392	6.166	2.557	100.779	.0916	10.921	.585	iml	o
6.350	6.128	2.585	100.590	.0910	10.983	.578	iml	o
6.278	6.144	2.611	100.712	.0916	10.918	.575	iml	o
6.264	6.386	2.766	110.645	.0905	11.050	.567	iml	o
6.327	6.701	2.887	122.401	.0900	11.116	.569	iml	o
6.342	7.369	3.258	152.260	.0880	11.368	.558	iml	o
6.343	7.211	3.269	149.522	.0862	11.603	.547	iml	o





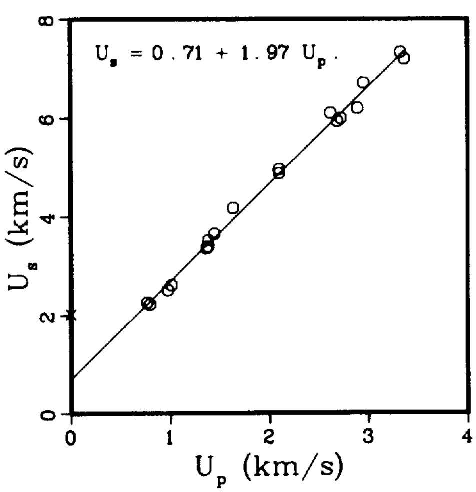
COPPER, sintered, ρ_0 = 5.7 g/cm^3.

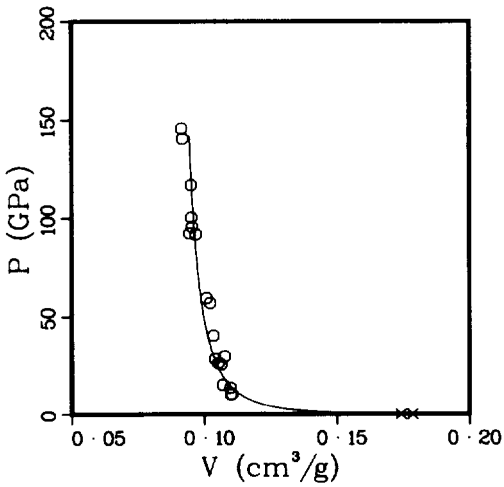
Average ρ_0 = 5.742 g/cm^3.

Sound velocities longitudinal 2.68 km/s.
shear 1.52 km/s.

References 13, 17, 18, 19

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
5.603	2.025	0.000	0.000	.1785	5.603	1.000	ssp	×
5.983	2.264	.769	10.416	.1104	9.061	.660	im1	o
5.833	2.224	.796	10.326	.1101	9.084	.642	im1	o
5.567	2.512	.977	13.663	.1098	9.110	.611	im1	o
5.718	2.613	1.015	15.165	.1070	9.350	.612	im1	o
5.564	3.353	1.368	25.522	.1064	9.399	.592	im1	o
5.830	3.520	1.385	28.422	.1040	9.612	.607	im1	o
5.605	3.382	1.386	26.273	.1053	9.497	.590	im1	o
5.605	3.651	1.447	29.611	.1077	9.285	.604	im1	o
5.876	4.175	1.637	40.159	.1035	9.666	.608	im1	o
5.712	4.955	2.100	59.436	.1009	9.913	.576	im1	o
5.557	4.872	2.103	56.936	.1023	9.777	.568	im1	o
5.978	6.104	2.621	95.640	.0955	10.477	.571	im1	o
5.785	5.934	2.690	92.343	.0945	10.582	.547	im1	o
5.627	5.992	2.725	91.879	.0969	10.320	.545	im1	o
5.598	6.197	2.893	100.361	.0952	10.500	.533	im1	o
5.892	6.716	2.952	116.813	.0951	10.513	.560	im1	o
5.972	7.335	3.327	145.738	.0915	10.929	.546	im1	o
5.801	7.203	3.365	140.605	.0919	10.887	.533	im1	o





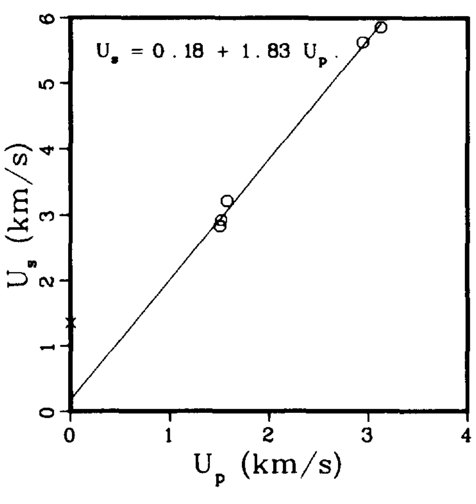
COPPER , sintered , ρ_0 = 4.5 g/cm^3 .

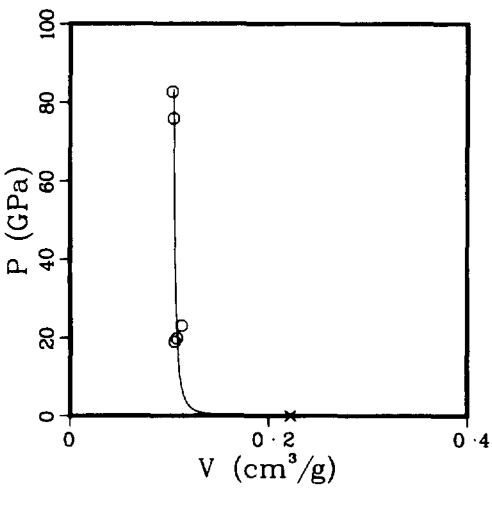
Average ρ_0 = 4.508 g/cm^3 .

Sound velocities longitudinal 1.83 km/s .
shear 1.07 km/s .

References 13 , 17 , 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.504	1.350	0.000	0.000	.2220	4.504	1.000	ssp ×
4.453	2.828	1.504	18.940	.1051	9.511	.468	im1 o
4.467	2.922	1.518	19.814	.1076	9.297	.480	im1 o
4.533	3.215	1.577	22.983	.1124	8.897	.509	im1 o
4.577	5.629	2.944	75.849	.1042	9.596	.477	im1 o
4.513	5.858	3.126	82.643	.1033	9.677	.466	im1 o



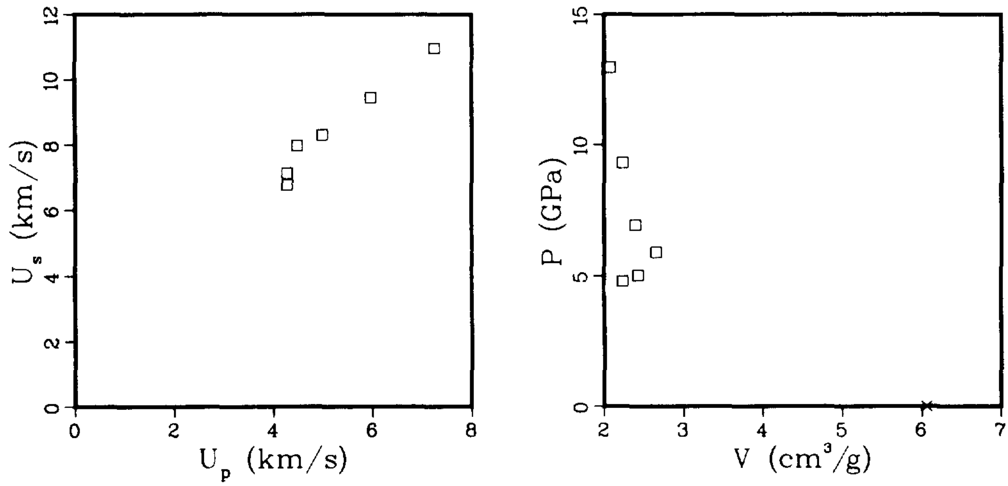


DEUTERIUM , liquid , T_0 = 20 K

Average ρ_0 = 0.165 g/cm^3 .

References 20 , 21

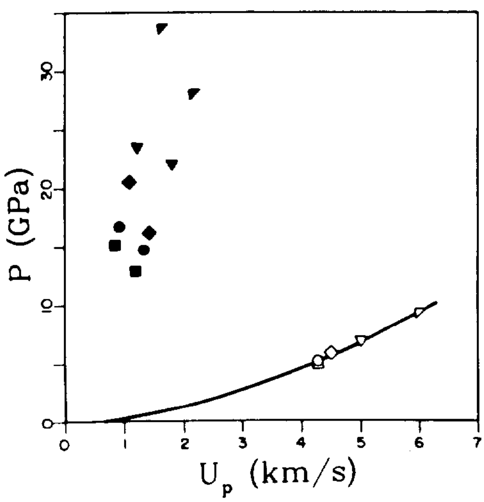
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.165	7.130	4.270	5.023	2.4310	.411	.401	im2 □
.165	6.780	4.280	4.788	2.2347	.447	.369	im2 □
.165	7.970	4.480	5.891	2.6539	.377	.438	im2 □
.167	8.310	4.990	6.925	2.3923	.418	.400	im2 □
.165	9.450	5.970	9.309	2.2318	.448	.368	im2 □
.163	10.970	7.250	12.964	2.0804	.481	.339	im2 □

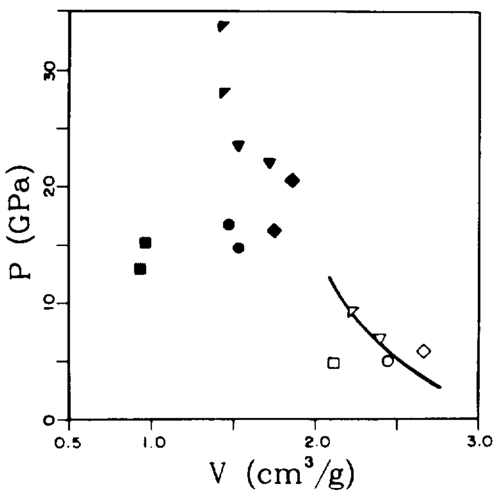


DEUTERIUM, liquid, T_0 = 20 K, reflected-shock data
ρ_0 = 0.165 g/cm³.

Initial Shock			Reflected Shock			
U_{p1} (km/s)	V_1 (cm³/g)	P_1 (GPa)	U_{p2} (km/s)	V_2 (cm³/g)	P_2 (GPa)	Std.[a]
4.27	2.44	5.02 ○	1.31	1.53	14.73 ●	Mg
			0.90	1.47	16.76 ●	Al
4.28	2.11	4.79 □	1.18	0.93	12.93 ■	Mg
			0.83	0.97	15.16 ■	Al
4.48	2.66	5.88 ◇	1.42	1.75	16.26 ◆	Mg
			1.07	1.86	20.52 ◆	Al
4.99	2.39	6.92 ▽	1.80	1.72	22.10 ▼	Mg
			1.20	1.53	23.55 ▼	Al
5.97	2.22	9.36 ◸	2.15	1.44	28.10 ◤	Mg
			1.60	1.43	33.80 ◤	Al

[a]Standards used for reflected-shock measurements were AZ31B magnesium alloy (Mg) and 2024 aluminum alloy (Al).





DYSPROSIUM

Average ρ_0 = 8.410 g/cm^3.

Sound velocities longitudinal 3.07 km/s.
shear 1.78 km/s.

Reference 15

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
8.410	2.280	0.000	0.000	.1189	8.410	1.000	ssp	×
8.411	2.574	.328	7.101	.1037	9.639	.873	im1	o
8.400	2.673	.429	9.632	.0999	10.006	.840	im1	o
8.417	2.868	.653	15.763	.0918	10.898	.772	im1	o
8.429	2.850	.673	16.167	.0906	11.035	.764	im1	o
8.416	3.031	.842	21.478	.0858	11.653	.722	im1	o
8.426	3.103	.920	24.054	.0835	11.977	.704	im1	o
8.410	3.225	1.056	28.641	.0800	12.504	.673	im1	o
8.381	3.261	1.107	30.255	.0788	12.688	.661	im1	o
8.409	3.342	1.187	33.358	.0767	13.041	.645	im1	o
8.420	3.387	1.188	33.880	.0771	12.969	.649	im1	o
8.411	3.405	1.235	35.370	.0758	13.198	.637	im1	o
8.422	3.516	1.313	38.880	.0744	13.442	.627	im1	o
8.368	4.035	1.738	58.683	.0680	14.700	.569	im1	o
8.412	4.535	2.111	80.531	.0635	15.738	.535	im1	o
8.408	4.507	2.141	81.133	.0624	16.016	.525	im1	o
8.422	4.789	2.363	95.307	.0601	16.625	.507	im1	o
8.419	5.181	2.670	116.462	.0576	17.371	.485	im1	o
8.410	5.335	2.809	126.032	.0563	17.762	.473	im1	o

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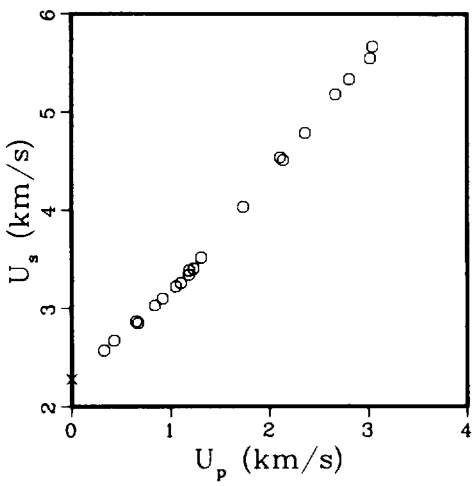
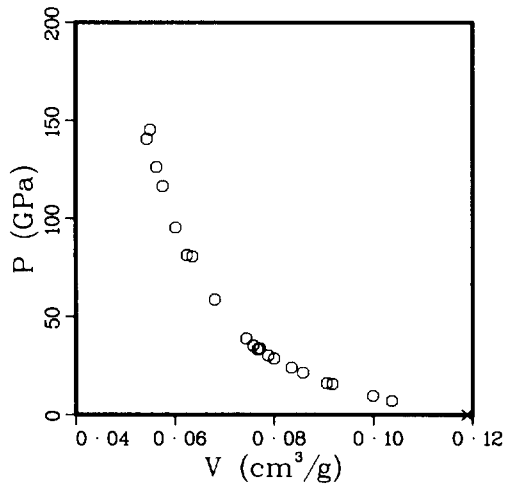




DYSPROSIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
8.386	5.551	3.021	140.630	.0543	18.399	.456	im1 ○
8.419	5.671	3.045	145.381	.0550	18.181	.463	im1 ○

ERBIUM

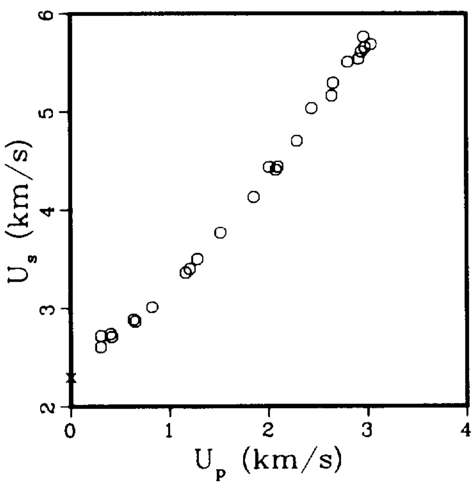
Average ρ_0 = 9.015 g/cm^3.

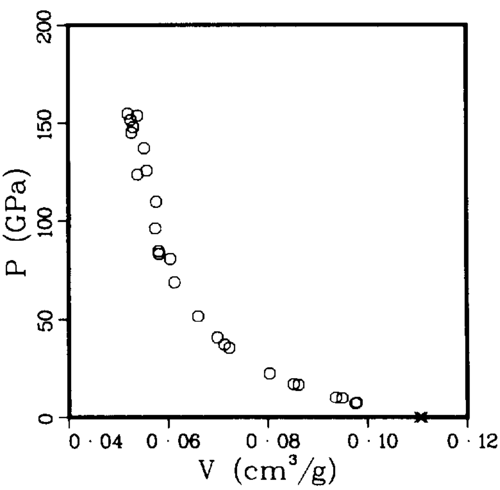
Sound velocities longitudinal 3.13 km/s.
shear 1.84 km/s.

Reference 15

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
9.058	2.298	0.000	0.000	.1104	9.058	1.000	ssp ×
9.058	2.608	.304	7.181	.0975	10.253	.883	im1 o
9.080	2.719	.304	7.505	.0978	10.223	.888	im1 o
8.992	2.739	.402	9.901	.0949	10.539	.853	im1 o
9.048	2.709	.415	10.172	.0936	10.685	.847	im1 o
9.054	2.884	.635	16.581	.0861	11.610	.780	im1 o
9.058	2.864	.655	16.992	.0852	11.744	.771	im1 o
9.046	3.011	.823	22.416	.0803	12.449	.727	im1 o
9.054	3.360	1.162	35.350	.0723	13.841	.654	im1 o
9.057	3.399	1.205	37.096	.0713	14.031	.645	im1 o
9.068	3.498	1.282	40.665	.0699	14.314	.634	im1 o
9.049	3.763	1.516	51.622	.0660	15.154	.597	im1 o
8.991	4.128	1.853	68.774	.0613	16.314	.551	im1 o
9.047	4.433	2.008	80.532	.0605	16.538	.547	im1 o
9.073	4.404	2.077	82.992	.0582	17.171	.528	im1 o
9.068	4.437	2.097	84.372	.0582	17.194	.527	im1 o
8.927	4.704	2.290	96.163	.0575	17.395	.513	im1 o
8.937	5.034	2.440	109.773	.0577	17.343	.515	im1 o
9.055	5.162	2.643	123.539	.0539	18.556	.488	im1 o

(Continued)





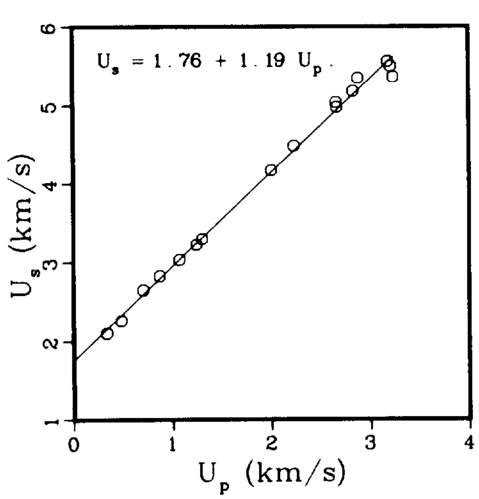
ERBIUM
(Continued)

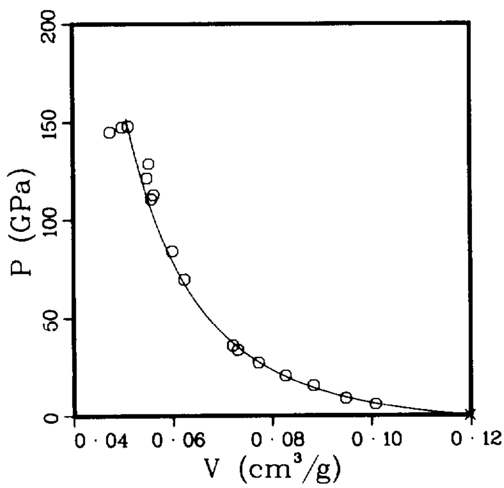
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
8.926	5.292	2.657	125.507	.0558	17.927	.498	im1	○
8.878	5.509	2.806	137.238	.0553	18.094	.491	im1	○
8.977	5.541	2.917	145.096	.0528	18.956	.474	im1	○
8.956	5.613	2.943	147.945	.0531	18.828	.476	im1	○
8.987	5.763	2.968	153.719	.0540	18.530	.485	im1	○
8.991	5.655	2.981	151.566	.0526	19.014	.473	im1	○
8.946	5.688	3.042	154.792	.0520	19.231	.465	im1	○

ERBIUM , cold-pressed , ρ_0 = 8.3 g/cm^3 .

Average ρ_0 = 8.348 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
8.344	2.105	.335	5.884	.1008	9.923	.841	im1 o
8.302	2.263	.482	9.056	.0948	10.549	.787	im1 o
8.321	2.653	.704	15.541	.0883	11.327	.735	im1 o
8.374	2.829	.871	20.634	.0827	12.099	.692	im1 o
8.367	3.034	1.073	27.239	.0772	12.945	.646	im1 o
8.407	3.224	1.244	33.718	.0731	13.689	.614	im1 o
8.393	3.296	1.302	36.018	.0721	13.873	.605	im1 o
8.332	4.170	2.004	69.628	.0623	16.041	.519	im1 o
8.371	4.485	2.234	83.873	.0600	16.679	.502	im1 o
8.392	5.041	2.662	112.613	.0562	17.782	.472	im1 o
8.326	4.978	2.667	110.539	.0558	17.935	.464	im1 o
8.257	5.182	2.833	121.218	.0549	18.215	.453	im1 o
8.345	5.350	2.882	128.669	.0553	18.090	.461	im1 o
8.352	5.562	3.184	147.909	.0512	19.535	.428	im1 o
8.345	5.503	3.212	147.503	.0499	20.045	.416	im1 o
8.345	5.364	3.239	144.986	.0475	21.065	.396	im1 o

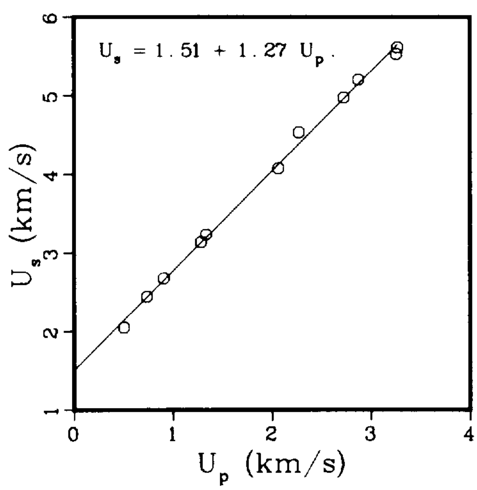


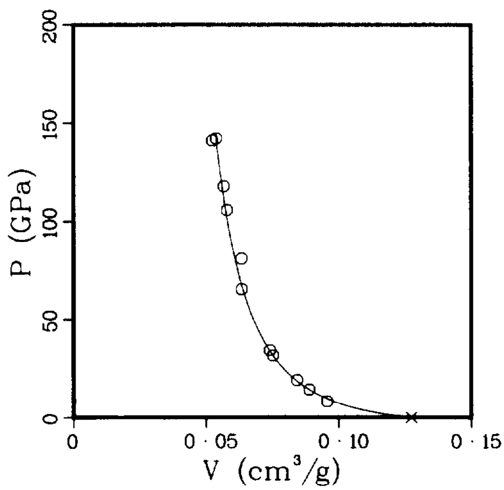


ERBIUM , cold-pressed , ρ_0 = 7.8 g/cm^3 .

Average ρ_0 = 7.849 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.884	2.050	.504	8.146	.0957	10.454	.754	iml ○
7.866	2.446	.735	14.142	.0889	11.245	.700	iml ○
7.861	2.679	.904	19.038	.0843	11.865	.663	iml ○
7.857	3.139	1.283	31.643	.0753	13.288	.591	iml ○
7.945	3.239	1.333	34.303	.0741	13.501	.588	iml ○
7.773	4.076	2.065	65.425	.0635	15.755	.493	iml ○
7.865	4.535	2.272	81.037	.0634	15.761	.499	iml ○
7.806	4.975	2.725	105.825	.0579	17.260	.452	iml ○
7.887	5.201	2.873	117.851	.0568	17.620	.448	iml ○
7.840	5.531	3.256	141.190	.0525	19.061	.411	iml ○
7.750	5.615	3.268	142.211	.0539	18.541	.418	iml ○

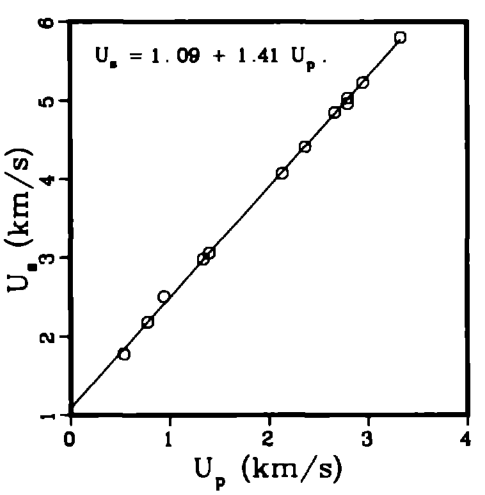


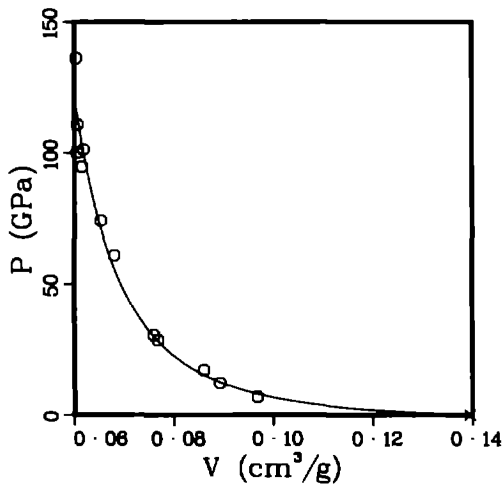


ERBIUM , cold-pressed , ρ_0 = 7.2 g/cm^3 .

Average ρ_0 = 7.169 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
7.219	1.780	.536	6.888	.0968	10.329	.699	im1	o
7.208	2.183	.778	12.242	.0893	11.199	.644	im1	o
7.256	2.512	.944	17.206	.0860	11.624	.624	im1	o
7.166	2.981	1.340	28.625	.0768	13.018	.550	im1	o
7.129	3.058	1.402	30.564	.0760	13.165	.542	im1	o
6.990	4.073	2.135	60.784	.0681	14.691	.476	im1	o
7.104	4.414	2.367	74.222	.0653	15.319	.464	im1	o
7.320	4.855	2.668	94.817	.0615	16.250	.450	im1	o
7.212	4.966	2.796	100.138	.0606	16.505	.437	im1	o
7.192	5.038	2.798	101.381	.0618	16.176	.445	im1	o
7.185	5.233	2.953	111.030	.0606	16.491	.436	im1	o
7.050	5.804	3.333	136.380	.0604	16.559	.426	im1	o



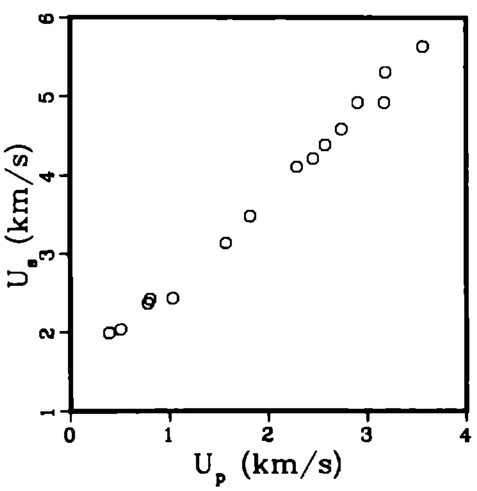


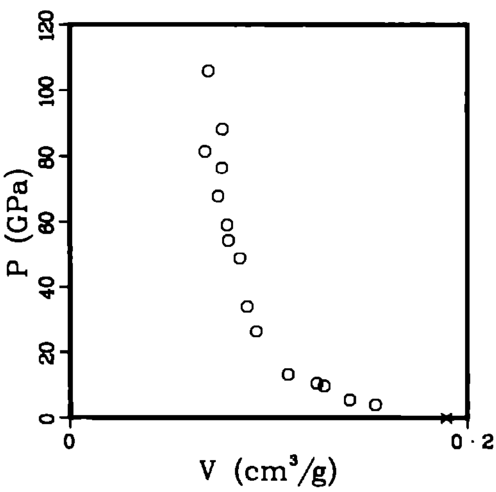
EUROPIUM

Average ρ_0 = 5.280 g/cm³

Reference 15

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
5.226	1.991	.392	4.079	.1537	6.507	.803	im1 o
5.330	2.040	.510	5.545	.1407	7.107	.750	im1 o
5.239	2.374	.784	9.751	.1278	7.822	.670	im1 o
5.380	2.427	.806	10.524	.1241	8.055	.668	im1 o
5.246	2.439	1.035	13.243	.1097	9.113	.576	im1 o
5.322	3.142	1.574	26.320	.0938	10.664	.499	im1 o
5.364	3.485	1.818	33.985	.0892	11.214	.478	im1 o
5.180	4.112	2.290	48.777	.0855	11.691	.443	im1 o
5.244	4.220	2.454	54.306	.0798	12.531	.418	im1 o
5.218	4.391	2.576	59.022	.0792	12.624	.413	im1 o
5.392	4.588	2.741	67.808	.0747	13.394	.403	im1 o
5.354	4.921	2.903	76.485	.0766	13.056	.410	im1 o
5.220	4.920	3.172	81.465	.0681	14.692	.355	im1 o
5.212	5.311	3.185	88.164	.0768	13.020	.400	im1 o
5.276	5.636	3.562	105.918	.0697	14.337	.368	im1 o





GADOLINIUM

Average ρ_0 = 7.861 g/cm^3.

Sound velocities longitudinal 2.95 km/s.
shear 1.69 km/s.

Reference 15

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.785	2.212	0.000	0.000	.1285	7.785	1.000	ssp ×
7.876	2.494	.324	6.364	.1105	9.052	.870	im1 o
7.877	2.610	.442	9.087	.1055	9.483	.831	im1 o
7.875	2.802	.673	14.850	.0965	10.364	.760	im1 o
7.877	2.824	.691	15.371	.0959	10.429	.755	im1 o
7.877	2.993	.865	20.393	.0903	11.079	.711	im1 o
7.878	3.219	1.080	27.388	.0843	11.856	.664	im1 o
7.877	3.205	1.082	27.316	.0841	11.892	.662	im1 o
7.877	3.221	1.135	28.797	.0822	12.163	.648	im1 o
7.876	3.353	1.219	32.192	.0808	12.375	.636	im1 o
7.876	3.364	1.268	33.595	.0791	12.641	.623	im1 o
7.875	3.481	1.347	36.925	.0778	12.846	.613	im1 o
7.881	3.812	1.582	47.527	.0742	13.472	.585	im1 o
7.878	4.276	1.916	64.543	.0701	14.274	.552	im1 o
7.877	4.613	2.146	77.978	.0679	14.729	.535	im1 o
7.875	4.567	2.179	78.368	.0664	15.061	.523	im1 o
7.864	4.574	2.206	79.350	.0658	15.190	.518	im1 o
7.846	4.822	2.373	89.779	.0647	15.449	.508	im1 o
7.873	4.885	2.401	92.342	.0646	15.483	.508	im1 o

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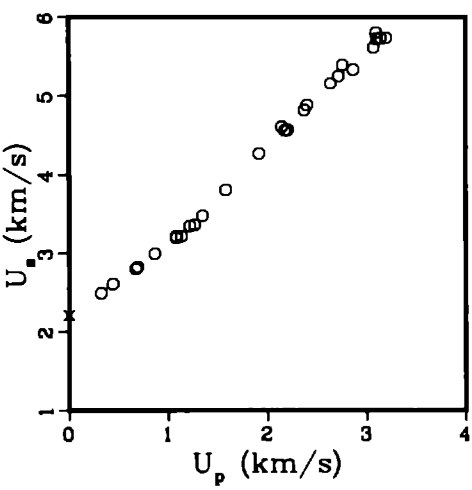

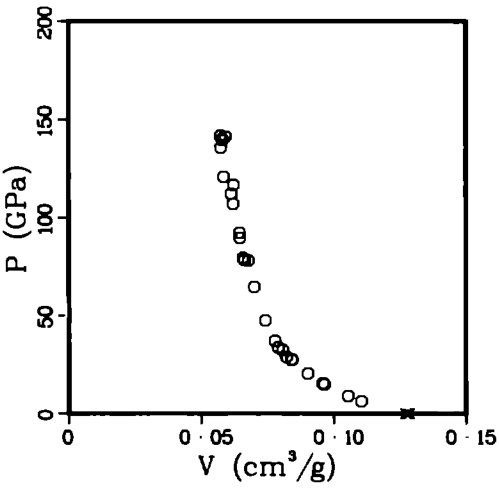

GADOLINIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.860	5.161	2.639	107.052	.0622	16.085	.489	im1 o
7.869	5.253	2.718	112.351	.0613	16.306	.483	im1 o
7.843	5.395	2.759	116.742	.0623	16.052	.489	im1 o
7.900	5.337	2.868	120.921	.0586	17.077	.463	im1 o
7.870	5.618	3.073	135.869	.0576	17.373	.453	im1 o
7.866	5.806	3.098	141.486	.0593	16.865	.466	im1 o
7.878	5.726	3.104	140.020	.0581	17.204	.458	im1 o
7.877	5.735	3.142	141.939	.0574	17.422	.452	im1 o
7.624	5.739	3.199	139.969	.0581	17.226	.443	im1 o

GERMANIUM

Average ρ_0 = 5.328 g/cm^3.

References 5, 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
5.330	4.249	.602	13.634	.1610	6.210	.858	im1 o
5.330	4.219	.750	16.865	.1543	6.482	.822	im1 o
5.311	4.249	.755	17.038	.1548	6.459	.822	im1 o
5.330	4.189	1.047	23.377	.1407	7.106	.750	im1 o
5.330	4.160	1.067	23.658	.1395	7.169	.744	im1 o
5.330	4.087	1.075	23.417	.1383	7.232	.737	im1 o
5.311	4.116	1.087	23.762	.1386	7.217	.736	im1 o
5.330	4.169	1.226	27.243	.1324	7.550	.706	im1 o
5.311	4.178	1.464	32.485	.1223	8.176	.650	im1 o
5.311	4.297	1.466	33.456	.1241	8.061	.659	im1 o
5.311	4.179	1.498	33.248	.1208	8.279	.642	im1 o
5.330	4.575	1.593	38.845	.1223	8.177	.652	im1 o
5.330	4.554	1.599	38.812	.1217	8.214	.649	im1 o
5.330	4.486	1.613	38.567	.1202	8.322	.640	im1 o
5.330	4.822	1.753	45.054	.1194	8.374	.636	im1 o
5.330	4.911	1.792	46.907	.1192	8.392	.635	im1 o
5.330	5.218	1.946	54.122	.1176	8.500	.627	im1 o
5.330	5.217	1.962	54.557	.1171	8.543	.624	im1 o
5.330	5.138	1.971	53.977	.1156	8.647	.616	im1 o
5.330	5.449	2.095	60.845	.1155	8.659	.616	im1 o
5.330	5.385	2.107	60.475	.1142	8.756	.609	im1 o

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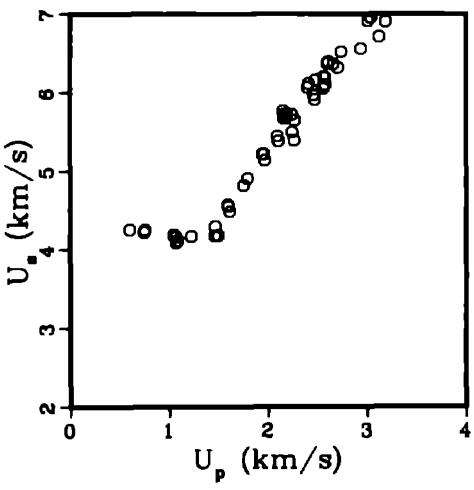
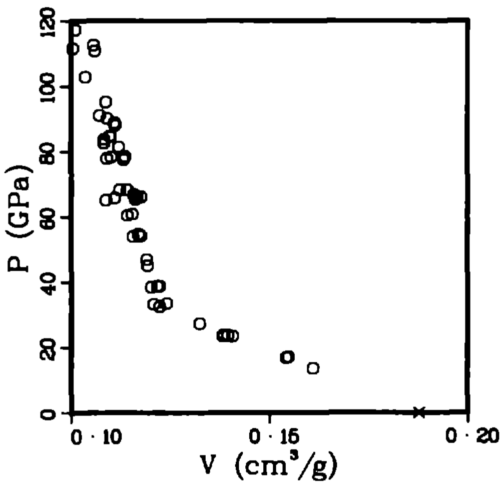




GERMANIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
5.330	5.770	2.152	66.183	.1176	8.500	.627	im1 o
5.330	5.721	2.162	65.926	.1167	8.568	.622	im1 o
5.330	5.681	2.162	65.465	.1162	8.605	.619	im1 o
5.330	5.731	2.192	66.957	.1159	8.631	.618	im1 o
5.330	5.725	2.242	68.413	.1141	8.761	.608	im1 o
5.330	5.503	2.246	65.877	.1110	9.006	.592	im1 o
5.330	5.394	2.267	65.176	.1088	9.194	.580	im1 o
5.330	5.652	2.271	68.414	.1122	8.910	.598	im1 o
5.330	6.067	2.401	77.641	.1134	8.821	.604	im1 o
5.330	6.116	2.411	78.594	.1137	8.798	.606	im1 o
5.330	5.970	2.463	78.373	.1102	9.073	.587	im1 o
5.330	5.912	2.474	77.958	.1091	9.165	.582	im1 o
5.330	6.162	2.481	81.485	.1121	8.922	.597	im1 o
5.330	6.057	2.559	82.614	.1084	9.229	.578	im1 o
5.330	6.200	2.564	84.730	.1100	9.089	.586	im1 o
5.330	6.195	2.570	84.860	.1098	9.109	.585	im1 o
5.330	6.100	2.578	83.819	.1083	9.231	.577	im1 o
5.330	6.373	2.597	88.215	.1112	8.996	.592	im1 o
5.330	6.393	2.610	88.935	.1110	9.007	.592	im1 o
5.330	6.363	2.660	90.213	.1092	9.159	.582	im1 o
5.330	6.318	2.708	91.192	.1072	9.328	.571	im1 o
5.330	6.521	2.740	95.234	.1088	9.193	.580	im1 o
5.330	6.562	2.938	102.758	.1036	9.651	.552	im1 o
5.330	6.916	3.009	110.919	.1060	9.435	.565	im1 o
5.330	6.956	3.039	112.672	.1056	9.465	.563	im1 o
5.330	6.714	3.121	111.687	.1004	9.960	.535	im1 o
5.330	6.906	3.188	117.347	.1010	9.900	.538	im1 o

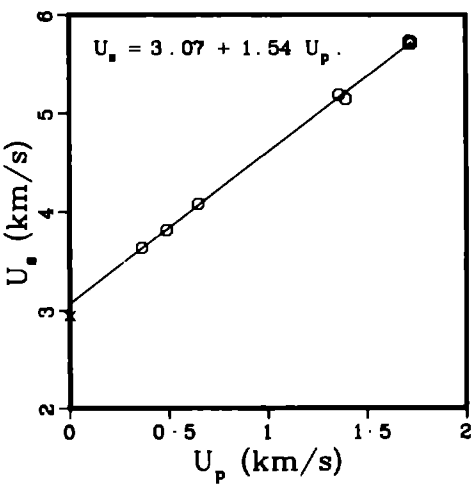
GOLD

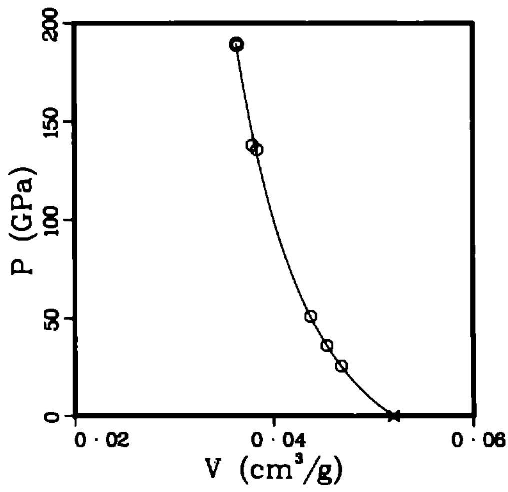
Average ρ_0 = 19.240 g/cm^3.

Sound velocities longitudinal 3.25 km/s.
shear 1.19 km/s.

References 4, 6, 11, 12

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
19.240	2.945	0.000	0.000	.0520	19.240	1.000	ssp ×
19.240	3.635	.365	25.527	.0468	21.388	.900	iml o
19.240	3.818	.489	35.921	.0453	22.066	.872	iml o
19.240	4.081	.650	51.037	.0437	22.885	.841	iml o
19.240	5.188	1.360	135.751	.0384	26.076	.738	iml o
19.240	5.144	1.395	138.064	.0379	26.399	.729	iml o
19.240	5.732	1.713	188.916	.0364	27.441	.701	iml o
19.240	5.711	1.718	188.773	.0363	27.518	.699	iml o
19.240	5.725	1.724	189.897	.0363	27.530	.699	iml o
19.240	5.708	1.724	189.333	.0363	27.566	.698	iml o





HAFNIUM

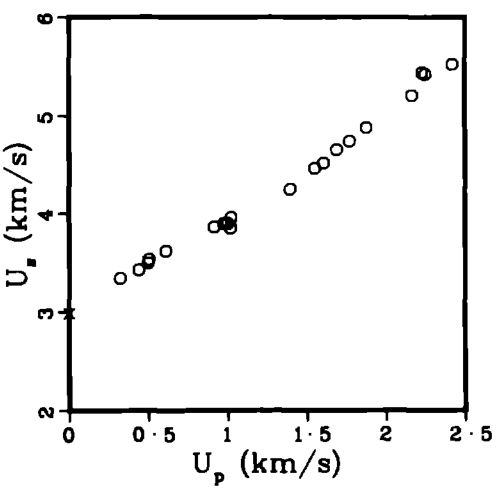
Average ρ_0 = 12.890 g/cm^3.

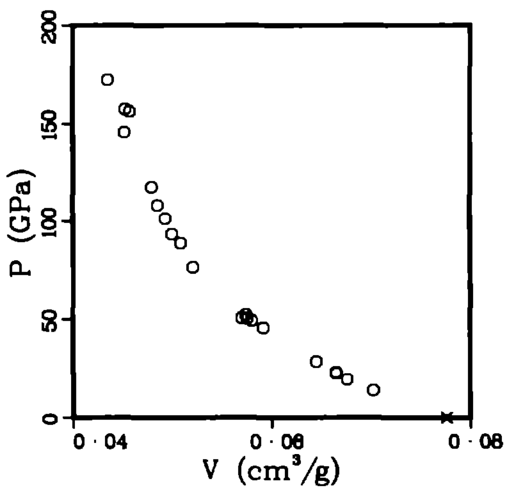
Sound velocities longitudinal 3.86 km/s.
shear 2.12 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
12.890	2.984	0.000	0.000	.0776	12.890	1.000	ssp	×
12.870	3.345	.322	13.862	.0702	14.241	.904	im1	o
12.900	3.430	.439	19.424	.0676	14.793	.872	im1	o
12.890	3.499	.499	22.506	.0665	15.034	.857	im1	o
12.900	3.534	.504	22.977	.0665	15.046	.857	im1	o
12.890	3.621	.611	28.518	.0645	15.507	.831	im1	o
12.880	3.864	.918	45.687	.0592	16.894	.762	im1	o
12.900	3.899	.980	49.291	.0580	17.231	.749	im1	o
12.900	3.898	1.003	50.435	.0576	17.369	.743	im1	o
12.890	3.851	1.021	50.682	.0570	17.540	.735	im1	o
12.900	3.958	1.025	52.335	.0574	17.408	.741	im1	o
12.890	4.252	1.397	76.567	.0521	19.197	.671	im1	o
12.830	4.463	1.551	88.811	.0509	19.664	.652	im1	o
12.890	4.515	1.606	93.467	.0500	20.006	.644	im1	o
12.910	4.651	1.689	101.415	.0493	20.272	.637	im1	o
12.900	4.738	1.771	108.244	.0485	20.600	.626	im1	o
12.840	4.878	1.877	117.563	.0479	20.871	.615	im1	o
12.920	5.206	2.166	145.688	.0452	22.125	.584	im1	o
12.890	5.437	2.231	156.355	.0457	21.860	.590	im1	o

(Continued)





HAFNIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
12.910	5.420	2.251	157.507	.0453	22.080	.585	im1 o
12.890	5.521	2.422	172.363	.0435	22.964	.561	im1 o

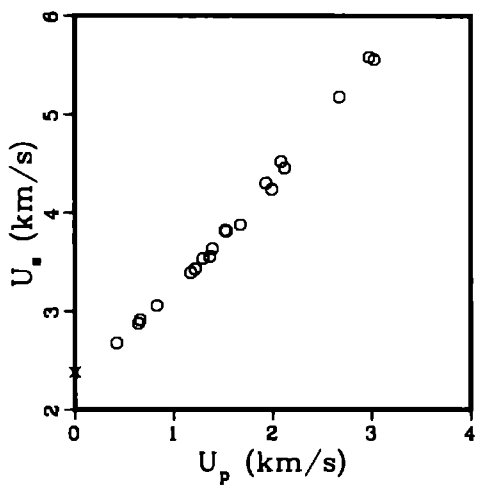
HOLMIUM

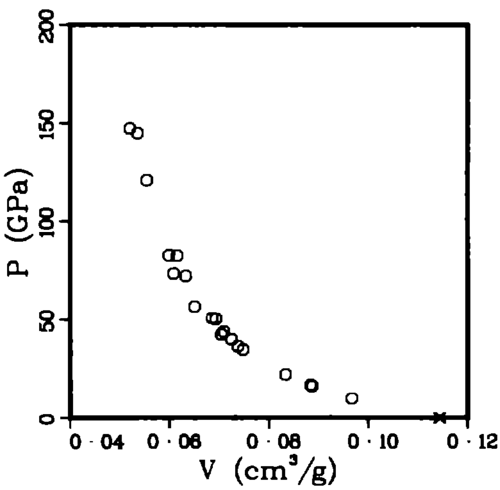
Average ρ_0 = 8.734 g/cm³.

Sound velocities longitudinal 3.21 km/s.
shear 1.86 km/s.

Reference 15

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
8.750	2.386	0.000	0.000	.1143	8.750	1.000	ssp ×
8.709	2.680	.423	9.873	.0967	10.341	.842	im1 o
8.755	2.878	.643	16.202	.0887	11.274	.777	im1 o
8.753	2.914	.659	16.809	.0884	11.311	.774	im1 o
8.750	3.060	.828	22.170	.0834	11.996	.729	im1 o
8.751	3.393	1.172	34.799	.0748	13.369	.655	im1 o
8.749	3.430	1.216	36.491	.0738	13.554	.645	im1 o
8.750	3.534	1.293	39.983	.0725	13.799	.634	im1 o
8.745	3.554	1.365	42.424	.0704	14.198	.616	im1 o
8.705	3.632	1.389	43.915	.0709	14.096	.618	im1 o
8.684	3.819	1.520	50.410	.0693	14.425	.602	im1 o
8.729	3.809	1.529	50.837	.0686	14.583	.599	im1 o
8.736	3.877	1.674	56.697	.0650	15.374	.568	im1 o
8.705	4.299	1.931	72.263	.0633	15.804	.551	im1 o
8.715	4.236	1.991	73.501	.0608	16.444	.530	im1 o
8.752	4.517	2.085	82.426	.0615	16.255	.538	im1 o
8.742	4.452	2.121	82.548	.0599	16.696	.524	im1 o
8.721	5.178	2.675	120.796	.0554	18.041	.483	im1 o
8.723	5.585	2.975	144.936	.0536	18.666	.467	im1 o
8.763	5.560	3.025	147.385	.0520	19.220	.456	im1 o



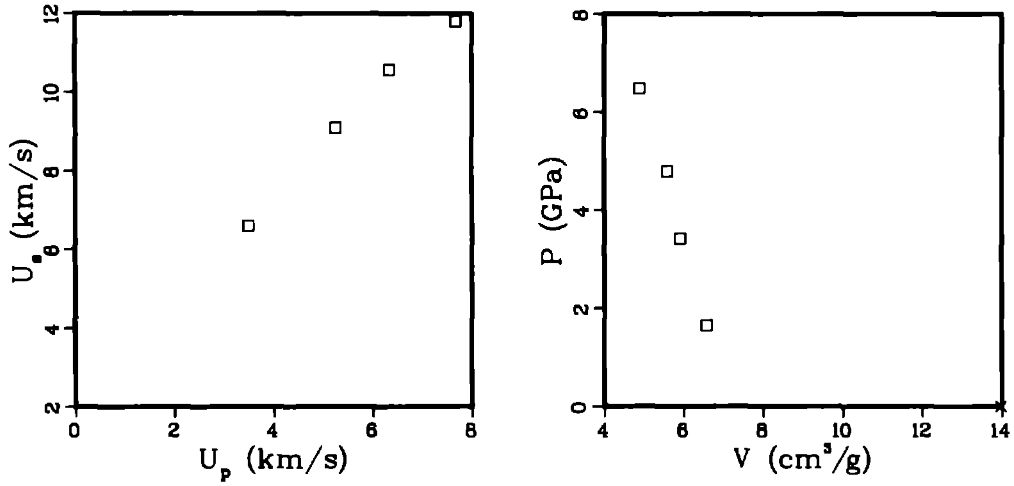


HYDROGEN , liquid , T_0 = 20 K

Average ρ_0 = 0.072 g/cm^3 .

References 20 , 21

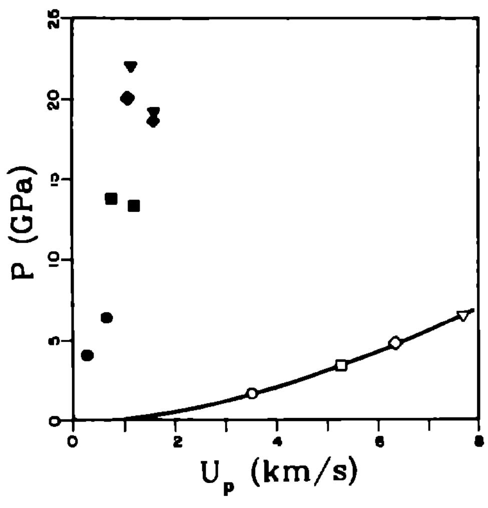
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.072	6.600	3.490	1.649	6.5812	.152	.471	im2 □
.072	9.090	5.250	3.417	5.9000	.169	.422	im2 □
.072	10.570	6.340	4.798	5.5892	.179	.400	im2 □
.072	11.800	7.670	6.480	4.8883	.205	.350	im2 □

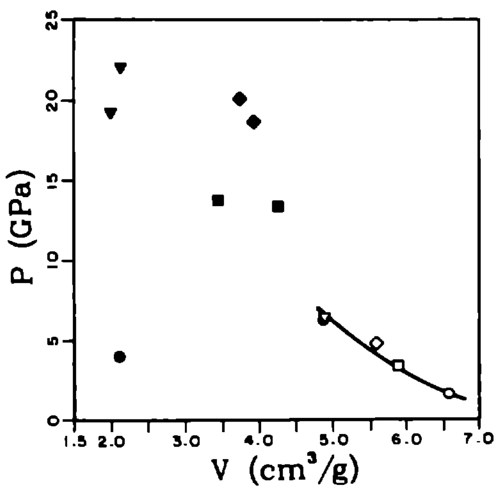


HYDROGEN, liquid, T_0 = 20 K, reflected-shock data
ρ_0 = 0.072 g/cm³.

Initial Shock			Reflected Shock			
U_{p1} (km/s)	V_1 (cm³/g)	P_1 (GPa)	U_{p2} (km/s)	V_2 (cm³/g)	P_2 (GPa)	Std.[a]
3.49	6.58	1.65 ○	0.65	4.88	6.4 ●	Mg
			0.25	2.11	4.0 ●	Al
5.25	5.89	3.42 □	1.22	4.27	13.4 ■	Mg
			0.76	3.45	13.8 ■	Al
6.34	5.58	4.80 ◇	1.58	3.95	18.7 ◆	Mg
			1.06	3.76	20.1 ◆	Al
7.67	4.89	6.49 ▽	1.61	2.00	19.2 ▼	Mg
			1.13	2.15	22.1 ▼	Al

[a]Standards used for reflected-shock measurements were AZ31B magnesium alloy (Mg) and 2024 aluminum alloy (Al).



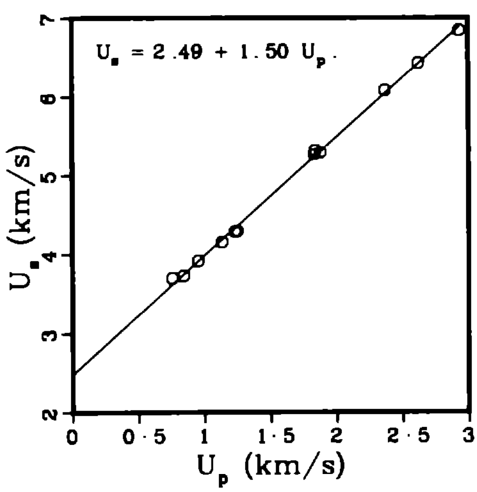


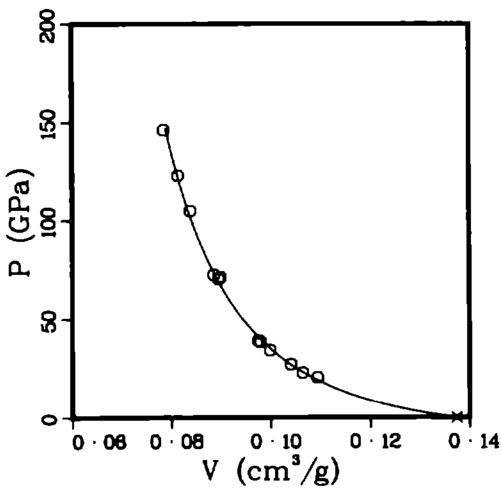
INDIUM

Average ρ_0 = 7.278 g/cm^3.

References 6, 11, 12

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.274	3.700	.756	20.347	.1094	9.142	.796	iml o
7.280	3.731	.841	22.843	.1064	9.399	.775	iml o
7.274	3.918	.953	27.160	.1040	9.612	.757	iml o
7.280	4.154	1.134	34.293	.0999	10.014	.727	iml o
7.280	4.290	1.232	38.477	.0979	10.213	.713	iml o
7.274	4.296	1.250	39.061	.0975	10.259	.709	iml o
7.280	5.269	1.834	70.349	.0896	11.167	.652	iml o
7.280	5.320	1.839	71.224	.0899	11.126	.654	iml o
7.280	5.290	1.880	72.401	.0885	11.294	.645	iml o
7.280	6.083	2.369	104.909	.0839	11.924	.611	iml o
7.280	6.432	2.622	122.775	.0814	12.290	.592	iml o
7.280	6.845	2.932	146.106	.0785	12.735	.572	iml o





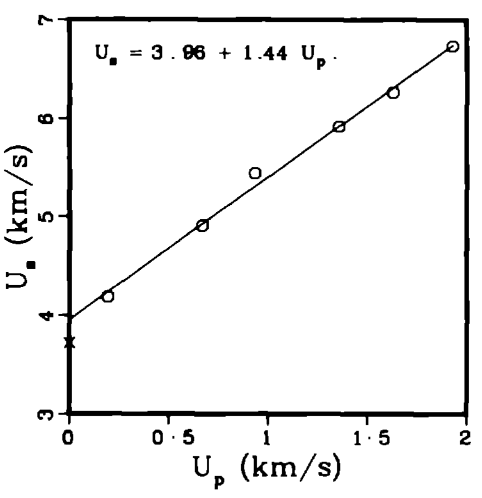
IRIDIUM

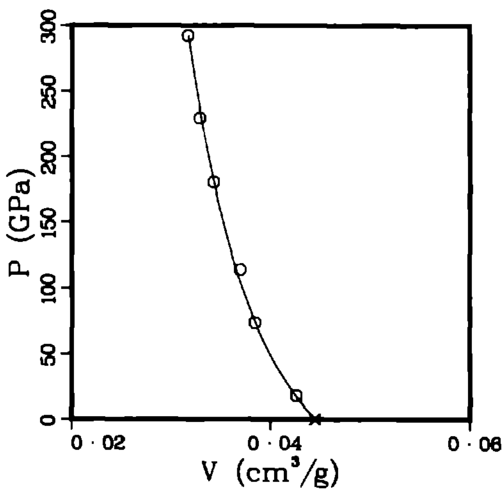
Average ρ_0 = 22.477 g/cm^3.

Sound velocities longitudinal 5.32 km/s.
shear 3.29 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
22.500	3.724	0.000	0.000	.0444	22.500	1.000	ssp	×
22.420	4.185	.193	18.109	.0425	23.504	.954	im1	o
22.500	4.904	.669	73.817	.0384	26.054	.864	im1	o
22.420	5.438	.933	113.751	.0370	27.063	.828	im1	o
22.500	5.914	1.358	180.702	.0342	29.207	.770	im1	o
22.500	6.261	1.629	229.481	.0329	30.413	.740	im1	o
22.500	6.733	1.930	292.381	.0317	31.541	.713	im1	o





IRON

Average ρ_0 = 7.856 g/cm^3.

Sound velocities longitudinal 5.94 km/s.
shear 3.26 km/s.

References 4, 5, 6, 11, 12, 13, 17, 22

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.870	4.595	0.000	0.000	.1271	7.870	1.000	ssp ×
7.861	4.838	.573	21.792	.1121	8.917	.882	im1 ○
7.850	4.913	.763	29.427	.1076	9.293	.845	sf1 ⊕
7.840	5.144	.867	34.965	.1061	9.429	.831	sf1 ⊕
7.840	5.147	.867	34.986	.1061	9.428	.832	sf1 ⊕
7.840	5.168	.876	35.493	.1059	9.440	.830	sf1 ⊕
7.850	5.190	.881	35.893	.1058	9.455	.830	sf1 ⊕
7.840	5.166	.884	35.803	.1057	9.459	.829	sf1 ⊕
7.882	5.225	.903	37.189	.1049	9.529	.827	im1 ○
7.882	5.172	.906	36.934	.1046	9.556	.825	im1 ○
7.850	5.328	.948	39.650	.1047	9.549	.822	sp1 ⊞
7.850	5.360	.952	40.056	.1048	9.545	.822	sf1 ⊕
7.840	5.393	.968	40.928	.1047	9.555	.821	im1 ○
7.840	5.373	.969	40.818	.1045	9.565	.820	im1 ○
7.882	5.339	.984	41.409	.1035	9.663	.816	im1 ○
7.840	5.408	.988	41.890	.1042	9.592	.817	im1 ○
7.864	5.252	.989	40.847	.1032	9.688	.812	im1 ○
7.850	5.443	.995	42.514	.1041	9.606	.817	sf1 ⊕
7.843	5.458	.998	42.721	.1042	9.598	.817	sp1 ⊞

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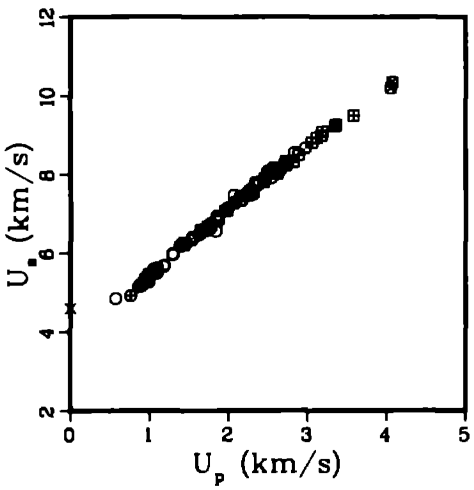

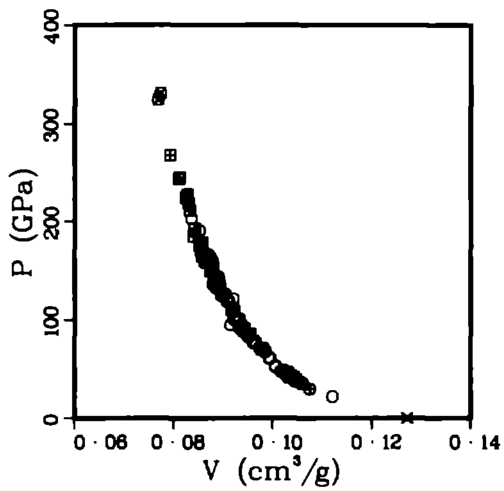

IRON
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ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.856	5.414	1.008	42.873	.1036	9.653	.814	im1 ○
7.840	5.584	1.060	46.405	.1033	9.677	.810	im1 ○
7.859	5.491	1.061	45.786	.1027	9.741	.807	im1 ○
7.865	5.518	1.063	46.133	.1027	9.742	.807	im1 ○
7.850	5.556	1.064	46.406	.1030	9.709	.808	sp1 ⊞
7.857	5.484	1.069	46.061	.1025	9.759	.805	im1 ○
7.861	5.480	1.069	46.051	.1024	9.766	.805	im1 ○
7.850	5.584	1.069	46.859	.1030	9.709	.809	sf1 ⊕
7.864	5.516	1.096	47.542	.1019	9.814	.801	im1 ○
7.864	5.493	1.098	47.430	.1017	9.829	.800	im1 ○
7.861	5.620	1.102	48.685	.1023	9.778	.804	im1 ○
7.861	5.673	1.184	52.801	.1007	9.934	.791	im1 ○
7.861	5.661	1.185	52.734	.1006	9.942	.791	im1 ○
7.862	5.972	1.298	60.944	.0995	10.045	.783	im1 ○
7.861	5.953	1.303	60.976	.0994	10.064	.781	im1 ○
7.861	6.183	1.391	67.609	.0986	10.143	.775	im1 ○
7.861	6.172	1.392	67.537	.0985	10.150	.774	im1 ○
7.856	6.200	1.413	68.823	.0983	10.175	.772	im1 ○
7.861	6.253	1.421	69.849	.0983	10.173	.773	im1 ○
7.847	6.204	1.433	69.762	.0980	10.204	.769	sp1 ⊞
7.850	6.240	1.445	70.782	.0979	10.216	.768	sp1 ⊞
7.861	6.239	1.460	71.605	.0974	10.263	.766	im1 ○
7.861	6.348	1.541	76.898	.0963	10.381	.757	im1 ○
7.861	6.332	1.543	76.804	.0962	10.394	.756	im1 ○
7.861	6.403	1.543	77.665	.0966	10.357	.759	im1 ○
7.861	6.388	1.545	77.584	.0964	10.369	.758	im1 ○
7.860	6.464	1.624	82.511	.0953	10.497	.749	im1 ○
7.860	6.495	1.644	83.927	.0950	10.524	.747	im1 ○
7.850	6.579	1.649	85.163	.0955	10.476	.749	sp1 ⊞
7.861	6.584	1.699	87.935	.0944	10.595	.742	im1 ○
7.860	6.571	1.726	89.145	.0938	10.660	.737	im1 ○
7.850	6.663	1.734	90.696	.0942	10.612	.740	sp1 ⊞
7.856	6.741	1.768	93.628	.0939	10.649	.738	im1 ○
7.860	6.629	1.771	92.276	.0932	10.725	.733	im1 ○
7.861	6.744	1.778	94.260	.0937	10.676	.736	im1 ○
7.860	6.551	1.840	94.743	.0915	10.930	.719	im1 ○
7.861	6.933	1.848	100.717	.0933	10.718	.733	im1 ○
7.861	6.862	1.860	100.332	.0927	10.784	.729	im1 ○
7.861	6.842	1.863	100.201	.0926	10.802	.728	im1 ○
7.860	6.810	1.871	100.148	.0923	10.838	.725	im1 ○
7.860	6.867	1.872	101.040	.0925	10.806	.727	im1 ○
7.847	7.072	1.957	108.602	.0922	10.849	.723	sp1 ⊞
7.850	7.076	1.982	110.093	.0917	10.904	.720	sp1 ⊞

(Continued)

IRON
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
7.862	7.153	1.990	111.911	.0918	10.892	.722	im1	o
7.861	7.469	2.066	121.303	.0920	10.867	.723	im1	o
7.857	7.291	2.074	118.810	.0911	10.981	.716	im1	o
7.856	7.259	2.081	118.673	.0908	11.013	.713	im1	o
7.860	7.334	2.150	123.937	.0899	11.120	.707	im1	o
7.861	7.450	2.153	126.089	.0904	11.056	.711	im1	o
7.860	7.326	2.166	124.723	.0896	11.159	.704	im1	o
7.861	7.486	2.229	131.171	.0893	11.194	.702	im1	o
7.867	7.556	2.250	133.747	.0893	11.203	.702	im1	o
7.861	7.582	2.258	134.582	.0893	11.195	.702	im1	o
7.867	7.462	2.261	132.729	.0886	11.287	.697	im1	o
7.861	7.552	2.263	134.346	.0891	11.224	.700	im1	o
7.831	7.559	2.273	134.549	.0893	11.198	.699	sp1	⊞
7.867	7.621	2.283	136.876	.0890	11.232	.700	im1	o
7.867	7.513	2.296	135.705	.0883	11.329	.694	im1	o
7.860	7.566	2.297	136.600	.0886	11.287	.696	im1	o
7.860	7.493	2.312	136.165	.0880	11.367	.691	im1	o
7.861	7.800	2.338	143.356	.0891	11.226	.700	im1	o
7.861	7.749	2.346	142.906	.0887	11.274	.697	im1	o
7.861	7.738	2.371	144.224	.0882	11.334	.694	im1	o
7.861	7.739	2.371	144.243	.0882	11.333	.694	im1	o
7.847	7.806	2.443	149.643	.0876	11.422	.687	sp1	⊞
7.832	7.896	2.459	152.068	.0879	11.374	.689	sp1	⊞
7.861	8.085	2.498	158.763	.0879	11.376	.691	im1	o
7.851	8.070	2.520	159.661	.0876	11.416	.688	sf2	⊠
7.860	7.907	2.545	158.169	.0863	11.591	.678	im1	o
7.859	8.028	2.547	160.695	.0869	11.511	.683	im1	o
7.861	8.167	2.561	164.418	.0873	11.452	.686	im1	o
7.861	8.092	2.574	163.735	.0867	11.528	.682	im1	o
7.861	8.168	2.584	165.915	.0870	11.499	.684	im1	o
7.861	8.047	2.587	163.647	.0863	11.586	.679	im1	o
7.861	8.110	2.594	165.375	.0865	11.558	.680	im1	o
7.809	8.088	2.613	165.035	.0867	11.536	.677	sp1	⊞
7.850	8.015	2.617	164.656	.0858	11.656	.673	sp1	⊞
7.860	8.122	2.646	168.918	.0858	11.658	.674	im1	o
7.860	8.102	2.654	169.011	.0856	11.689	.672	im1	o
7.847	8.245	2.717	175.786	.0854	11.704	.670	sp1	⊞
7.850	8.226	2.720	175.642	.0853	11.728	.669	sp1	⊞
7.850	8.322	2.727	178.149	.0856	11.676	.672	sp1	⊞
7.850	8.262	2.733	177.253	.0852	11.730	.669	sp1	⊞
7.868	8.312	2.821	184.490	.0840	11.910	.661	sp1	⊞
7.852	8.554	2.834	190.348	.0852	11.742	.669	im1	o
7.840	8.494	2.889	192.387	.0842	11.881	.660	sp1	⊞

(Continued)

IRON
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.861	8.665	2.973	202.508	.0836	11.967	.657	im1 ○
7.842	8.808	3.056	211.085	.0833	12.008	.653	sp1 ⊞
7.850	8.936	3.116	218.580	.0830	12.053	.651	sp1 ⊞
7.850	8.990	3.178	224.276	.0824	12.142	.646	sp1 ⊞
7.850	9.098	3.188	227.685	.0828	12.084	.650	sp1 ⊞
7.860	9.236	3.352	243.338	.0811	12.338	.637	sp1 ⊞
7.860	9.279	3.361	245.128	.0811	12.324	.638	sp1 ⊞
7.855	9.507	3.586	267.793	.0793	12.612	.623	sp1 ⊞
7.851	10.200	4.050	324.325	.0768	13.021	.603	sf2 ⊗
7.851	10.350	4.070	330.719	.0773	12.939	.607	sf2 ⊗

IRON, sintered, ρ_0 = 7.0 g/cm^3.

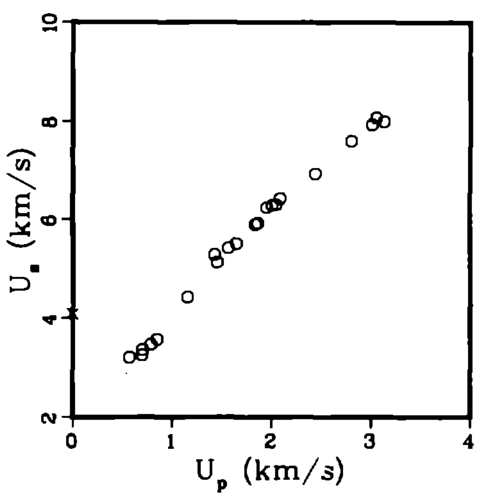
Average ρ_0 = 6.972 g/cm^3.

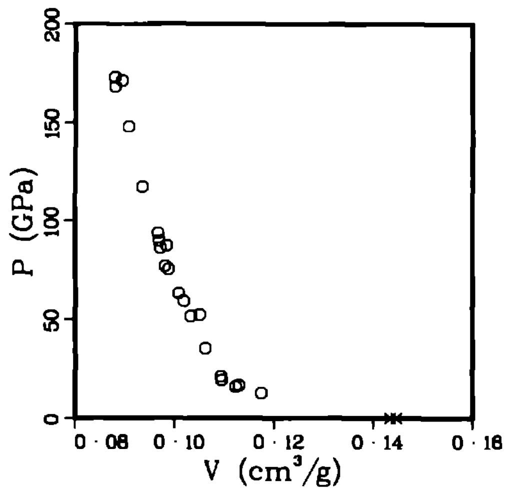
Sound velocities longitudinal 5.36 km/s.
shear 3.00 km/s.

References 13, 17

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
6.913	4.090	0.000	0.000	.1447	6.913	1.000	ssp	×
7.002	3.214	.569	12.805	.1175	8.508	.823	iml	o
6.992	3.259	.698	15.905	.1124	8.898	.786	iml	o
7.001	3.366	.702	16.543	.1130	8.846	.791	iml	o
7.061	3.474	.786	19.281	.1096	9.126	.774	iml	o
6.965	3.573	.850	21.153	.1094	9.139	.762	iml	o
6.960	4.425	1.153	35.510	.1062	9.413	.739	iml	o
6.945	5.290	1.427	52.427	.1051	9.510	.730	iml	o
6.940	5.137	1.453	51.801	.1033	9.677	.717	iml	o
6.988	5.424	1.566	59.356	.1018	9.824	.711	iml	o
6.954	5.514	1.648	63.191	.1008	9.918	.701	iml	o
6.968	5.898	1.838	75.537	.0988	10.122	.688	iml	o
6.986	5.922	1.864	77.116	.0981	10.195	.685	iml	o
7.070	6.243	1.954	86.246	.0972	10.291	.687	iml	o
6.913	6.291	2.010	87.414	.0984	10.159	.680	iml	o
6.963	6.298	2.049	89.855	.0969	10.321	.675	iml	o
6.979	6.429	2.090	93.774	.0967	10.341	.675	iml	o
6.933	6.937	2.440	117.350	.0935	10.695	.648	iml	o
6.959	7.596	2.800	148.010	.0907	11.022	.631	iml	o

(Continued)





IRON , sintered , ρ_0 = 7.0 g/cm^3 .
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.046	7.932	3.010	168.226	.0881	11.355	.621	iml o
6.945	8.071	3.054	171.186	.0895	11.173	.622	iml o
6.910	7.994	3.131	172.952	.0880	11.359	.608	iml o

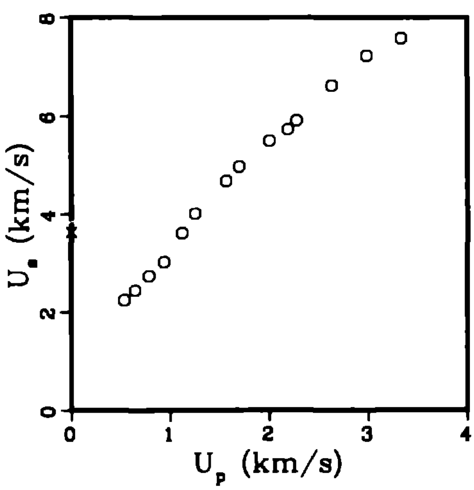
IRON , sintered , ρ_0 = 6.0 g/cm^3 .

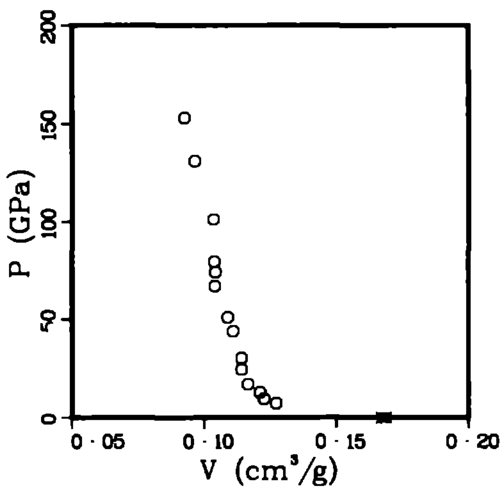
Average ρ_0 = 5.982 g/cm^3 .

Sound velocities longitudinal 4.55 km/s .
shear 2.37 km/s .

References 13 , 17

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
5.925	3.635	0.000	0.000	.1688	5.925	1.000	ssp ×
5.973	2.238	.537	7.178	.1272	7.859	.760	iml o
5.993	2.441	.647	9.465	.1226	8.154	.735	iml o
5.884	2.742	.788	12.714	.1211	8.257	.713	iml o
5.913	3.031	.941	16.865	.1166	8.575	.690	iml o
6.054	3.621	1.118	24.508	.1142	8.758	.691	iml o
6.041	4.021	1.249	30.339	.1141	8.763	.689	iml o
6.000	4.685	1.565	43.992	.1110	9.010	.666	iml o
6.050	4.975	1.696	51.047	.1089	9.179	.659	iml o
6.104	5.498	2.003	67.220	.1041	9.602	.636	iml o
5.920	5.732	2.189	74.280	.1044	9.578	.618	iml o
5.919	5.915	2.276	79.685	.1039	9.621	.615	iml o
5.820	6.620	2.632	101.407	.1035	9.661	.602	iml o
6.080	7.220	2.985	131.034	.0965	10.365	.587	iml o
6.055	7.584	3.333	153.055	.0926	10.802	.561	iml o



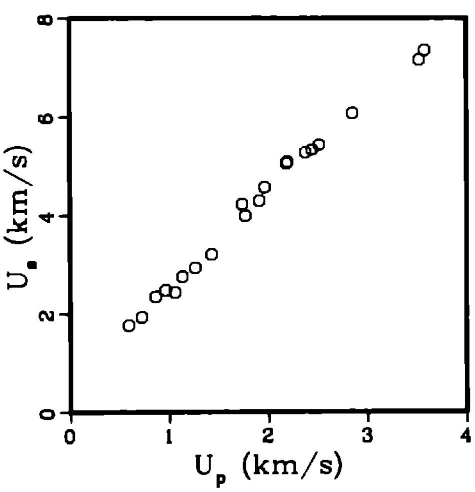


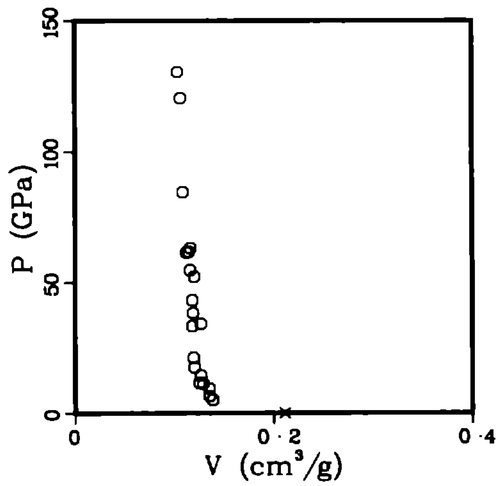
IRON, sintered, ρ_0 = 4.7 g/cm^3.

Average ρ_0 = 4.743 g/cm^3.

References 13, 17

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.808	1.767	.591	5.021	.1384	7.224	.666	iml o
4.629	1.932	.722	6.457	.1353	7.391	.626	iml o
4.697	2.352	.862	9.523	.1349	7.414	.634	iml o
4.761	2.484	.962	11.377	.1287	7.770	.613	iml o
4.532	2.439	1.058	11.695	.1249	8.004	.566	iml o
4.662	2.756	1.132	14.544	.1264	7.912	.589	iml o
4.744	2.934	1.262	17.566	.1201	8.325	.570	iml o
4.651	3.201	1.428	21.260	.1191	8.397	.554	iml o
4.650	4.227	1.738	34.161	.1266	7.897	.589	iml o
4.720	3.991	1.769	33.324	.1180	8.478	.557	iml o
4.680	4.294	1.910	38.383	.1186	8.429	.555	iml o
4.827	4.566	1.965	43.309	.1180	8.474	.570	iml o
4.729	5.052	2.186	52.226	.1200	8.336	.567	iml o
4.908	5.082	2.194	54.724	.1158	8.637	.568	iml o
4.901	5.275	2.377	61.452	.1121	8.921	.549	iml o
4.734	5.331	2.444	61.679	.1144	8.742	.542	iml o
4.619	5.430	2.515	63.079	.1162	8.604	.537	iml o
4.880	6.073	2.852	84.523	.1087	9.201	.530	iml o
4.770	7.163	3.526	120.475	.1064	9.394	.508	iml o
4.958	7.355	3.580	130.549	.1035	9.660	.513	iml o



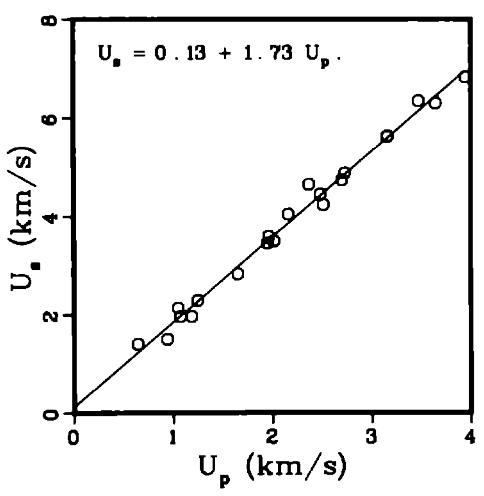


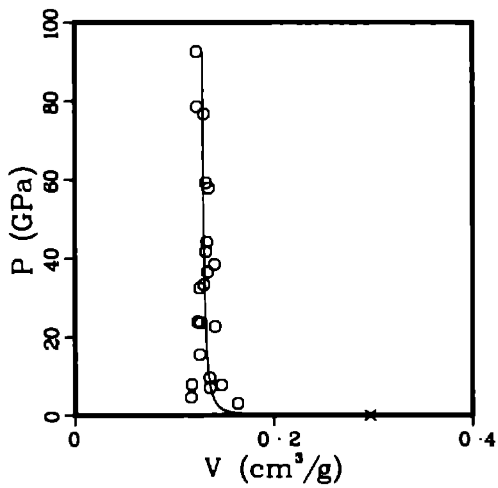
IRON , sintered , ρ_0 = 3.4 g/cm^3 .

Average ρ_0 = 3.368 g/cm^3 .

References 13 , 17

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.313	1.407	.644	3.002	.1637	6.109	.542	im1 o
3.222	1.505	.940	4.558	.1165	8.582	.375	im1 o
3.472	2.144	1.048	7.801	.1472	6.792	.511	im1 o
3.351	1.967	1.073	7.073	.1356	7.373	.454	im1 o
3.388	1.967	1.185	7.897	.1173	8.522	.398	im1 o
3.380	2.296	1.245	9.662	.1354	7.384	.458	im1 o
3.323	2.834	1.651	15.548	.1256	7.961	.417	im1 o
3.538	3.459	1.952	23.888	.1231	8.121	.436	im1 o
3.219	3.590	1.962	22.673	.1409	7.098	.453	im1 o
3.351	3.493	2.015	23.586	.1263	7.920	.423	im1 o
3.716	4.046	2.160	32.475	.1254	7.972	.466	im1 o
3.494	4.647	2.368	38.448	.1404	7.124	.490	im1 o
3.310	4.449	2.482	36.550	.1336	7.487	.442	im1 o
3.133	4.236	2.514	33.364	.1298	7.707	.407	im1 o
3.260	4.734	2.701	41.684	.1317	7.591	.429	im1 o
3.317	4.874	2.730	44.136	.1326	7.541	.440	im1 o
3.260	5.622	3.158	57.879	.1344	7.438	.438	im1 o
3.323	5.630	3.164	59.194	.1318	7.587	.438	im1 o
3.486	6.342	3.473	76.782	.1298	7.706	.452	im1 o
3.424	6.295	3.646	78.586	.1229	8.137	.421	im1 o
3.443	6.823	3.946	92.698	.1225	8.165	.422	im1 o





LANTHANUM

Average ρ_0 = 6.138 g/cm³.

Sound velocities longitudinal 2.69 km/s.
shear 1.51 km/s.

Reference 15

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
6.136	2.048	0.000	0.000	.1630	6.136	1.000	ssp ×
6.140	2.398	.354	5.212	.1388	7.203	.852	im1 o
6.135	2.539	.473	7.368	.1326	7.540	.814	im1 o
6.130	2.697	.654	10.812	.1236	8.092	.758	im1 o
6.138	2.784	.723	12.355	.1206	8.291	.740	im1 o
6.133	2.806	.740	12.735	.1201	8.330	.736	im1 o
6.136	2.825	.757	13.122	.1193	8.382	.732	im1 o
6.132	2.813	.787	13.575	.1175	8.514	.720	im1 o
6.135	3.020	.942	17.453	.1122	8.916	.688	im1 o
6.151	3.143	1.023	19.777	.1097	9.119	.675	im1 o
6.137	3.322	1.169	23.833	.1056	9.469	.648	im1 o
6.137	3.504	1.289	27.719	.1030	9.708	.632	im1 o
6.137	3.757	1.442	33.248	.1004	9.960	.616	im1 o
6.119	4.279	1.772	46.397	.0957	10.444	.586	im1 o
6.155	4.160	1.783	45.653	.0928	10.772	.571	im1 o
6.137	4.637	2.022	57.541	.0919	10.882	.564	im1 o
6.153	5.089	2.233	69.921	.0912	10.964	.561	im1 o
6.082	5.015	2.325	70.915	.0882	11.339	.536	im1 o
6.136	5.184	2.345	74.592	.0893	11.204	.548	im1 o

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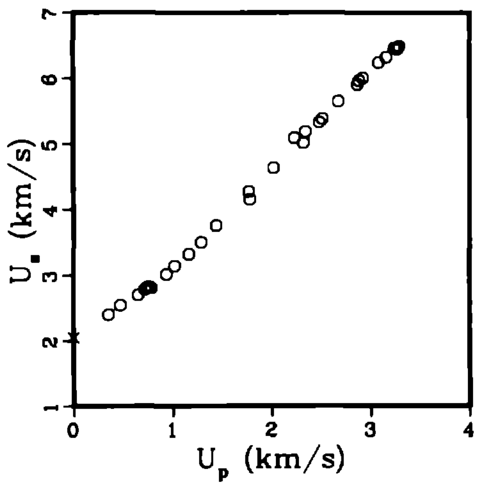

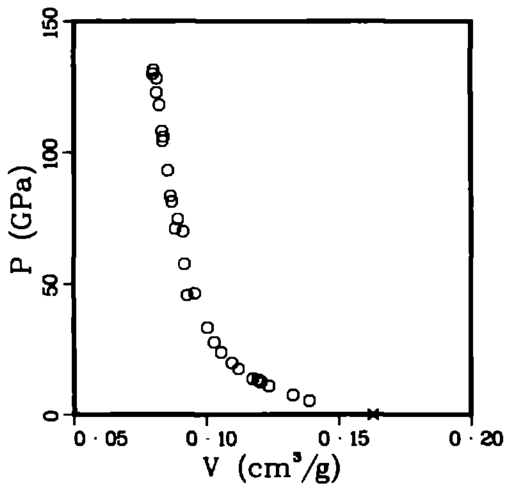

LANTHANUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
6.140	5.332	2.485	81.355	.0870	11.499	.534	im1	o
6.155	5.388	2.518	83.505	.0865	11.555	.533	im1	o
6.153	5.652	2.678	93.132	.0855	11.694	.526	im1	o
6.154	5.908	2.871	104.383	.0835	11.972	.514	im1	o
6.149	5.967	2.888	105.964	.0839	11.917	.516	im1	o
6.156	6.006	2.927	108.220	.0833	12.008	.513	im1	o
6.134	6.239	3.086	118.101	.0824	12.138	.505	im1	o
6.142	6.319	3.164	122.799	.0813	12.302	.499	im1	o
6.110	6.462	3.246	128.161	.0815	12.277	.498	im1	o
6.157	6.444	3.275	129.938	.0799	12.520	.492	im1	o
6.142	6.490	3.295	131.344	.0802	12.476	.492	im1	o

LEAD

Average ρ_0 = 11.346 g/cm³.

Sound velocities longitudinal 2.25 km/s.
shear .89 km/s.

References 4, 6, 11, 12

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
11.340	2.002	0.000	0.000	.0882	11.340	1.000	ssp ×
11.340	2.472	.282	7.905	.0781	12.800	.886	iml o
11.340	2.465	.303	8.470	.0773	12.929	.877	iml o
11.340	2.479	.336	9.446	.0762	13.118	.864	iml o
11.360	2.596	.381	11.236	.0751	13.314	.853	iml o
11.340	2.607	.400	11.825	.0747	13.395	.847	iml o
11.340	2.614	.404	11.976	.0746	13.413	.845	iml o
11.330	2.828	.525	16.822	.0719	13.913	.814	iml o
11.360	2.911	.548	18.122	.0715	13.994	.812	iml o
11.340	2.879	.566	18.479	.0708	14.115	.803	iml o
11.360	2.896	.574	18.884	.0706	14.168	.802	iml o
11.340	2.929	.582	19.331	.0707	14.152	.801	iml o
11.340	2.859	.587	19.031	.0701	14.270	.795	iml o
11.340	2.921	.606	20.073	.0699	14.308	.793	iml o
11.340	2.882	.610	19.936	.0695	14.385	.788	iml o
11.340	2.987	.687	23.270	.0679	14.727	.770	iml o
11.330	3.059	.691	23.949	.0683	14.636	.774	iml o
11.340	2.971	.692	23.314	.0676	14.783	.767	iml o
11.360	3.051	.697	24.158	.0679	14.724	.772	iml o

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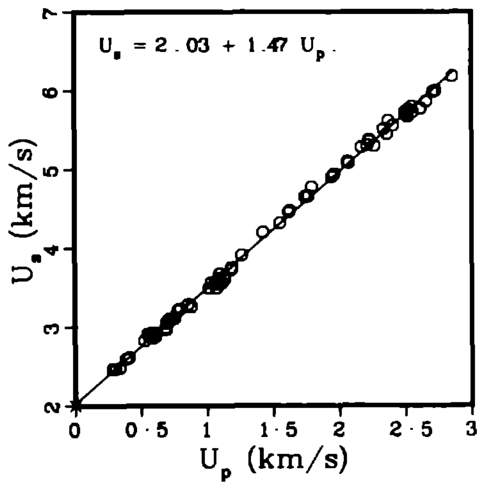
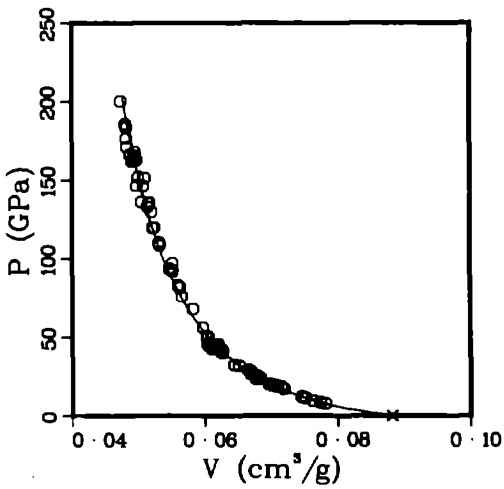




LEAD
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
11.360	3.098	.711	25.022	.0678	14.744	.770	im1 o
11.340	3.094	.723	25.367	.0676	14.798	.766	im1 o
11.340	3.119	.751	26.562	.0670	14.936	.759	im1 o
11.340	3.111	.752	26.530	.0669	14.955	.758	im1 o
11.340	3.211	.777	28.293	.0668	14.960	.758	im1 o
11.340	3.229	.794	29.074	.0665	15.038	.754	im1 o
11.370	3.288	.856	32.001	.0651	15.372	.740	im1 o
11.340	3.260	.880	32.532	.0644	15.533	.730	im1 o
11.360	3.497	1.011	40.163	.0626	15.980	.711	im1 o
11.360	3.567	1.028	41.656	.0627	15.959	.712	im1 o
11.340	3.571	1.061	42.965	.0620	16.134	.703	im1 o
11.330	3.571	1.063	43.008	.0620	16.132	.702	im1 o
11.340	3.495	1.071	42.447	.0612	16.350	.694	im1 o
11.340	3.585	1.072	43.581	.0618	16.177	.701	im1 o
11.360	3.613	1.083	44.450	.0616	16.223	.700	im1 o
11.360	3.626	1.092	44.981	.0615	16.255	.699	im1 o
11.340	3.679	1.092	45.558	.0620	16.127	.703	im1 o
11.330	3.542	1.093	43.863	.0610	16.387	.691	im1 o
11.390	3.569	1.111	45.163	.0605	16.538	.689	im1 o
11.340	3.611	1.131	46.313	.0606	16.512	.687	im1 o
11.340	3.731	1.181	49.968	.0603	16.592	.683	im1 o
11.340	3.760	1.182	50.399	.0605	16.539	.686	im1 o
11.340	3.915	1.265	56.161	.0597	16.753	.677	im1 o
11.360	4.202	1.425	68.022	.0582	17.189	.661	im1 o
11.340	4.321	1.554	76.146	.0565	17.709	.640	im1 o
11.340	4.461	1.620	81.952	.0562	17.806	.637	im1 o
11.340	4.464	1.620	82.007	.0562	17.799	.637	im1 o
11.390	4.481	1.627	83.040	.0559	17.883	.637	im1 o
11.340	4.657	1.743	92.048	.0552	18.123	.626	im1 o
11.340	4.660	1.753	92.636	.0550	18.178	.624	im1 o
11.360	4.665	1.767	93.641	.0547	18.287	.621	im1 o
11.330	4.779	1.792	97.030	.0552	18.127	.625	im1 o
11.340	4.910	1.946	108.352	.0532	18.785	.604	im1 o
11.340	4.945	1.964	110.134	.0532	18.811	.603	im1 o
11.360	5.102	2.064	119.627	.0524	19.078	.595	im1 o
11.360	5.083	2.071	119.586	.0522	19.171	.593	im1 o
11.340	5.284	2.168	129.908	.0520	19.230	.590	im1 o
11.340	5.306	2.211	133.036	.0514	19.441	.583	im1 o
11.340	5.377	2.225	135.670	.0517	19.345	.586	im1 o
11.340	5.359	2.226	135.276	.0516	19.397	.585	im1 o
11.340	5.299	2.266	136.165	.0505	19.812	.572	im1 o
11.360	5.510	2.335	146.156	.0507	19.715	.576	im1 o
11.390	5.449	2.362	146.595	.0497	20.105	.567	im1 o

(Continued)

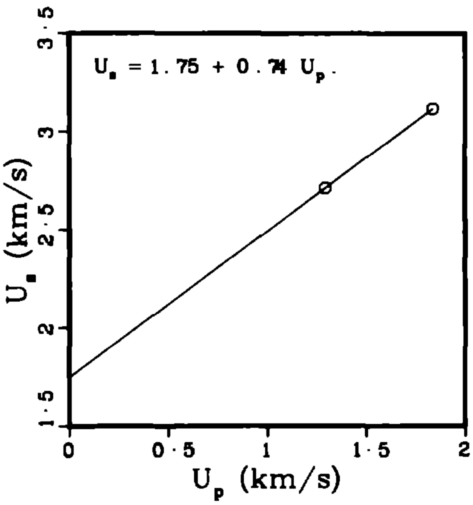
LEAD
(Continued)

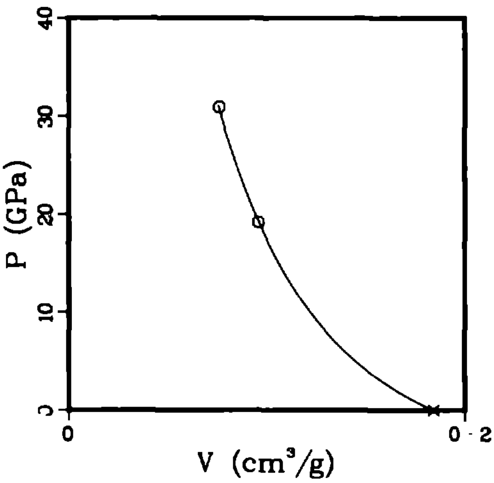
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
11.340	5.623	2.374	151.378	.0510	19.626	.578	im1	o
11.340	5.561	2.411	152.042	.0500	20.020	.566	im1	o
11.340	5.732	2.502	162.632	.0497	20.124	.564	im1	o
11.340	5.675	2.521	162.238	.0490	20.404	.556	im1	o
11.360	5.706	2.521	163.412	.0491	20.352	.558	im1	o
11.340	5.763	2.527	165.146	.0495	20.195	.562	im1	o
11.340	5.802	2.552	167.908	.0494	20.245	.560	im1	o
11.360	5.731	2.558	166.536	.0487	20.518	.554	im1	o
11.330	5.776	2.620	171.458	.0482	20.736	.546	im1	o
11.330	5.866	2.661	176.855	.0482	20.737	.546	im1	o
11.340	5.984	2.710	183.897	.0482	20.726	.547	im1	o
11.340	6.003	2.731	185.910	.0481	20.805	.545	im1	o
11.340	6.181	2.859	200.395	.0474	21.100	.537	im1	o

LEAD, powdered, unpressed

Average ρ_0 = 5.432 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
5.463	2.712	1.293	19.157	.0958	10.441	.523	im1 o
5.402	3.116	1.836	30.905	.0760	13.150	.411	im1 o



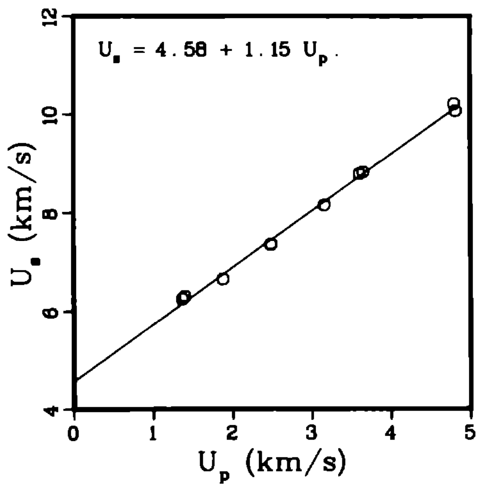


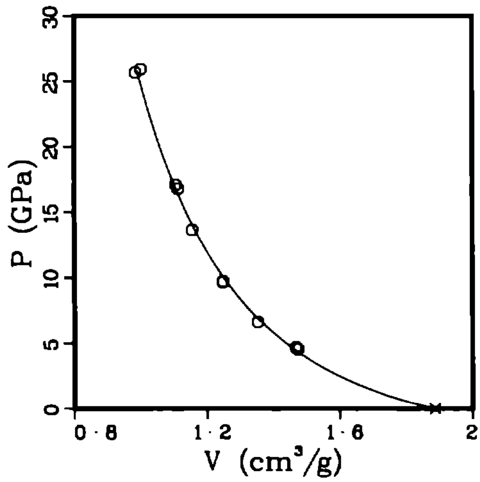
LITHIUM

Average ρ_0 = 0.530 g/cm^3.

References 6, 16

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.530	6.253	1.370	4.540	1.4734	.679	.781	im1 o
.530	6.306	1.401	4.682	1.4676	.681	.778	im1 o
.530	6.653	1.882	6.636	1.3531	.739	.717	im1 o
.530	7.360	2.487	9.701	1.2492	.800	.662	im1 o
.530	7.344	2.488	9.684	1.2476	.802	.661	im1 o
.530	8.152	3.159	13.649	1.1556	.865	.612	im1 o
.530	8.787	3.602	16.775	1.1134	.898	.590	im1 o
.530	8.822	3.650	17.066	1.1062	.904	.586	im1 o
.530	10.211	4.794	25.944	1.0010	.999	.531	im1 o
.530	10.070	4.814	25.693	.9848	1.015	.522	im1 o





MAGNESIUM

Average ρ_0 = 1.740 g/cm^3.

Sound velocities longitudinal 5.74 km/s.
shear 3.15 km/s.

References 6, 11, 12, 13, 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.740	4.440	0.000	0.000	.5747	1.740	1.000	ssp	×
1.745	5.665	.878	8.679	.4842	2.065	.845	im1	o
1.745	5.651	.879	8.668	.4839	2.066	.844	im1	o
1.745	5.874	1.077	11.039	.4680	2.137	.817	im1	o
1.745	5.864	1.078	11.031	.4677	2.138	.816	im1	o
1.735	5.915	1.078	11.063	.4713	2.122	.818	im1	o
1.734	6.121	1.199	12.726	.4637	2.156	.804	im1	o
1.734	6.278	1.343	14.620	.4533	2.206	.786	im1	o
1.734	6.238	1.374	14.862	.4497	2.224	.780	im1	o
1.745	6.317	1.473	16.237	.4394	2.276	.767	im1	o
1.745	6.270	1.477	16.160	.4381	2.283	.764	im1	o
1.741	6.384	1.584	17.605	.4319	2.316	.752	im1	o
1.745	6.978	1.879	22.880	.4188	2.388	.731	im1	o
1.745	6.887	1.887	22.678	.4160	2.404	.726	im1	o
1.734	7.009	1.933	23.493	.4177	2.394	.724	im1	o
1.734	6.763	1.934	22.680	.4118	2.428	.714	im1	o
1.734	6.873	1.947	23.204	.4133	2.419	.717	im1	o
1.735	6.997	2.030	24.644	.4092	2.444	.710	im1	o
1.745	7.175	2.123	26.581	.4035	2.478	.704	im1	o

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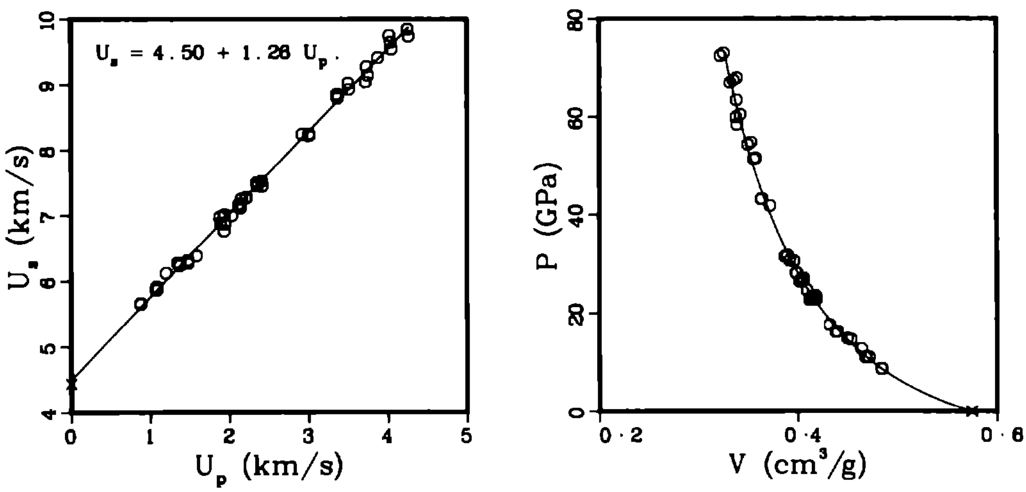


MAGNESIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.745	7.127	2.128	26.465	.4020	2.488	.701	im1 o
1.740	7.113	2.140	26.486	.4018	2.489	.699	im1 o
1.734	7.253	2.150	27.040	.4058	2.465	.704	im1 o
1.745	7.268	2.214	28.079	.3985	2.509	.695	im1 o
1.745	7.273	2.214	28.099	.3986	2.509	.696	im1 o
1.736	7.504	2.345	30.548	.3960	2.525	.687	im1 o
1.745	7.450	2.354	30.603	.3920	2.551	.684	im1 o
1.745	7.525	2.409	31.633	.3896	2.567	.680	im1 o
1.745	7.448	2.418	31.426	.3870	2.584	.675	im1 o
1.736	8.245	2.921	41.809	.3720	2.688	.646	im1 o
1.745	8.244	3.007	43.258	.3640	2.747	.635	im1 o
1.745	8.222	3.009	43.171	.3633	2.752	.634	im1 o
1.734	8.834	3.359	51.454	.3574	2.798	.620	im1 o
1.734	8.850	3.359	51.547	.3578	2.795	.620	im1 o
1.734	8.795	3.368	51.364	.3559	2.810	.617	im1 o
1.734	9.027	3.502	54.816	.3530	2.833	.612	im1 o
1.734	8.928	3.512	54.370	.3498	2.858	.607	im1 o
1.735	9.040	3.724	58.409	.3389	2.950	.588	im1 o
1.745	9.279	3.735	60.477	.3424	2.921	.597	im1 o
1.745	9.148	3.752	59.894	.3380	2.958	.590	im1 o
1.737	9.416	3.878	63.427	.3386	2.953	.588	im1 o
1.734	9.753	4.022	68.019	.3389	2.951	.588	im1 o
1.734	9.649	4.035	67.511	.3355	2.980	.582	im1 o
1.734	9.545	4.049	67.015	.3321	3.011	.576	im1 o
1.745	9.848	4.251	73.052	.3257	3.070	.568	im1 o
1.745	9.741	4.266	72.514	.3221	3.105	.562	im1 o

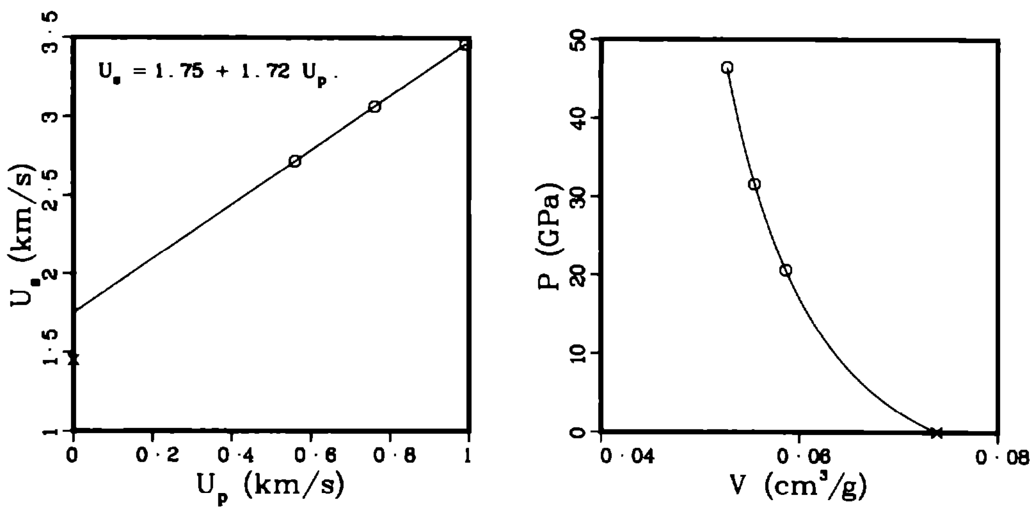
MERCURY

Average ρ_0 = 13.540 g/cm^3.

Sound velocities longitudinal 1.45 km/s.
shear 0.00 km/s.

Reference 23

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
13.540	1.451	0.000	0.000	.0739	13.540	1.000	ssp ×
13.540	2.719	.560	20.617	.0586	17.052	.794	iml o
13.540	3.064	.762	31.613	.0555	18.022	.751	iml o
13.540	3.462	.991	46.454	.0527	18.970	.714	iml o



MOLYBDENUM

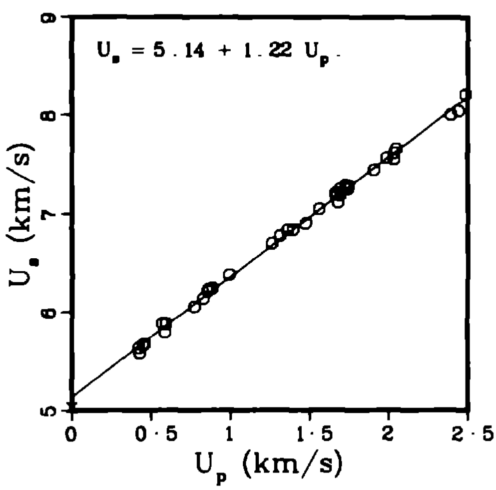
Average ρ_0 = 10.208 g/cm^3.

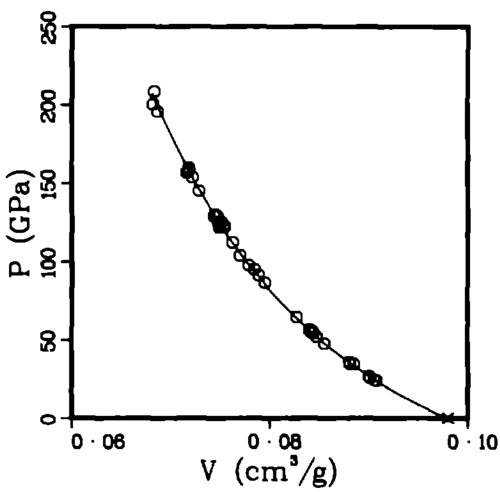
Sound velocities longitudinal 6.44 km/s.
shear 3.48 km/s.

References 4, 5, 6, 11, 12, 13, 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
10.200	5.033	0.000	0.000	.0980	10.200	1.000	ssp	×
10.200	5.631	.420	24.123	.0907	11.022	.925	im1	o
10.200	5.579	.427	24.299	.0905	11.045	.923	im1	o
10.220	5.664	.448	25.933	.0901	11.098	.921	im1	o
10.210	5.671	.459	26.577	.0900	11.109	.919	im1	o
10.200	5.884	.573	34.390	.0885	11.300	.903	im1	o
10.200	5.791	.588	34.732	.0881	11.353	.898	im1	o
10.210	5.876	.594	35.636	.0880	11.358	.899	im1	o
10.200	6.051	.773	47.710	.0855	11.694	.872	im1	o
10.200	6.136	.830	51.947	.0848	11.796	.865	im1	o
10.210	6.216	.858	54.453	.0844	11.845	.862	im1	o
10.220	6.228	.866	55.121	.0842	11.871	.861	im1	o
10.210	6.232	.867	55.166	.0843	11.860	.861	im1	o
10.210	6.242	.888	56.593	.0840	11.903	.858	im1	o
10.210	6.376	.992	64.578	.0827	12.091	.844	im1	o
10.210	6.701	1.264	86.479	.0795	12.584	.811	im1	o
10.220	6.777	1.315	91.078	.0789	12.681	.806	im1	o
10.210	6.833	1.362	95.020	.0784	12.752	.801	im1	o
10.220	6.839	1.397	97.643	.0779	12.844	.796	im1	o

(Continued)





MOLYBDENUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
10.210	6.902	1.476	104.013	.0770	12.987	.786	iml o
10.210	7.049	1.560	112.274	.0763	13.112	.779	iml o
10.200	7.203	1.664	122.255	.0754	13.264	.769	iml o
10.200	7.207	1.671	122.838	.0753	13.279	.768	iml o
10.200	7.115	1.680	121.923	.0749	13.353	.764	iml o
10.210	7.248	1.692	125.212	.0751	13.319	.767	iml o
10.220	7.187	1.694	124.426	.0748	13.372	.764	iml o
10.210	7.290	1.731	128.840	.0747	13.389	.763	iml o
10.220	7.252	1.741	129.035	.0744	13.449	.760	iml o
10.210	7.280	1.746	129.778	.0745	13.431	.760	iml o
10.210	7.446	1.908	145.053	.0728	13.728	.744	iml o
10.210	7.571	1.989	153.750	.0722	13.848	.737	iml o
10.200	7.620	2.035	158.168	.0719	13.917	.733	iml o
10.200	7.556	2.036	156.917	.0716	13.962	.731	iml o
10.200	7.658	2.045	159.738	.0719	13.916	.733	iml o
10.210	8.009	2.394	195.762	.0687	14.563	.701	iml o
10.210	8.048	2.442	200.659	.0682	14.658	.697	iml o
10.210	8.218	2.487	208.674	.0683	14.641	.697	iml o

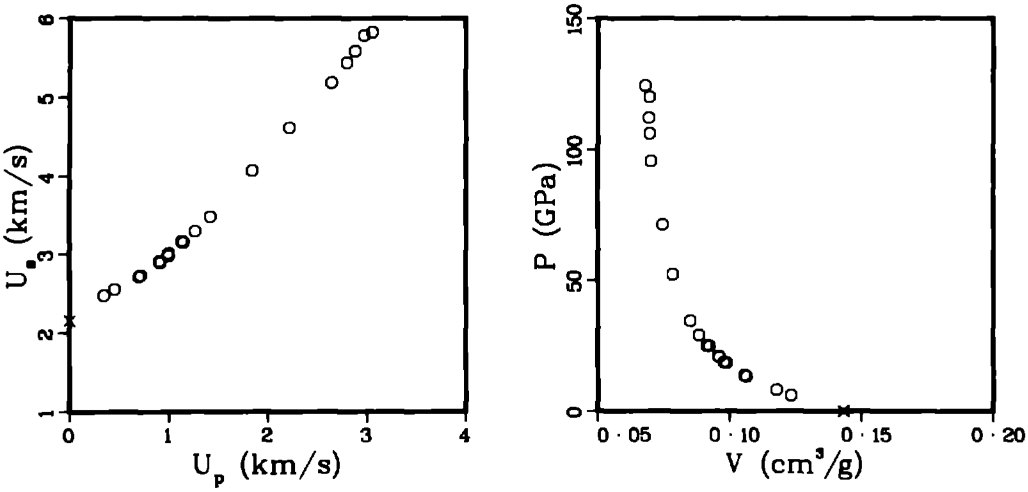
NEODYMIUM

Average ρ_0 = 6.980 g/cm^3.

Sound velocities longitudinal 2.84 km/s.
shear 1.60 km/s.

Reference 15

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
6.986	2.157	0.000	0.000	.1431	6.986	1.000	ssp	×
6.982	2.477	.347	6.001	.1232	8.119	.860	im1	o
6.984	2.554	.455	8.116	.1177	8.498	.822	im1	o
6.983	2.719	.701	13.310	.1063	9.409	.742	im1	o
6.985	2.736	.718	13.722	.1056	9.470	.738	im1	o
6.965	2.914	.908	18.429	.0988	10.118	.688	im1	o
6.982	2.898	.918	18.575	.0979	10.219	.683	im1	o
6.983	3.017	.997	21.005	.0959	10.430	.670	im1	o
6.921	2.987	1.001	20.694	.0961	10.409	.665	im1	o
6.976	3.171	1.128	24.952	.0924	10.828	.644	im1	o
6.983	3.154	1.143	25.174	.0913	10.952	.638	im1	o
6.980	3.299	1.263	29.083	.0884	11.310	.617	im1	o
6.983	3.488	1.418	34.538	.0850	11.767	.593	im1	o
6.994	4.074	1.838	52.371	.0785	12.743	.549	im1	o
6.978	4.616	2.213	71.282	.0746	13.404	.521	im1	o
6.984	5.184	2.644	95.726	.0702	14.254	.490	im1	o
6.991	5.437	2.793	106.162	.0696	14.376	.486	im1	o
6.984	5.583	2.879	112.257	.0693	14.420	.484	im1	o
6.990	5.785	2.971	120.139	.0696	14.370	.486	im1	o
6.988	5.827	3.056	124.437	.0681	14.695	.476	im1	o



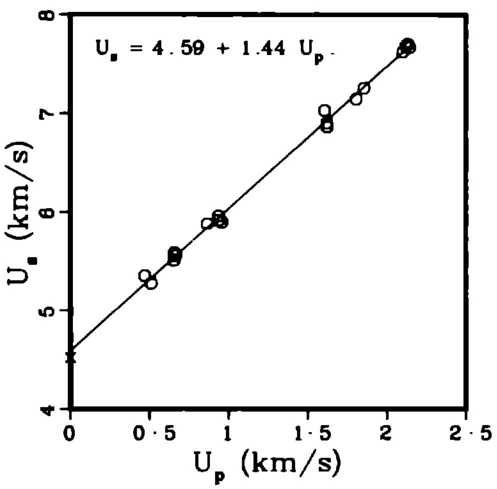
NICKEL

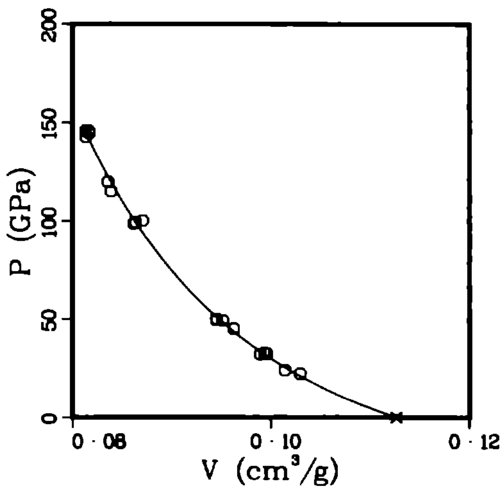
Average ρ_0 = 8.875 g/cm^3.

Sound velocities longitudinal 5.79 km/s.
shear 3.13 km/s.

References 4, 6, 11, 12

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
8.882	4.523	0.000	0.000	.1126	8.882	1.000	ssp ×
8.860	5.352	.470	22.287	.1030	9.713	.912	im1 o
8.905	5.275	.511	24.004	.1014	9.860	.903	im1 o
8.905	5.509	.656	32.182	.0989	10.109	.881	im1 o
8.860	5.585	.657	32.510	.0996	10.041	.882	im1 o
8.860	5.553	.666	32.767	.0993	10.067	.880	im1 o
8.860	5.881	.865	45.071	.0963	10.388	.853	im1 o
8.860	5.959	.935	49.365	.0952	10.509	.843	im1 o
8.905	5.917	.938	49.424	.0945	10.583	.841	im1 o
8.860	5.898	.959	50.114	.0945	10.580	.837	im1 o
8.860	7.029	1.607	100.079	.0871	11.486	.771	im1 o
8.860	6.903	1.622	99.202	.0863	11.581	.765	im1 o
8.860	6.864	1.624	98.764	.0862	11.606	.763	im1 o
8.905	7.144	1.808	115.020	.0839	11.922	.747	im1 o
8.905	7.253	1.856	119.875	.0836	11.967	.744	im1 o
8.905	7.624	2.102	142.708	.0813	12.295	.724	im1 o
8.860	7.686	2.123	144.572	.0817	12.241	.724	im1 o
8.860	7.704	2.134	145.661	.0816	12.254	.723	im1 o
8.860	7.670	2.145	145.766	.0813	12.300	.720	im1 o



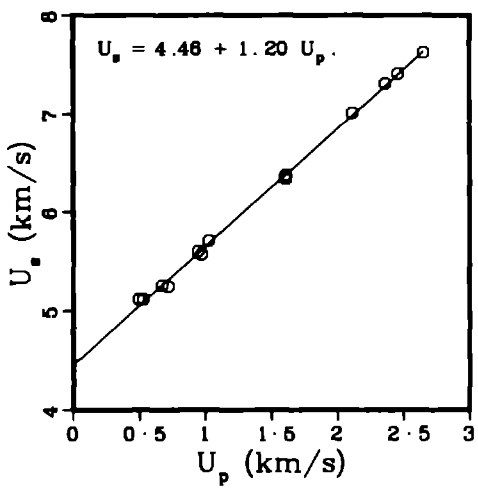


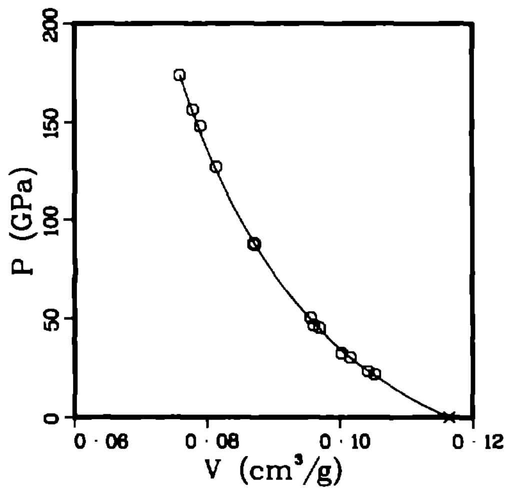
NIOBIUM

Average ρ_0 = 8.587 g/cm³.

References 6, 11, 12, 13

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
8.583	5.120	.496	21.797	.1052	9.504	.903	im1 o
8.604	5.115	.528	23.237	.1042	9.594	.897	im1 o
8.586	5.258	.673	30.383	.1016	9.846	.872	im1 o
8.604	5.247	.720	32.505	.1003	9.972	.863	im1 o
8.584	5.605	.943	45.371	.0969	10.320	.832	im1 o
8.604	5.574	.969	46.472	.0960	10.414	.826	im1 o
8.583	5.710	1.025	50.234	.0956	10.461	.820	im1 o
8.584	6.356	1.602	87.405	.0871	11.477	.748	im1 o
8.580	6.340	1.609	87.525	.0870	11.498	.746	im1 o
8.578	6.378	1.610	88.084	.0871	11.475	.748	im1 o
8.584	7.012	2.112	127.123	.0814	12.284	.699	im1 o
8.571	7.311	2.363	148.072	.0790	12.664	.677	im1 o
8.585	7.410	2.459	156.429	.0778	12.849	.668	im1 o
8.584	7.623	2.654	173.667	.0759	13.169	.652	im1 o





NITROGEN , liquid , T_0 = 75 K

Average ρ_0 = 0.820 g/cm^3 .

Sound velocities longitudinal .88 km/s .
shear 0.00 km/s .

References 24 , 25 , 26

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.820	.880	0.000	0.000	1.2195	.820	1.000	ssp ×
.820	2.580	.900	1.904	.7941	1.259	.651	im2 □
.820	2.970	1.110	2.703	.7637	1.309	.626	im2 □
.820	3.530	1.510	4.371	.6979	1.433	.572	im2 □
.820	4.190	1.970	6.769	.6461	1.548	.530	im2 □
.820	5.090	2.540	10.601	.6110	1.637	.501	im2 □
.820	5.500	2.780	12.538	.6031	1.658	.495	im2 □
.820	5.930	2.990	14.539	.6046	1.654	.496	im2 □
.820	6.660	3.620	19.770	.5567	1.796	.456	im2 □
.820	6.980	3.720	21.292	.5696	1.756	.467	im2 □
.820	6.850	3.890	21.850	.5270	1.898	.432	im2 □
.820	7.340	4.050	24.376	.5466	1.829	.448	im2 □
.820	7.520	4.330	26.701	.5173	1.933	.424	im2 □
.820	7.520	4.360	26.886	.5125	1.951	.420	im2 □
.820	7.430	4.390	26.747	.4990	2.004	.409	im2 □
.820	7.590	4.450	27.696	.5045	1.982	.414	im2 □
.820	7.730	4.570	28.967	.4985	2.006	.409	im2 □
.820	8.170	4.610	30.884	.5314	1.882	.436	im2 □
.820	7.920	4.660	30.264	.5020	1.992	.412	im2 □

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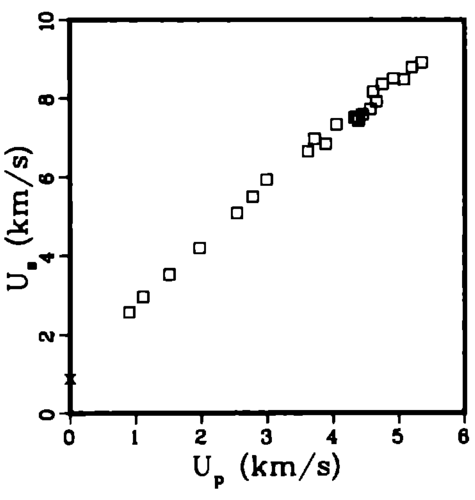
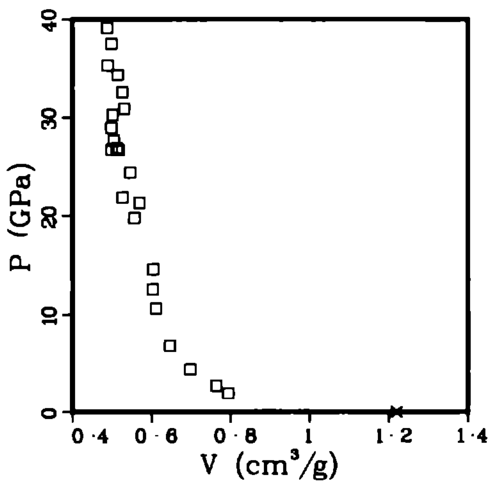




NITROGEN, liquid, T_0 = 75 K
(Continued)

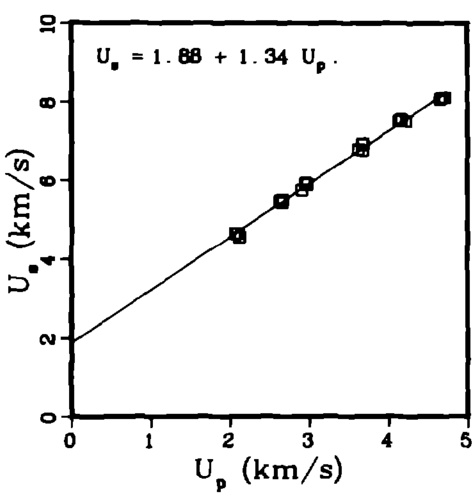
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.820	8.360	4.750	32.562	.5266	1.899	.432	im2 □
.820	8.510	4.920	34.333	.5145	1.944	.422	im2 □
.820	8.480	5.080	35.324	.4890	2.045	.401	im2 □
.820	8.800	5.200	37.523	.4989	2.004	.409	im2 □
.820	8.920	5.350	39.132	.4881	2.049	.400	im2 □

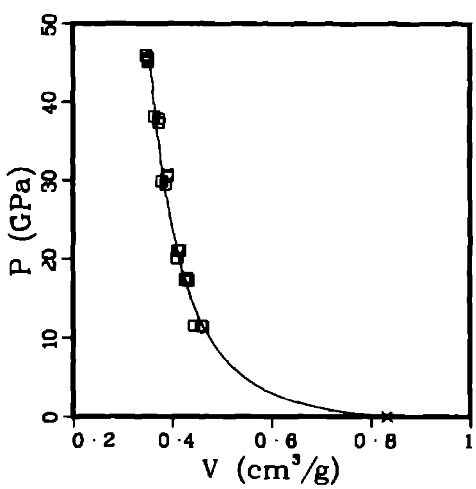
OXYGEN , liquid

Average ρ_0 = 1.202 g/cm^3.

Reference 27

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.202	4.644	2.060	11.499	.4629	2.160	.556	im2 □
1.202	4.640	2.080	11.601	.4590	2.179	.552	im2 □
1.202	4.552	2.120	11.600	.4445	2.250	.534	im2 □
1.202	5.473	2.630	17.302	.4322	2.314	.519	im2 □
1.202	5.505	2.660	17.601	.4300	2.326	.517	im2 □
1.202	5.442	2.660	17.400	.4253	2.351	.511	im2 □
1.202	5.746	2.910	20.098	.4106	2.435	.494	im2 □
1.202	5.930	2.960	21.098	.4167	2.400	.501	im2 □
1.202	5.891	2.980	21.101	.4111	2.432	.494	im2 □
1.202	6.780	3.620	29.501	.3878	2.579	.466	im2 □
1.202	6.914	3.670	30.500	.3903	2.562	.469	im2 □
1.202	6.940	3.680	30.698	.3908	2.559	.470	im2 □
1.202	6.760	3.680	29.902	.3791	2.638	.456	im2 □
1.202	7.516	4.140	37.402	.3737	2.676	.449	im2 □
1.202	7.561	4.170	37.898	.3731	2.680	.448	im2 □
1.202	7.513	4.230	38.200	.3635	2.751	.437	im2 □
1.202	8.070	4.660	45.203	.3515	2.845	.423	im2 □
1.202	8.106	4.680	45.599	.3516	2.844	.423	im2 □
1.202	8.108	4.720	46.000	.3476	2.877	.418	im2 □





OXYGEN, liquid, reflected-shock data
ρ_0 = 1.202 g/cm^3.

Initial Shock				Reflected Shock[a]			
U_{p1} (km/s)	V_1 (cm^3/g)	P_1 (GPa)		U_{p2} (km/s)	V_2 (cm^3/g)	P_2 (GPa)	Std.[b]
2.05	0.461	11.3	○	1.51	0.416	17.7 ●	Mg
				1.17	0.396	23.1 ●	Al
2.07	0.457	11.5	○	1.17	0.388	22.9 ●	Al
				0.71	0.367	32.1 ●	Cu
				0.49	0.354	36.7 ●	Au
2.11	0.451	11.7	○	1.50	0.388	17.6 ●	Mg
				1.17	0.370	23.0 ●	Al
				0.69	0.349	31.4 ●	Cu
2.62	0.433	17.2	□	2.00	0.387	25.7 ■	Mg
				1.58	0.364	33.5 ■	Al
				0.92	0.330	44.2 ■	Cu
2.65	0.424	17.2	□	2.08	0.386	27.0 ■	Mg
				1.59	0.359	33.9 ■	Al
				0.95	0.329	46.3 ■	Cu
2.65	0.430	17.4	□	2.07	0.399	26.8 ■	Mg
				1.65	0.373	35.4 ■	Al
				0.66	0.313	52.6 ■	Au
2.69	0.421	17.7	□	0.95	0.316	46.4 ■	Cu
				0.66	0.304	53.1 ■	Au

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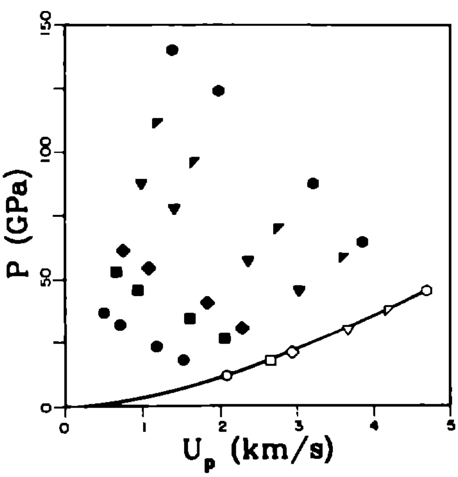
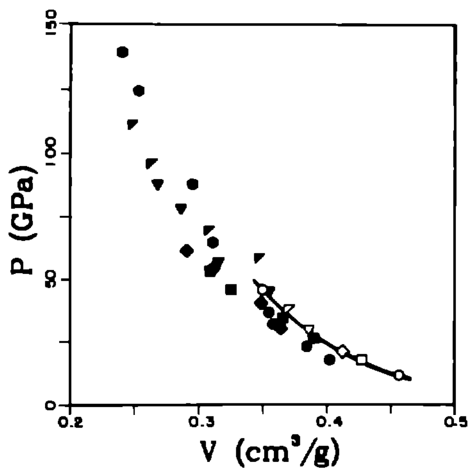




2.90	0.410	19.9		1.82	0.358	40.2 ♦	Al
				1.08	0.321	54.1 ♦	Cu
				0.74	0.283	60.3 ♦	Au
2.95	0.415	20.9	◇	2.29	0.368	30.7 ♦	Mg
				1.09	0.314	55.0 ♦	Cu
				0.75	0.300	62.0 ♦	Au
2.95	0.411	20.9		2.25	0.359	30.0 ♦	Mg
				1.83	0.338	40.5 ♦	Al
				1.05	0.299	52.8 ♦	Cu
3.61	0.384	29.0		3.05	0.360	46.3 ▼	Mg
				1.41	0.293	77.7 ▼	Cu
				0.99	0.269	88.9 ▼	Au
3.66	0.380	29.7		2.96	0.350	44.0 ▼	Mg
			▽	2.40	0.316	58.3 ▼	Al
				1.41	0.276	77.4 ▼	Cu
3.66	0.389	30.3		2.37	0.318	57.5 ▼	Al
				1.42	0.289	78.3 ▼	Cu
				0.97	0.268	86.2 ▼	Au
3.67	0.389	30.5		2.30	0.312	54.9 ▼	Al
4.13	0.374	37.2		3.47	0.344	55.5 ◤	Mg
				2.70	0.313	68.7 ◤	Al
				1.65	0.270	95.7 ◤	Cu
4.17	0.372	37.7	◸	3.68	0.348	60.6 ◤	Mg
				1.65	0.273	96.1 ◤	Cu
				1.19	0.260	114.0 ◤	Au
4.22	0.363	38.0		2.76	0.301	70.7 ◤	Al
				1.66	0.244	96.9 ◤	Cu
				1.15	0.233	108.4 ◤	Au
4.66	0.351	45.1		3.20	0.295	87.4 ●	Al
				1.94	0.255	120.5 ●	Cu
				1.36	0.237	137.8 ●	Au
4.67	0.352	45.4	○	3.78	0.305	62.8 ●	Mg
				1.97	0.255	125.5 ●	Cu
				1.39	0.243	141.9 ●	Au
4.72	0.347	45.8		3.90	0.317	65.8 ●	Mg
				3.20	0.294	87.5 ●	Al
				2.00	0.249	126.1 ●	Cu

[a]Reflected-shock points for a given standard and nominally identical initial shock states were averaged for purposes of plotting pressure vs particle velocity and pressure vs volume.

[b]Standards used for reflected-shock measurements were AZ31B magnesium alloy (Mg), 2024 aluminum alloy (Al), copper (Cu), and gold (Au).

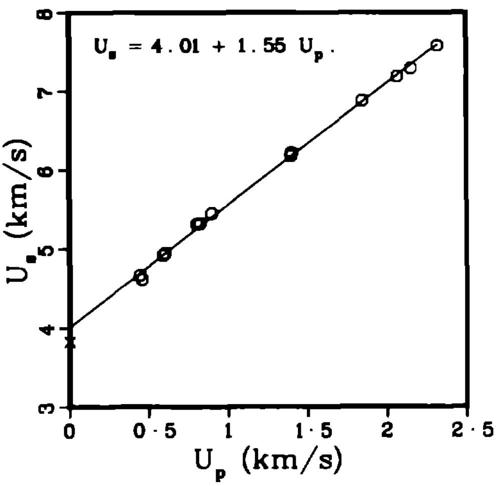
PALLADIUM

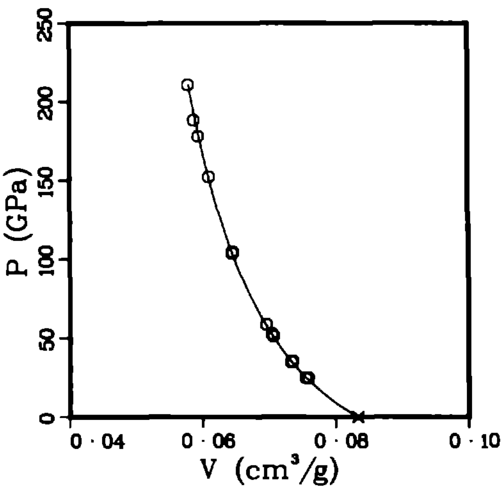
Average ρ_0 = 11.991 g/cm^3.

Sound velocities longitudinal 4.68 km/s.
shear 2.33 km/s.

References 6, 11, 12, 13, 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
12.000	3.829	0.000	0.000	.0833	12.000	1.000	ssp ×
12.000	4.669	.440	24.652	.0755	13.249	.906	im1 o
11.880	4.617	.455	24.957	.0759	13.179	.901	im1 o
12.000	4.920	.591	34.893	.0733	13.638	.880	im1 o
11.950	4.944	.602	35.567	.0735	13.607	.878	im1 o
12.020	5.310	.803	51.252	.0706	14.162	.849	im1 o
12.000	5.319	.825	52.658	.0704	14.203	.845	im1 o
12.010	5.443	.896	58.572	.0696	14.377	.835	im1 o
12.000	6.181	1.398	103.692	.0645	15.507	.774	im1 o
12.000	6.214	1.399	104.321	.0646	15.487	.775	im1 o
12.000	6.214	1.404	104.693	.0645	15.503	.774	im1 o
12.000	6.881	1.845	152.345	.0610	16.396	.732	im1 o
12.000	7.189	2.066	178.230	.0594	16.839	.713	im1 o
12.000	7.292	2.153	188.396	.0587	17.027	.705	im1 o
12.000	7.581	2.317	210.782	.0579	17.282	.694	im1 o





PLATINUM

Average ρ_0 = 21.449 g/cm^3.

Sound velocities longitudinal 4.08 km/s.
shear 1.76 km/s.

References 6, 11, 12, 13, 28

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
21.430	3.538	0.000	0.000	.0467	21.430	1.000	ssp	×
21.370	4.149	.316	28.018	.0432	23.132	.924	im1	o
21.430	4.119	.339	29.924	.0428	23.352	.918	im1	o
21.370	4.254	.441	40.090	.0419	23.842	.896	im1	o
21.430	4.302	.460	42.408	.0417	23.996	.893	im1	o
21.430	4.339	.466	43.331	.0417	24.008	.893	im1	o
21.370	4.441	.596	56.563	.0405	24.682	.866	im1	o
21.430	4.615	.650	64.285	.0401	24.943	.859	im1	o
21.430	4.709	.713	71.952	.0396	25.254	.849	im1	o
21.430	5.342	1.120	128.217	.0369	27.115	.790	im1	o
21.430	5.387	1.122	129.528	.0369	27.068	.792	im1	o
21.430	5.364	1.150	132.193	.0367	27.278	.786	im1	o
21.430	5.928	1.492	189.539	.0349	28.638	.748	im1	o
21.490	6.033	1.580	204.846	.0343	29.115	.738	im1	o
21.490	6.025	1.581	204.704	.0343	29.135	.738	im1	o
21.430	6.225	1.665	222.114	.0342	29.255	.733	im1	o
21.430	6.276	1.751	235.500	.0336	29.723	.721	im1	o
21.700	6.416	1.806	251.444	.0331	30.201	.719	im1	o
21.700	6.378	1.812	250.786	.0330	30.312	.716	im1	o

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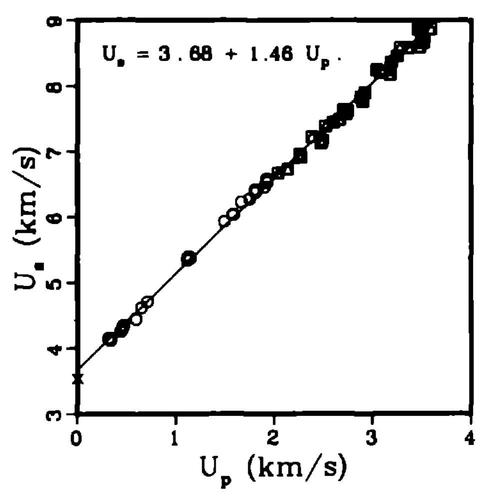

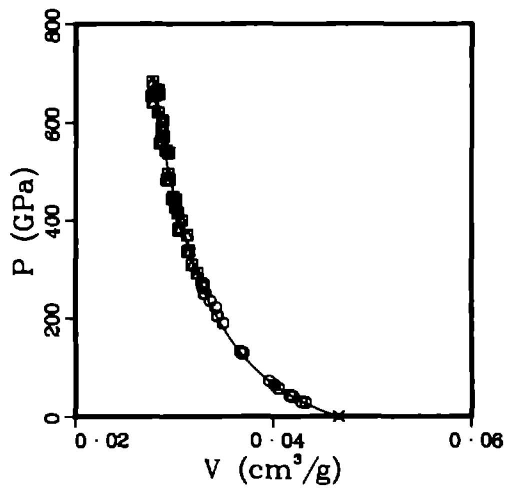

PLATINUM
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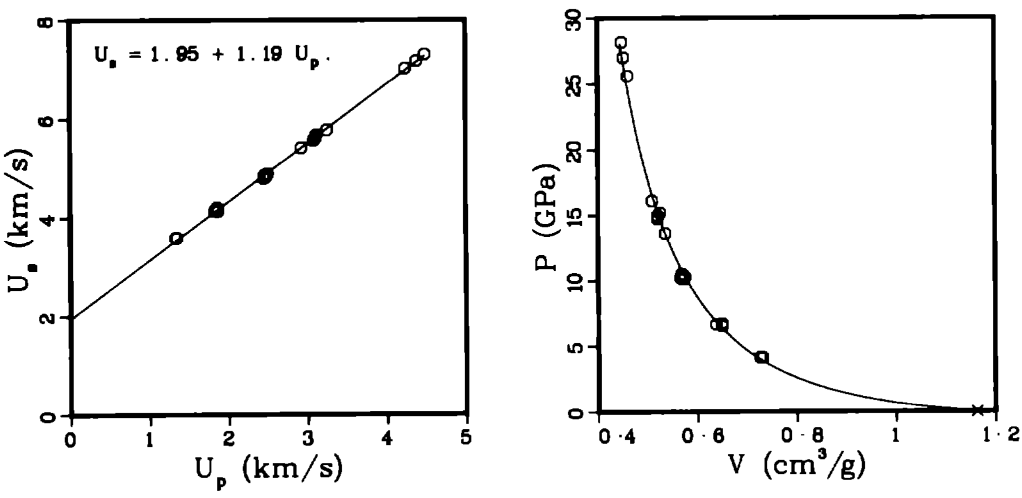
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
21.430	6.454	1.899	262.649	.0329	30.364	.706	im1 ○
21.490	6.577	1.921	271.514	.0329	30.356	.708	im1 ○
21.490	6.528	1.929	270.613	.0328	30.504	.705	im1 ○
21.460	6.670	2.040	292.002	.0323	30.915	.694	sp3 ⊠
21.440	6.730	2.140	308.783	.0318	31.436	.682	sp3 ⊠
21.450	6.960	2.260	337.400	.0315	31.764	.675	sp3 ⊠
21.440	6.910	2.270	336.301	.0313	31.929	.671	sp3 ⊠
21.440	7.230	2.380	368.927	.0313	31.961	.671	sp3 ⊠
21.450	7.130	2.480	379.287	.0304	32.890	.652	sp3 ⊠
21.450	7.170	2.490	382.953	.0304	32.862	.653	sp3 ⊠
21.430	7.390	2.520	399.087	.0308	32.519	.659	sp3 ⊠
21.460	7.450	2.600	415.680	.0303	32.964	.651	sp3 ⊠
21.440	7.490	2.660	427.158	.0301	33.248	.645	sp3 ⊠
21.440	7.640	2.700	442.264	.0302	33.158	.647	sp3 ⊠
21.470	7.580	2.730	444.287	.0298	33.555	.640	sp3 ⊠
21.440	7.620	2.740	447.641	.0299	33.478	.640	sp3 ⊠
21.440	7.830	2.880	483.481	.0295	33.914	.632	sp3 ⊠
21.440	7.770	2.900	483.108	.0292	34.207	.627	sp3 ⊠
21.450	7.900	2.920	494.809	.0294	34.027	.630	sp3 ⊠
21.440	8.250	3.040	537.715	.0295	33.950	.632	sp3 ⊠
21.450	8.210	3.080	542.402	.0291	34.328	.625	sp3 ⊠
21.440	8.180	3.180	557.706	.0285	35.076	.611	sp3 ⊠
21.450	8.250	3.180	562.741	.0287	34.904	.615	sp3 ⊠
21.440	8.370	3.190	572.454	.0289	34.643	.619	sp3 ⊠
21.440	8.460	3.250	589.493	.0287	34.814	.616	sp3 ⊠
21.450	8.590	3.280	604.358	.0288	34.700	.618	sp3 ⊠
21.450	8.590	3.370	620.941	.0283	35.298	.608	sp3 ⊠
21.450	8.870	3.460	658.305	.0284	35.168	.610	sp3 ⊠
21.420	8.600	3.480	641.058	.0278	35.979	.595	sp3 ⊠
21.420	8.880	3.490	663.832	.0283	35.289	.607	sp3 ⊠
21.420	8.910	3.490	666.074	.0284	35.213	.608	sp3 ⊠
21.450	8.750	3.490	655.029	.0280	35.682	.601	sp3 ⊠
21.440	8.670	3.520	654.314	.0277	36.094	.594	sp3 ⊠
21.430	8.870	3.590	682.402	.0278	36.001	.595	sp3 ⊠

POTASSIUM

Average ρ_0 = 0.860 g/cm^3.

References 6, 16

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.860	3.597	1.335	4.130	.7312	1.368	.629	im1	o
.860	3.590	1.347	4.159	.7265	1.376	.625	im1	o
.860	4.148	1.830	6.528	.6498	1.539	.559	im1	o
.860	4.207	1.857	6.719	.6495	1.540	.559	im1	o
.860	4.137	1.869	6.650	.6375	1.569	.548	im1	o
.860	4.806	2.449	10.122	.5703	1.754	.490	im1	o
.860	4.862	2.457	10.274	.5752	1.739	.495	im1	o
.860	4.816	2.468	10.222	.5669	1.764	.488	im1	o
.860	4.890	2.496	10.497	.5693	1.757	.490	im1	o
.860	4.884	2.497	10.488	.5683	1.760	.489	im1	o
.860	5.423	2.924	13.637	.5358	1.866	.461	im1	o
.860	5.573	3.079	14.757	.5204	1.922	.448	im1	o
.860	5.615	3.103	14.984	.5202	1.922	.447	im1	o
.860	5.678	3.112	15.196	.5255	1.903	.452	im1	o
.860	5.775	3.246	16.121	.5092	1.964	.438	im1	o
.860	7.023	4.240	25.609	.4608	2.170	.396	im1	o
.860	7.171	4.382	27.024	.4522	2.211	.389	im1	o
.860	7.304	4.486	28.179	.4486	2.229	.386	im1	o



PRASEODYMIUM

Average ρ_0 = 6.756 g/cm^3.

Sound velocities longitudinal 2.74 km/s.
shear 1.51 km/s.

Reference 15

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.764	2.114	0.000	0.000	.1478	6.764	1.000	ssp ×
6.764	2.386	.354	5.713	.1259	7.942	.852	im1 o
6.762	2.454	.465	7.716	.1199	8.343	.811	im1 o
6.757	2.651	.713	12.772	.1082	9.243	.731	im1 o
6.756	2.823	.934	17.813	.0990	10.096	.669	im1 o
6.761	2.886	1.020	19.902	.0956	10.457	.647	im1 o
6.763	3.034	1.167	23.946	.0910	10.990	.615	im1 o
6.727	3.064	1.210	24.940	.0899	11.117	.605	im1 o
6.751	3.130	1.296	27.385	.0868	11.522	.586	im1 o
6.761	3.284	1.404	31.173	.0847	11.810	.572	im1 o
6.728	3.373	1.449	32.883	.0848	11.795	.570	im1 o
6.734	3.728	1.664	41.774	.0822	12.163	.554	im1 o
6.765	3.947	1.761	47.021	.0819	12.215	.554	im1 o
6.757	4.272	2.013	58.107	.0783	12.778	.529	im1 o
6.760	4.686	2.188	69.310	.0789	12.681	.533	im1 o
6.730	4.779	2.214	71.208	.0798	12.539	.537	im1 o
6.756	4.736	2.291	73.304	.0764	13.086	.516	im1 o
6.757	4.743	2.299	73.679	.0763	13.113	.515	im1 o
6.754	5.045	2.454	83.617	.0760	13.151	.514	im1 o

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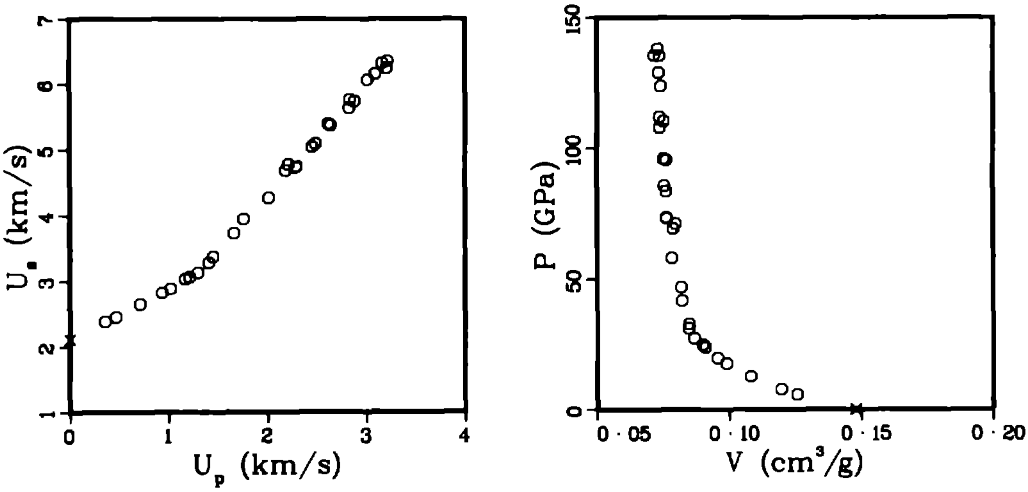


PRASEODYMIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.762	5.092	2.489	85.702	.0756	13.228	.511	im1 o
6.754	5.403	2.617	95.499	.0763	13.098	.516	im1 o
6.764	5.378	2.640	96.035	.0753	13.286	.509	im1 o
6.764	5.642	2.828	107.924	.0737	13.562	.499	im1 o
6.759	5.769	2.833	110.466	.0753	13.281	.509	im1 o
6.759	5.744	2.883	111.929	.0737	13.570	.498	im1 o
6.755	6.065	3.020	123.727	.0743	13.455	.502	im1 o
6.759	6.153	3.096	128.757	.0735	13.604	.497	im1 o
6.765	6.318	3.165	135.276	.0738	13.556	.499	im1 o
6.763	6.241	3.212	135.572	.0718	13.935	.485	im1 o
6.755	6.354	3.219	138.164	.0730	13.691	.493	im1 o

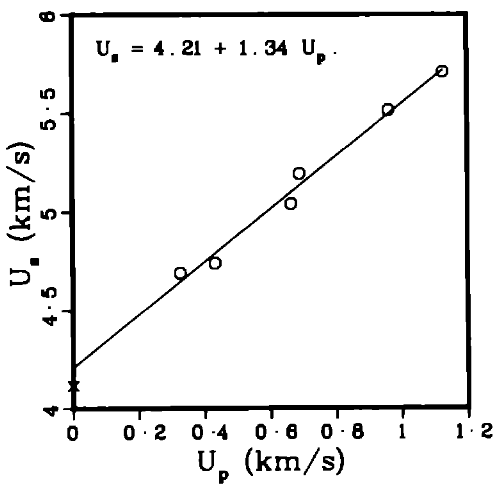
RHENIUM , ρ_0 = 21.0 g/cm^3.

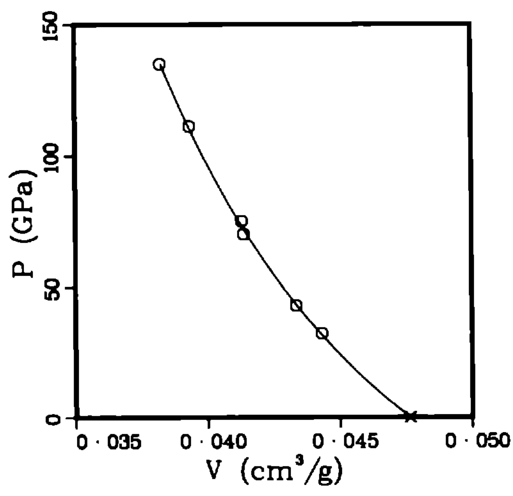
Average ρ_0 = 20.984 g/cm^3.

Sound velocities longitudinal 5.30 km/s.
shear 2.89 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
20.990	4.118	0.000	0.000	.0476	20.990	1.000	ssp ×
20.990	4.691	.327	32.198	.0443	22.563	.930	im1 o
20.960	4.740	.433	43.019	.0434	23.067	.909	im1 o
20.980	5.041	.665	70.331	.0414	24.168	.868	im1 o
20.990	5.192	.690	75.196	.0413	24.207	.867	im1 o
20.990	5.515	.961	111.245	.0393	25.419	.826	im1 o
20.990	5.710	1.127	135.074	.0382	26.152	.803	im1 o





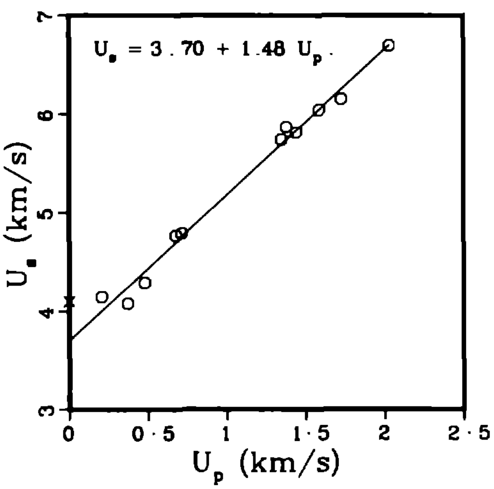
RHENIUM , ρ_0 = 20.5 g/cm^3.

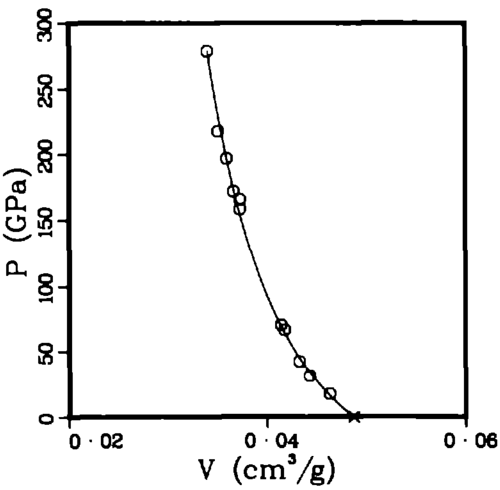
Average ρ_0 = 20.530 g/cm^3.

Sound velocities longitudinal 5.28 km/s.
shear 2.89 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
20.530	4.101	0.000	0.000	.0487	20.530	1.000	ssp	×
20.530	4.150	.206	17.551	.0463	21.602	.950	im1	o
20.530	4.082	.372	31.175	.0443	22.589	.909	im1	o
20.530	4.295	.479	42.236	.0433	23.107	.888	im1	o
20.530	4.770	.679	66.493	.0418	23.937	.858	im1	o
20.530	4.791	.716	70.425	.0414	24.137	.851	im1	o
20.530	5.739	1.346	158.588	.0373	26.820	.765	im1	o
20.530	5.868	1.377	165.887	.0373	26.825	.765	im1	o
20.530	5.813	1.441	171.970	.0366	27.297	.752	im1	o
20.530	6.043	1.585	196.640	.0359	27.829	.738	im1	o
20.530	6.153	1.725	217.904	.0351	28.528	.720	im1	o
20.530	6.694	2.028	278.704	.0340	29.453	.697	im1	o





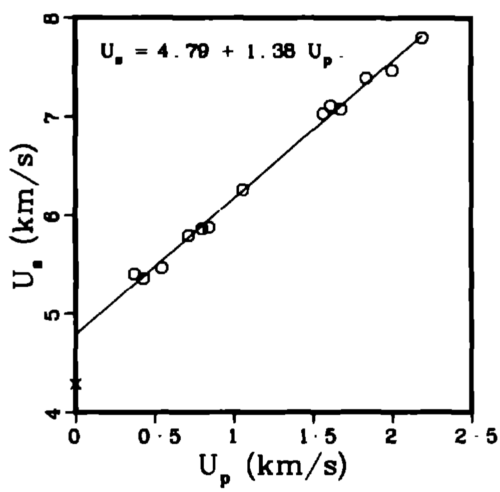
RHODIUM

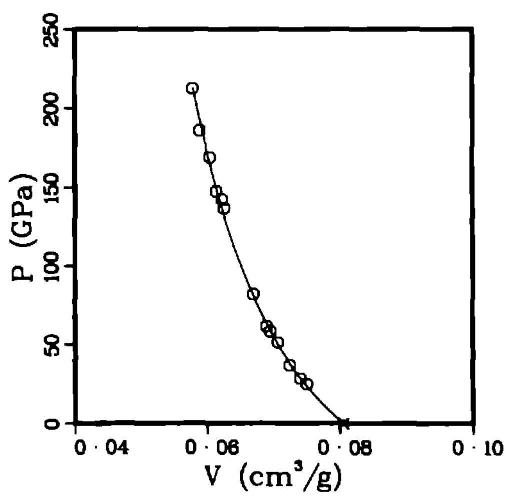
Average ρ_0 = 12.429 g/cm^3.

Sound velocities longitudinal 6.00 km/s.
shear 3.64 km/s.

References 11, 12, 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
12.430	4.282	0.000	0.000	.0805	12.430	1.000	ssp ×
12.420	5.405	.369	24.771	.0750	13.330	.932	im1 o
12.430	5.358	.426	28.372	.0741	13.504	.920	im1 o
12.430	5.468	.543	36.906	.0725	13.800	.901	im1 o
12.420	5.795	.714	51.389	.0706	14.165	.877	im1 o
12.430	5.863	.800	58.302	.0695	14.394	.864	im1 o
12.430	5.877	.843	61.582	.0689	14.512	.857	im1 o
12.430	6.262	1.056	82.196	.0669	14.951	.831	im1 o
12.430	7.034	1.566	136.919	.0625	15.990	.777	im1 o
12.430	7.111	1.612	142.484	.0622	16.074	.773	im1 o
12.430	7.078	1.678	147.630	.0614	16.293	.763	im1 o
12.430	7.391	1.839	168.949	.0604	16.547	.751	im1 o
12.430	7.469	2.004	186.051	.0589	16.988	.732	im1 o
12.430	7.802	2.191	212.481	.0579	17.284	.719	im1 o



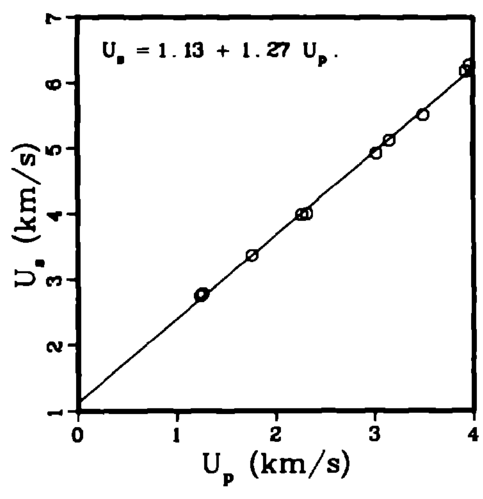


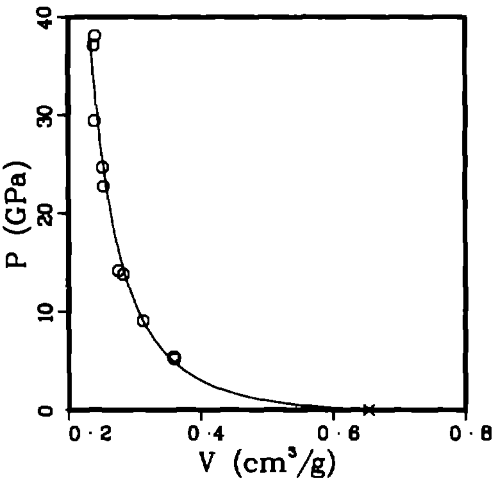
RUBIDIUM

Average ρ_0 = 1.530 g/cm^3.

References 6, 16

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.530	2.753	1.236	5.206	.3602	2.777	.551	im1 o
1.530	2.786	1.259	5.367	.3582	2.791	.548	im1 o
1.530	3.371	1.758	9.067	.3127	3.198	.478	im1 o
1.530	3.988	2.261	13.796	.2830	3.533	.433	im1 o
1.530	4.002	2.314	14.169	.2757	3.627	.422	im1 o
1.530	4.928	3.019	22.763	.2532	3.950	.387	im1 o
1.530	5.125	3.153	24.723	.2515	3.976	.385	im1 o
1.530	5.507	3.493	29.431	.2390	4.184	.366	im1 o
1.530	6.181	3.925	37.118	.2386	4.192	.365	im1 o
1.530	6.273	3.967	38.074	.2403	4.162	.368	im1 o





SAMARIUM

Average ρ_0 = 7.461 g/cm^3.

Sound velocities longitudinal 2.89 km/s.
shear 1.64 km/s.

Reference 15

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
7.464	2.183	0.000	0.000	.1340	7.464	1.000	ssp	×
7.468	2.511	.338	6.338	.1159	8.630	.865	im1	o
7.464	2.760	.688	14.173	.1006	9.942	.751	im1	o
7.469	2.786	.706	14.691	.1000	10.004	.747	im1	o
7.464	2.916	.888	19.327	.0932	10.732	.695	im1	o
7.463	2.976	.971	21.566	.0903	11.077	.674	im1	o
7.445	3.076	.971	22.237	.0919	10.879	.684	im1	o
7.463	3.114	1.150	26.726	.0845	11.833	.631	im1	o
7.460	3.152	1.163	27.347	.0846	11.822	.631	im1	o
7.470	3.268	1.243	30.344	.0830	12.055	.620	im1	o
7.463	3.278	1.250	30.580	.0829	12.063	.619	im1	o
7.443	3.396	1.287	32.531	.0834	11.985	.621	im1	o
7.463	3.404	1.381	35.083	.0796	12.558	.594	im1	o
7.465	3.708	1.625	44.980	.0753	13.289	.562	im1	o
7.454	4.312	2.032	65.312	.0709	14.097	.529	im1	o
7.465	4.498	2.202	73.938	.0684	14.624	.510	im1	o
7.460	4.548	2.221	75.354	.0686	14.580	.512	im1	o
7.459	5.317	2.755	109.262	.0646	15.480	.482	im1	o
7.459	5.472	2.898	118.284	.0631	15.857	.470	im1	o

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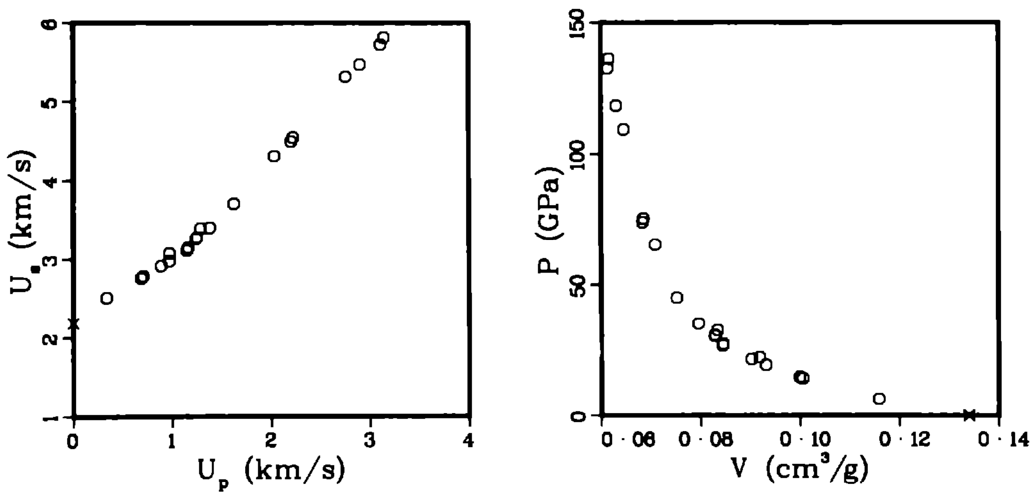


SAMARIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.454	5.726	3.108	132.654	.0613	16.303	.457	im1 o
7.460	5.814	3.143	136.320	.0616	16.238	.459	im1 o

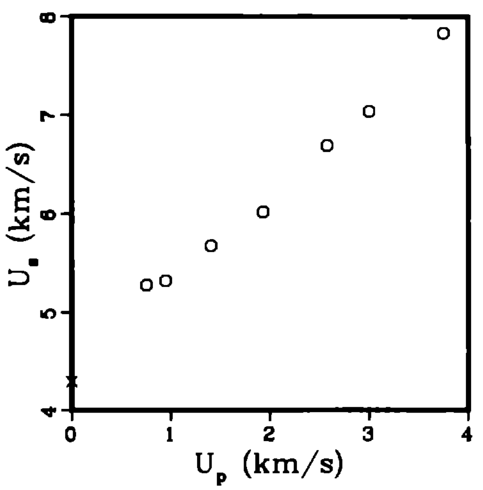
SCANDIUM

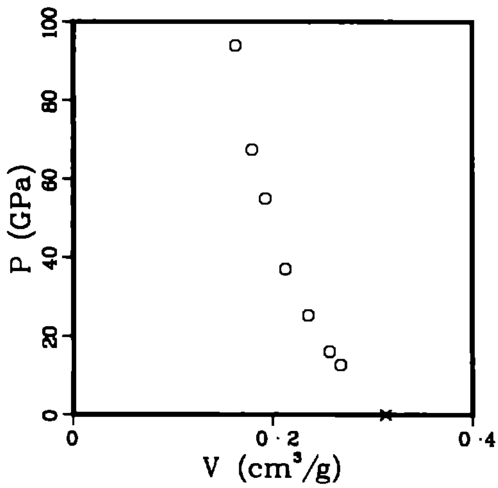
Average ρ_0 = 3.195 g/cm^3.

Sound velocities longitudinal 5.57 km/s.
shear 3.07 km/s.

Reference 15

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.195	4.296	0.000	0.000	.3130	3.195	1.000	ssp ×
3.196	5.274	.755	12.726	.2681	3.730	.857	im1 o
3.196	5.317	.948	16.109	.2571	3.889	.822	im1 o
3.193	5.670	1.405	25.437	.2356	4.245	.752	im1 o
3.192	6.017	1.932	37.107	.2127	4.702	.679	im1 o
3.191	6.693	2.578	55.059	.1927	5.190	.615	im1 o
3.197	7.038	3.003	67.569	.1793	5.576	.573	im1 o
3.198	7.833	3.752	93.987	.1629	6.138	.521	im1 o





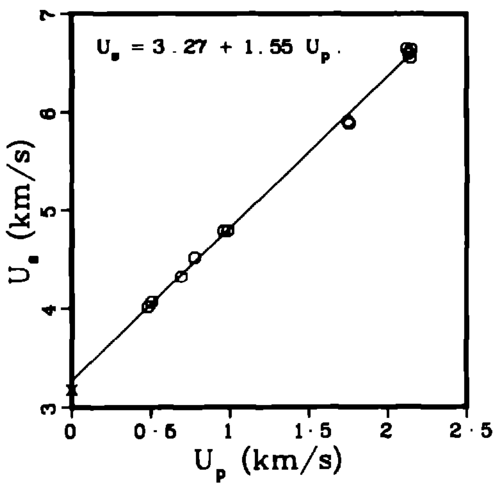
SILVER

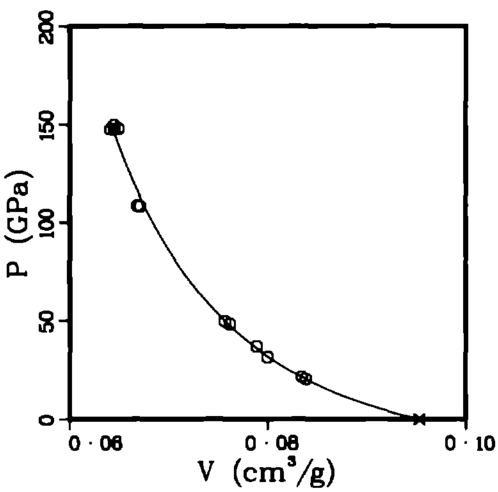
Average ρ_0 = 10.490 g/cm^3.

Sound velocities longitudinal 3.71 km/s.
shear 1.66 km/s.

References 4, 6, 11, 12, 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
10.490	3.176	0.000	0.000	.0953	10.490	1.000	ssp	×
10.490	4.016	.483	20.348	.0839	11.924	.880	im1	o
10.490	4.064	.506	21.571	.0835	11.982	.875	im1	o
10.490	4.326	.695	31.539	.0800	12.498	.839	im1	o
10.490	4.517	.780	36.959	.0789	12.680	.827	im1	o
10.490	4.788	.962	48.318	.0762	13.128	.799	im1	o
10.490	4.790	.987	49.594	.0757	13.212	.794	im1	o
10.490	5.909	1.749	108.412	.0671	14.900	.704	im1	o
10.490	5.885	1.758	108.528	.0669	14.958	.701	im1	o
10.490	6.645	2.120	147.777	.0649	15.405	.681	im1	o
10.490	6.596	2.133	147.587	.0645	15.503	.677	im1	o
10.490	6.554	2.146	147.541	.0641	15.597	.673	im1	o
10.490	6.636	2.149	149.595	.0645	15.514	.676	im1	o



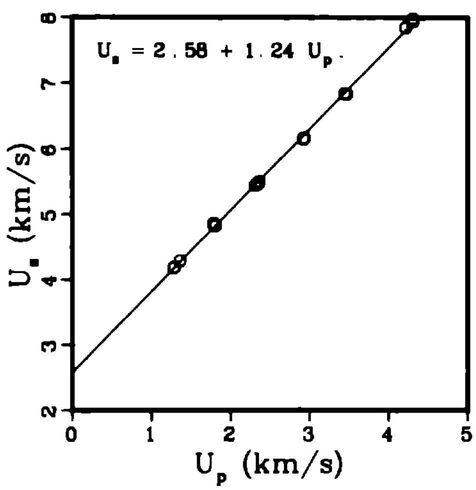


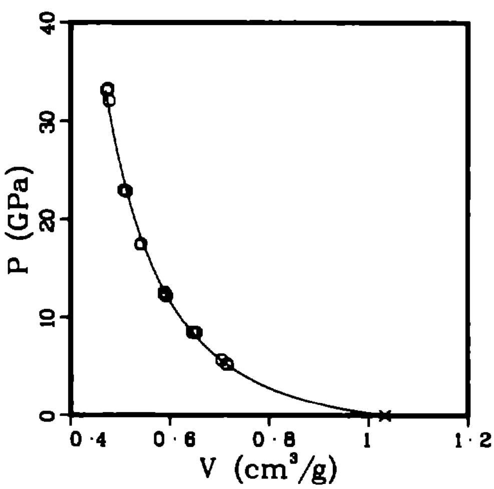
SODIUM

Average ρ_0 = 0.968 g/cm^3.

References 6, 16, 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.968	4.178	1.282	5.185	.7161	1.397	.693	iml o
.968	4.187	1.293	5.241	.7140	1.400	.691	iml o
.968	4.284	1.363	5.652	.7044	1.420	.682	iml o
.968	4.859	1.785	8.396	.6536	1.530	.633	iml o
.968	4.855	1.793	8.426	.6515	1.535	.631	iml o
.968	4.825	1.812	8.463	.6451	1.550	.624	iml o
.968	5.439	2.314	12.183	.5935	1.685	.575	iml o
.968	5.463	2.342	12.385	.5902	1.694	.571	iml o
.968	5.455	2.346	12.388	.5888	1.698	.570	iml o
.968	5.474	2.358	12.495	.5881	1.701	.569	iml o
.968	5.494	2.362	12.562	.5889	1.698	.570	iml o
.968	6.150	2.929	17.437	.5411	1.848	.524	iml o
.968	6.170	2.932	17.512	.5421	1.845	.525	iml o
.968	6.842	3.446	22.823	.5128	1.950	.496	iml o
.968	6.828	3.474	22.961	.5075	1.971	.491	iml o
.968	7.847	4.218	32.039	.4778	2.093	.462	iml o
.968	7.979	4.309	33.281	.4752	2.105	.460	iml o
.968	7.940	4.309	33.119	.4724	2.117	.457	iml o





STRONTIUM

Average ρ_0 = 2.628 g/cm^3.

Sound velocities longitudinal 2.70 km/s.
shear 1.45 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.585	2.118	0.000	0.000	.3868	2.585	1.000	ssp	×
2.652	2.756	.531	3.881	.3044	3.285	.807	im1	o
2.628	2.673	.537	3.772	.3041	3.289	.799	im1	o
2.580	2.595	.636	4.258	.2926	3.418	.755	im1	o
2.668	3.042	.710	5.762	.2873	3.480	.767	im1	o
2.664	3.013	.842	6.758	.2705	3.697	.721	im1	o
2.639	3.018	.844	6.722	.2730	3.664	.720	im1	o
2.586	2.847	.873	6.427	.2681	3.730	.693	im1	o
2.652	3.338	1.102	9.755	.2526	3.959	.670	im1	o
2.627	3.286	1.111	9.591	.2520	3.969	.662	im1	o
2.586	3.274	1.171	9.914	.2484	4.026	.642	im1	o
2.663	3.373	1.216	10.922	.2401	4.164	.639	im1	o
2.665	3.367	1.216	10.911	.2397	4.172	.639	im1	o
2.648	3.645	1.538	14.845	.2183	4.581	.578	im1	o
2.654	3.614	1.541	14.781	.2161	4.627	.574	im1	o
2.585	3.486	1.562	14.076	.2135	4.684	.552	im1	o
2.649	4.166	1.974	21.785	.1986	5.035	.526	im1	o
2.628	4.080	1.993	21.369	.1946	5.138	.512	im1	o
2.585	4.054	2.120	22.217	.1845	5.419	.477	im1	o
2.584	4.218	2.332	25.417	.1730	5.779	.447	im1	o

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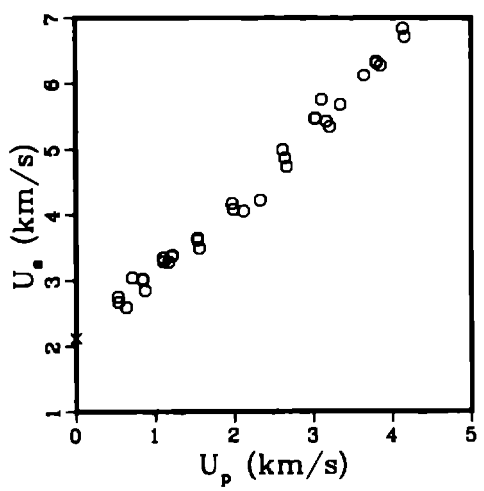
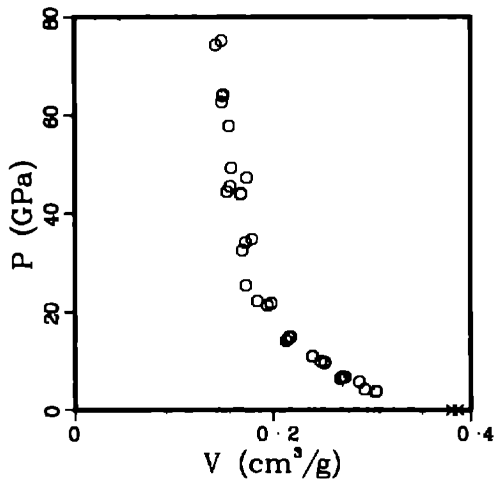




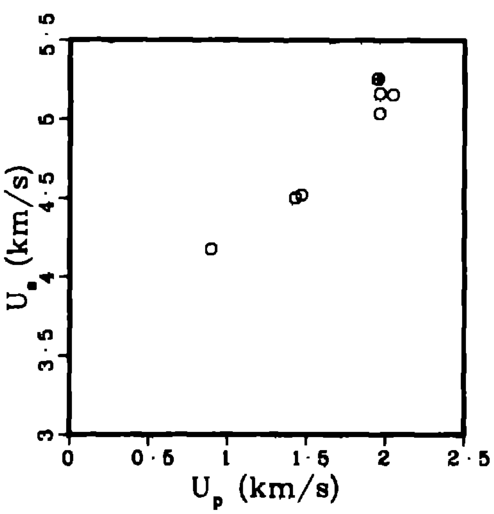
STRONTIUM
(Continued)

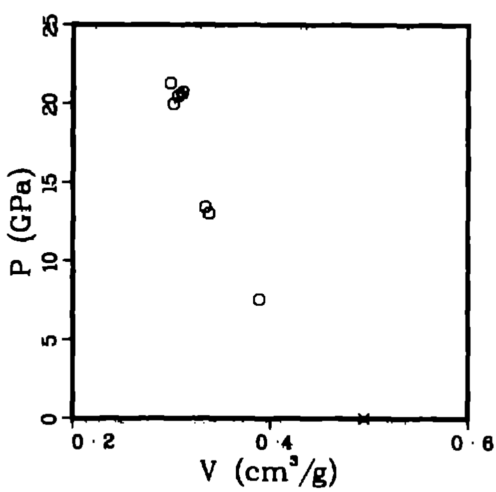
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.656	4.994	2.617	34.712	.1792	5.580	.476	iml o
2.645	4.865	2.644	34.023	.1726	5.794	.457	iml o
2.570	4.728	2.668	32.419	.1695	5.899	.436	iml o
2.660	5.471	3.025	44.022	.1681	5.950	.447	iml o
2.648	5.467	3.031	43.879	.1683	5.943	.446	iml o
2.639	5.756	3.110	47.241	.1742	5.741	.460	iml o
2.644	5.423	3.171	45.467	.1571	6.367	.415	iml o
2.587	5.342	3.213	44.403	.1541	6.491	.399	iml o
2.590	5.679	3.348	49.244	.1585	6.310	.410	iml o
2.587	6.127	3.650	57.855	.1563	6.399	.404	iml o
2.661	6.342	3.802	64.163	.1505	6.644	.401	iml o
2.660	6.323	3.807	64.031	.1496	6.685	.398	iml o
2.588	6.280	3.856	62.670	.1491	6.705	.386	iml o
2.655	6.841	4.140	75.194	.1487	6.724	.395	iml o
2.660	6.716	4.163	74.370	.1429	6.997	.380	iml o

SULFUR, rhombic

Average ρ_0 = 2.020 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.020	4.176	.897	7.567	.3887	2.573	.785	im1 ○
2.020	4.503	1.431	13.016	.3377	2.961	.682	im1 ○
2.020	4.520	1.470	13.422	.3340	2.994	.675	im1 ○
2.020	5.254	1.952	20.717	.3111	3.214	.628	sf1 ⊕
2.020	5.036	1.964	19.979	.3020	3.311	.610	im1 ○
2.020	5.162	1.964	20.479	.3067	3.261	.620	im1 ○
2.020	5.153	2.046	21.297	.2985	3.350	.603	im1 ○





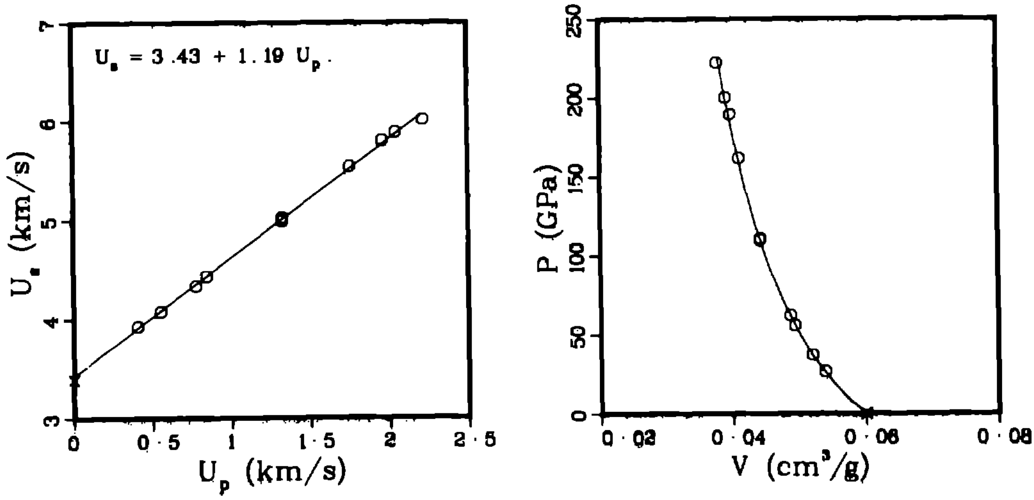
TANTALUM

Average ρ_0 = 16.656 g/cm^3.

Sound velocities	longitudinal	4.16 km/s.
	shear	2.09 km/s.

References 6, 11, 12, 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
16.690	3.388	0.000	0.000	.0599	16.690	1.000	ssp ×
16.660	3.924	.404	26.411	.0538	18.572	.897	im1 o
16.640	4.075	.549	37.227	.0520	19.231	.865	im1 o
16.650	4.332	.775	55.899	.0493	20.278	.821	im1 o
16.660	4.430	.842	62.143	.0486	20.570	.810	im1 o
16.650	4.988	1.324	109.958	.0441	22.667	.735	im1 o
16.660	5.020	1.324	110.730	.0442	22.628	.736	im1 o
16.660	5.540	1.752	161.703	.0410	24.365	.684	im1 o
16.640	5.804	1.962	189.487	.0398	25.138	.662	im1 o
16.660	5.881	2.045	200.364	.0392	25.542	.652	im1 o
16.650	6.015	2.219	222.232	.0379	26.383	.631	im1 o



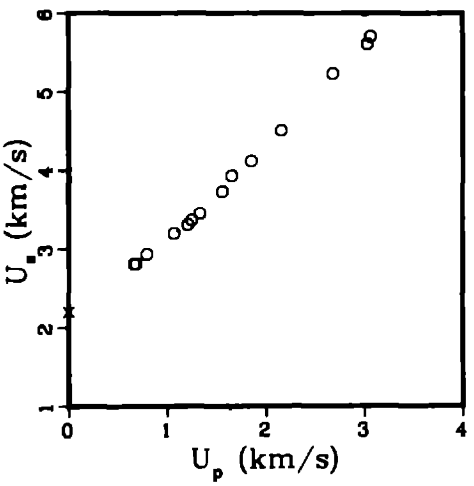
TERBIUM

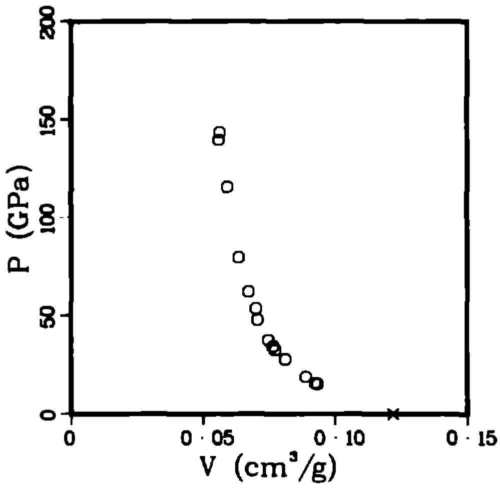
Average ρ_0 = 8.209 g/cm^3.

Sound velocities longitudinal 2.94 km/s.
shear 1.69 km/s.

Reference 15

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
8.202	2.199	0.000	0.000	.1219	8.202	1.000	ssp ×
8.194	2.812	.663	15.277	.0933	10.722	.764	im1 o
8.199	2.811	.682	15.718	.0924	10.825	.757	im1 o
8.218	2.933	.792	19.090	.0888	11.258	.730	im1 o
8.210	3.197	1.068	28.032	.0811	12.328	.666	im1 o
8.199	3.307	1.209	32.781	.0774	12.924	.634	im1 o
8.209	3.366	1.250	34.539	.0766	13.058	.629	im1 o
8.205	3.448	1.333	37.712	.0748	13.376	.613	im1 o
8.214	3.730	1.562	47.857	.0708	14.132	.581	im1 o
8.247	3.930	1.654	53.607	.0702	14.240	.579	im1 o
8.181	4.118	1.853	62.426	.0672	14.874	.550	im1 o
8.194	4.506	2.160	79.752	.0635	15.738	.521	im1 o
8.247	5.231	2.680	115.615	.0591	16.911	.488	im1 o
8.204	5.611	3.032	139.571	.0560	17.849	.460	im1 o
8.209	5.704	3.065	143.516	.0564	17.743	.463	im1 o



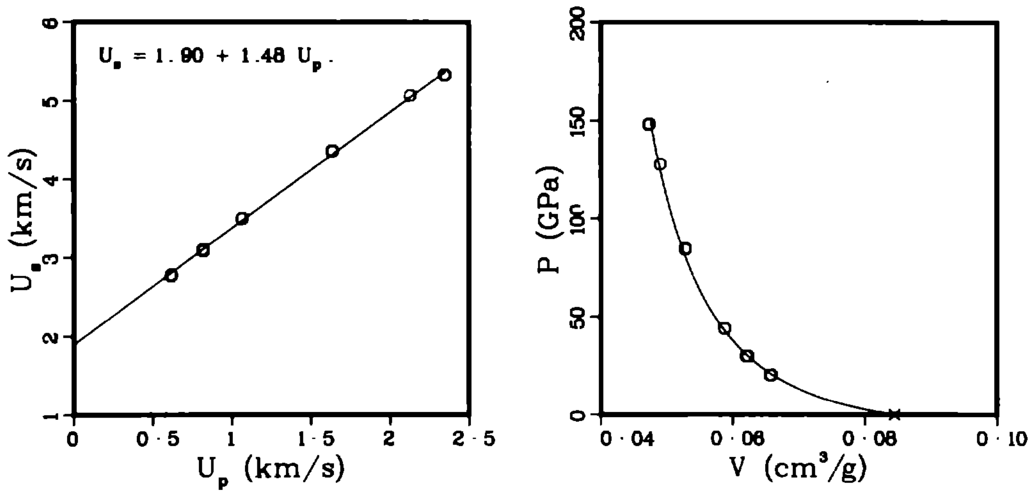


THALLIUM

Average ρ_0 = 11.840 g/cm^3.

References 4, 6, 11, 12

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
11.840	2.783	.614	20.232	.0658	15.192	.779	im1 o
11.840	2.770	.617	20.236	.0656	15.233	.777	im1 o
11.840	3.107	.815	29.981	.0623	16.050	.738	im1 o
11.840	3.083	.820	29.932	.0620	16.130	.734	im1 o
11.840	3.499	1.063	44.038	.0588	17.007	.696	im1 o
11.840	3.496	1.064	44.042	.0588	17.020	.696	im1 o
11.840	4.360	1.635	84.403	.0528	18.944	.625	im1 o
11.840	4.361	1.635	84.422	.0528	18.941	.625	im1 o
11.840	4.368	1.635	84.557	.0528	18.923	.626	im1 o
11.840	5.069	2.128	127.716	.0490	20.407	.580	im1 o
11.840	5.338	2.345	148.209	.0474	21.117	.561	im1 o
11.840	5.335	2.347	148.252	.0473	21.140	.560	im1 o
11.840	5.327	2.347	148.029	.0472	21.165	.559	im1 o



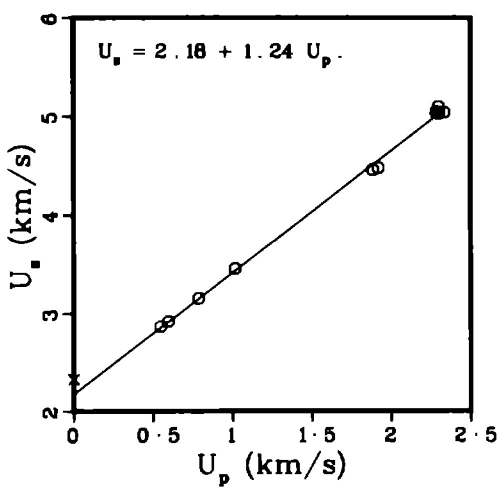
THORIUM

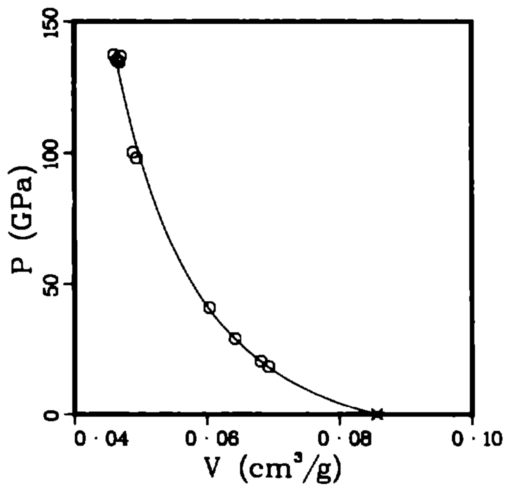
Average ρ_0 = 11.680 g/cm^3.

Sound velocities longitudinal 2.95 km/s.
shear 1.57 km/s.

References 4, 6, 11, 12

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
11.680	2.327	0.000	0.000	.0856	11.680	1.000	ssp ×
11.680	2.865	.547	18.304	.0693	14.436	.809	iml o
11.680	2.919	.596	20.320	.0681	14.677	.796	iml o
11.680	3.154	.787	28.992	.0643	15.563	.750	iml o
11.680	3.455	1.017	41.040	.0604	16.552	.706	iml o
11.680	4.458	1.885	98.151	.0494	20.237	.577	iml o
11.680	4.477	1.920	100.399	.0489	20.450	.571	iml o
11.680	5.048	2.285	134.725	.0469	21.339	.547	iml o
11.680	5.099	2.299	136.920	.0470	21.270	.549	iml o
11.680	5.032	2.303	135.356	.0464	21.537	.542	iml o
11.680	5.041	2.334	137.423	.0460	21.751	.537	iml o





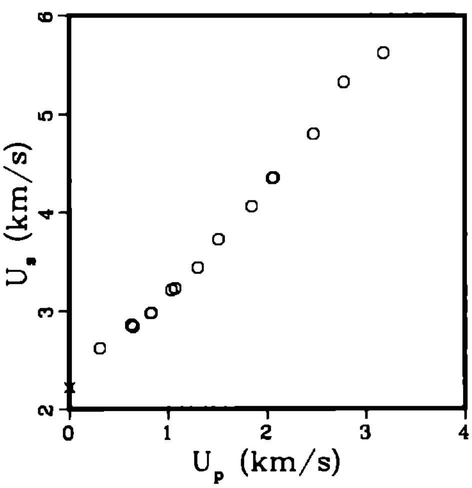
THULIUM

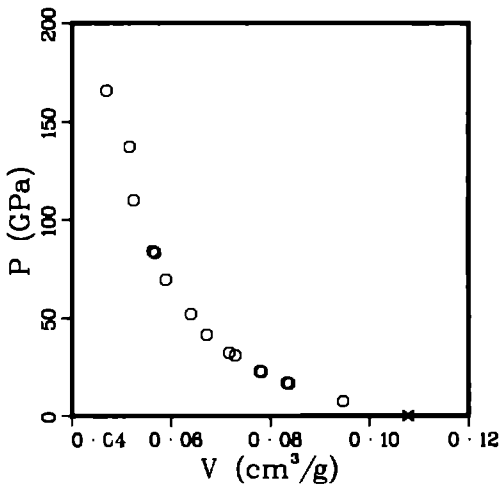
Average ρ_0 = 9.291 g/cm^3.

Sound velocities longitudinal 3.02 km/s.
shear 1.77 km/s.

Reference 15

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
9.268	2.223	0.000	0.000	.1079	9.268	1.000	ssp ×
9.318	2.620	.309	7.544	.0947	10.564	.882	im1 o
9.317	2.855	.626	16.652	.0838	11.934	.781	im1 o
9.271	2.837	.646	16.991	.0833	12.004	.772	im1 o
9.260	2.977	.820	22.605	.0782	12.780	.725	im1 o
9.269	2.980	.829	22.898	.0779	12.841	.722	im1 o
9.310	3.213	1.032	30.870	.0729	13.715	.679	im1 o
9.325	3.228	1.070	32.208	.0717	13.949	.669	im1 o
9.266	3.437	1.298	41.338	.0672	14.889	.622	im1 o
9.303	3.721	1.507	52.167	.0640	15.635	.595	im1 o
9.263	4.061	1.845	69.403	.0589	16.975	.546	im1 o
9.305	4.347	2.051	82.961	.0568	17.617	.528	im1 o
9.339	4.350	2.065	83.890	.0562	17.779	.525	im1 o
9.269	4.801	2.469	109.872	.0524	19.083	.486	im1 o
9.289	5.328	2.776	137.389	.0516	19.393	.479	im1 o
9.289	5.626	3.175	165.925	.0469	21.322	.436	im1 o





TIN

Average ρ_0 = 7.287 g/cm^3.

Sound velocities longitudinal 3.43 km/s.
shear 1.77 km/s.

References 4, 5, 6, 11, 12

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
7.291	2.755	0.000	0.000	.1372	7.291	1.000	ssp	×
7.294	3.273	.304	7.257	.1244	8.041	.907	im1	o
7.290	3.299	.418	10.053	.1198	8.348	.873	im1	o
7.289	3.263	.451	10.727	.1182	8.458	.862	im1	o
7.290	3.361	.577	14.137	.1136	8.801	.828	im1	o
7.280	3.482	.642	16.274	.1120	8.926	.816	im1	o
7.291	3.476	.645	16.347	.1117	8.952	.814	im1	o
7.280	3.514	.677	17.319	.1109	9.017	.807	im1	o
7.290	3.524	.693	17.803	.1102	9.075	.803	im1	o
7.292	3.658	.767	20.459	.1084	9.227	.790	im1	o
7.280	3.956	.896	25.805	.1063	9.412	.774	im1	o
7.290	4.102	1.073	32.087	.1013	9.872	.738	im1	o
7.280	4.382	1.161	37.037	.1010	9.904	.735	im1	o
7.289	4.309	1.171	36.779	.0999	10.009	.728	im1	o
7.289	4.292	1.201	37.573	.0988	10.121	.720	im1	o
7.280	4.500	1.260	41.278	.0989	10.111	.720	im1	o
7.290	4.587	1.361	45.511	.0965	10.366	.703	im1	o
7.289	4.755	1.456	50.464	.0952	10.506	.694	im1	o
7.289	4.766	1.465	50.893	.0950	10.524	.693	im1	o

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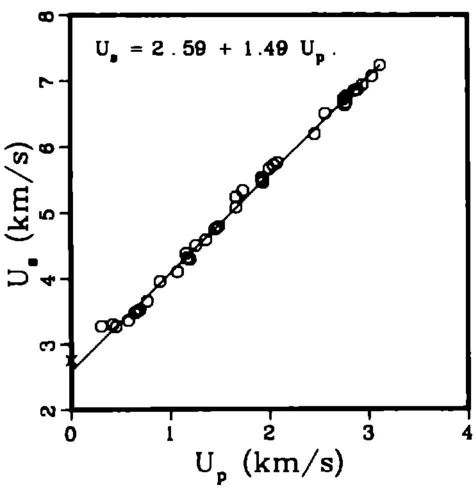

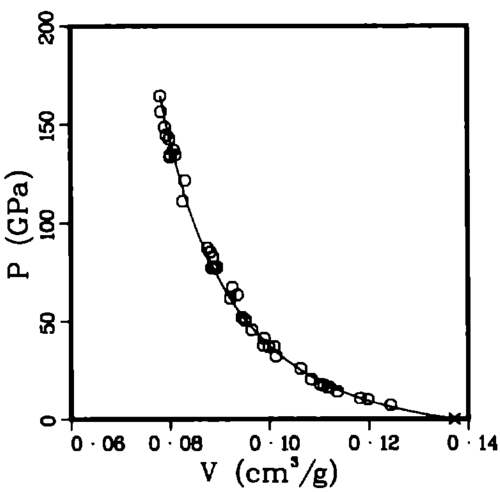

TIN
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ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.286	4.793	1.493	52.138	.0945	10.582	.689	im1 o
7.290	5.239	1.665	63.590	.0936	10.686	.682	im1 o
7.289	5.083	1.669	61.836	.0921	10.852	.672	im1 o
7.290	5.331	1.734	67.388	.0926	10.804	.675	im1 o
7.280	5.527	1.926	77.496	.0895	11.174	.652	im1 o
7.280	5.504	1.929	77.293	.0892	11.208	.650	im1 o
7.280	5.481	1.933	77.130	.0889	11.246	.647	im1 o
7.289	5.458	1.940	77.180	.0884	11.309	.645	im1 o
7.289	5.661	2.002	82.609	.0887	11.277	.646	im1 o
7.289	5.717	2.044	85.176	.0881	11.345	.642	im1 o
7.289	5.752	2.082	87.291	.0875	11.424	.638	im1 o
7.291	6.193	2.461	111.122	.0827	12.099	.603	im1 o
7.290	6.500	2.564	121.495	.0831	12.039	.606	im1 o
7.280	6.721	2.751	134.603	.0811	12.325	.591	im1 o
7.280	6.626	2.764	133.328	.0801	12.490	.583	im1 o
7.280	6.664	2.777	134.723	.0801	12.481	.583	im1 o
7.289	6.765	2.780	137.082	.0808	12.374	.589	im1 o
7.290	6.849	2.859	142.748	.0799	12.514	.583	im1 o
7.289	6.858	2.893	144.615	.0793	12.607	.578	im1 o
7.289	6.935	2.942	148.716	.0790	12.659	.576	im1 o
7.289	7.068	3.038	156.514	.0782	12.784	.570	im1 o
7.290	7.236	3.118	164.476	.0781	12.810	.569	im1 o

TITANIUM

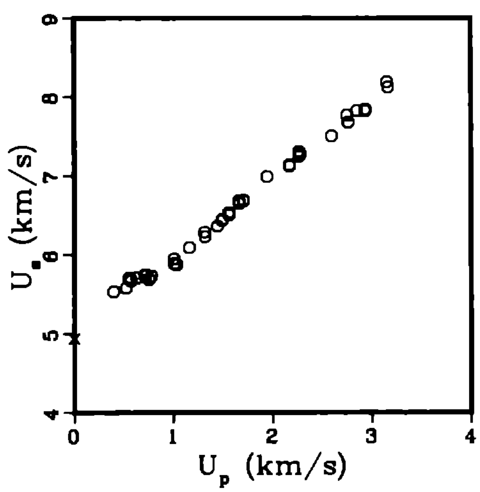
Average ρ_0 = 4.527 g/cm^3.

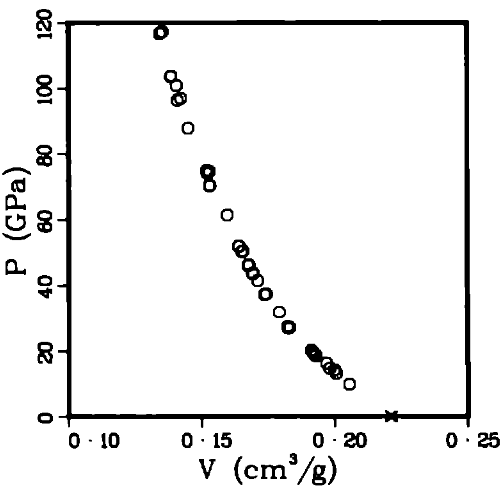
Sound velocities longitudinal 6.16 km/s.
shear 3.19 km/s.

References 4, 6, 11, 12, 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.517	4.937	0.000	0.000	.2214	4.517	1.000	ssp ×
4.517	5.538	.397	9.931	.2055	4.866	.928	im1 o
4.517	5.585	.524	13.219	.2006	4.985	.906	im1 o
4.517	5.709	.552	14.235	.2000	5.000	.903	im1 o
4.539	5.676	.572	14.737	.1981	5.048	.899	im1 o
4.517	5.711	.631	16.278	.1969	5.078	.890	im1 o
4.539	5.749	.714	18.632	.1930	5.183	.876	im1 o
4.539	5.731	.715	18.599	.1928	5.186	.875	im1 o
4.517	5.691	.755	19.408	.1920	5.208	.867	im1 o
4.517	5.730	.779	20.162	.1913	5.228	.864	im1 o
4.539	5.947	1.004	27.101	.1831	5.461	.831	im1 o
4.539	5.887	1.009	26.962	.1826	5.478	.829	im1 o
4.517	5.873	1.035	27.457	.1824	5.483	.824	im1 o
4.517	6.090	1.159	31.882	.1793	5.579	.810	im1 o
4.539	6.286	1.312	37.434	.1743	5.736	.791	im1 o
4.539	6.226	1.318	37.246	.1737	5.758	.788	im1 o
4.517	6.361	1.444	41.490	.1711	5.844	.773	im1 o
4.539	6.446	1.491	43.624	.1694	5.905	.769	im1 o
4.539	6.437	1.492	43.593	.1692	5.909	.768	im1 o

(Continued)





TITANIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.539	6.534	1.557	46.177	.1678	5.959	.762	im1 o
4.539	6.505	1.561	46.090	.1674	5.972	.760	im1 o
4.539	6.682	1.660	50.347	.1656	6.039	.752	im1 o
4.539	6.650	1.664	50.227	.1652	6.054	.750	im1 o
4.539	6.689	1.707	51.827	.1641	6.094	.745	im1 o
4.539	6.683	1.708	51.811	.1640	6.097	.744	im1 o
4.517	6.988	1.945	61.394	.1598	6.259	.722	im1 o
4.539	7.136	2.171	70.319	.1533	6.524	.696	im1 o
4.539	7.122	2.173	70.246	.1531	6.532	.695	im1 o
4.510	7.310	2.265	74.673	.1530	6.535	.690	im1 o
4.510	7.247	2.268	74.127	.1523	6.564	.687	im1 o
4.510	7.262	2.275	74.510	.1523	6.567	.687	im1 o
4.517	7.275	2.279	74.891	.1520	6.577	.687	im1 o
4.510	7.508	2.596	87.903	.1451	6.894	.654	im1 o
4.539	7.769	2.750	96.975	.1423	7.026	.646	im1 o
4.539	7.682	2.764	96.377	.1410	7.090	.640	im1 o
4.517	7.828	2.852	100.844	.1407	7.106	.636	im1 o
4.510	7.825	2.935	103.578	.1386	7.217	.625	im1 o
4.510	7.845	2.935	103.843	.1388	7.206	.626	im1 o
4.539	8.189	3.154	117.234	.1355	7.382	.615	im1 o
4.539	8.125	3.165	116.723	.1345	7.435	.610	im1 o

TUNGSTEN , ρ_0 = 19.2 g/cm^3.

Average ρ_0 = 19.235 g/cm^3.

Sound velocities longitudinal 5.22 km/s.
shear 2.89 km/s.

References 4, 6, 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
19.270	4.014	0.000	0.000	.0519	19.270	1.000	ssp	×
19.250	4.434	.316	26.972	.0482	20.727	.929	iml	o
19.250	4.449	.358	30.660	.0478	20.935	.920	iml	o
19.250	4.517	.364	31.651	.0478	20.937	.919	iml	o
19.270	4.519	.367	31.959	.0477	20.973	.919	iml	o
19.170	4.508	.437	37.765	.0471	21.228	.903	iml	o
19.170	4.499	.437	37.689	.0471	21.232	.903	iml	o
19.250	4.648	.475	42.500	.0466	21.441	.898	iml	o
19.170	4.766	.623	56.920	.0453	22.053	.869	iml	o
19.170	4.727	.625	56.635	.0453	22.091	.868	iml	o
19.250	4.921	.692	65.553	.0446	22.400	.859	iml	o
19.250	4.920	.700	66.297	.0446	22.443	.858	iml	o
19.250	4.925	.700	66.364	.0446	22.439	.858	iml	o
19.250	4.947	.717	68.280	.0444	22.513	.855	iml	o
19.270	5.046	.803	78.081	.0436	22.917	.841	iml	o
19.270	5.390	1.071	111.240	.0416	24.048	.801	iml	o
19.260	5.476	1.106	116.647	.0414	24.134	.798	iml	o
19.270	5.465	1.137	119.738	.0411	24.332	.792	iml	o
19.170	5.422	1.156	120.154	.0410	24.365	.787	iml	o

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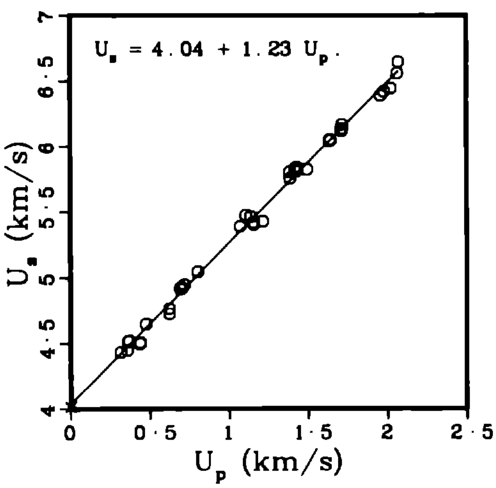
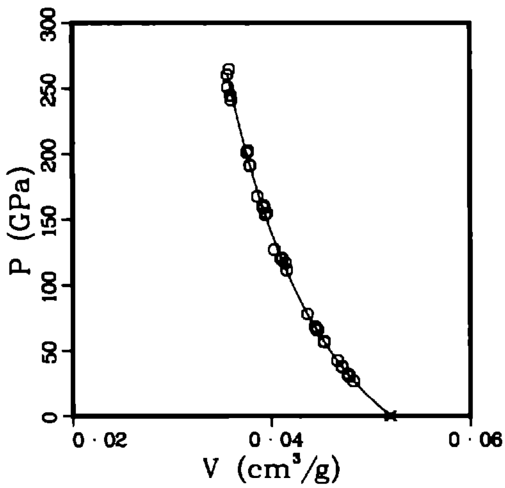




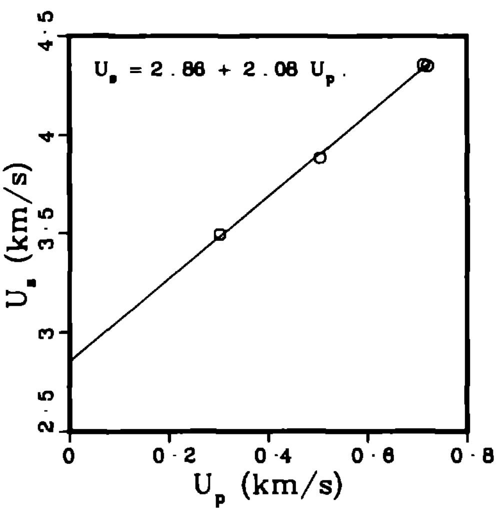
TUNGSTEN , ρ_0 = 19.2 g/cm^3.
(Continued)

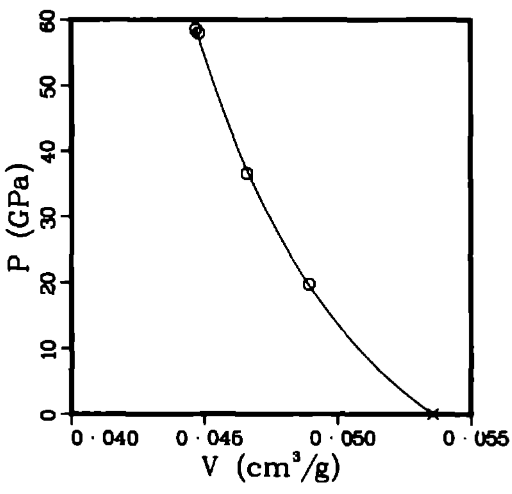
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
19.170	5.402	1.158	119.918	.0410	24.401	.786	iml o
19.260	5.429	1.213	126.834	.0403	24.801	.777	iml o
19.250	5.804	1.384	154.630	.0396	25.278	.762	iml o
19.270	5.754	1.386	153.679	.0394	25.385	.759	iml o
19.260	5.830	1.418	159.221	.0393	25.450	.757	iml o
19.270	5.809	1.426	159.626	.0392	25.539	.755	iml o
19.250	5.838	1.429	160.593	.0392	25.489	.755	iml o
19.250	5.823	1.494	167.467	.0386	25.893	.743	iml o
19.250	6.053	1.637	190.744	.0379	26.386	.730	iml o
19.250	6.046	1.641	190.989	.0378	26.421	.729	iml o
19.170	6.120	1.712	200.853	.0376	26.615	.720	iml o
19.170	6.137	1.713	201.528	.0376	26.593	.721	iml o
19.170	6.169	1.714	202.697	.0377	26.545	.722	iml o
19.260	6.390	1.959	241.097	.0360	27.775	.693	iml o
19.250	6.421	1.981	244.860	.0359	27.839	.691	iml o
19.250	6.446	2.023	251.025	.0356	28.055	.686	iml o
19.250	6.560	2.064	260.642	.0356	28.087	.685	iml o
19.250	6.650	2.070	264.986	.0358	27.950	.689	iml o

TUNGSTEN , ρ_0 = 18.7 g/cm^3.

Average ρ_0 = 18.670 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
18.670	3.495	.302	19.706	.0489	20.436	.914	im1 o
18.670	3.883	.505	36.610	.0466	21.461	.870	im1 o
18.670	4.356	.713	57.986	.0448	22.324	.836	im1 o
18.670	4.349	.721	58.542	.0447	22.380	.834	im1 o





URANIUM

Average ρ_0 = 18.930 g/cm^3.

Sound velocities longitudinal 3.45 km/s.
shear 2.12 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
19.000	2.431	0.000	0.000	.0526	19.000	1.000	ssp ×
18.980	2.961	.294	16.523	.0475	21.072	.901	iml ○
18.990	2.979	.296	16.745	.0474	21.085	.901	iml ○
18.970	2.945	.296	16.537	.0474	21.090	.899	iml ○
18.910	3.032	.371	21.271	.0464	21.546	.878	sf1 ⊕
18.910	3.099	.378	22.152	.0464	21.537	.878	sf1 ⊕
18.920	3.115	.379	22.337	.0464	21.541	.878	iml ○
18.910	3.133	.410	24.290	.0460	21.757	.869	sf1 ⊕
18.980	3.221	.435	26.594	.0456	21.943	.865	iml ○
18.970	3.190	.447	27.050	.0453	22.061	.860	iml ○
18.930	3.206	.453	27.492	.0454	22.045	.859	iml ○
18.950	3.185	.454	27.402	.0452	22.100	.857	iml ○
18.980	3.194	.456	27.644	.0452	22.141	.857	iml ○
18.990	3.177	.457	27.571	.0451	22.181	.856	iml ○
18.910	3.211	.474	28.781	.0451	22.185	.852	sf1 ⊕
18.910	3.191	.477	28.783	.0450	22.234	.851	sf1 ⊕
18.910	3.378	.540	34.494	.0444	22.508	.840	sf1 ⊕
18.910	3.343	.544	34.390	.0443	22.585	.837	sf1 ⊕
18.910	3.343	.546	34.516	.0442	22.601	.837	sf1 ⊕
18.940	3.364	.546	34.788	.0442	22.610	.838	iml ○

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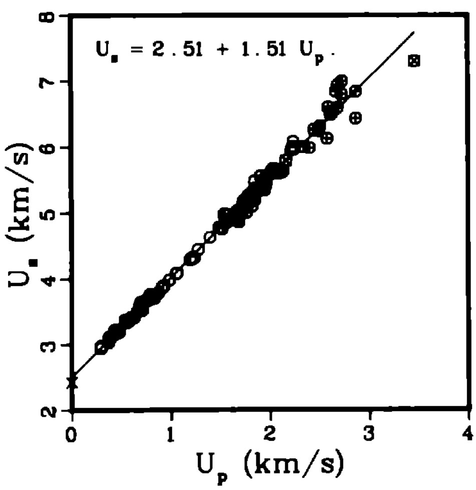

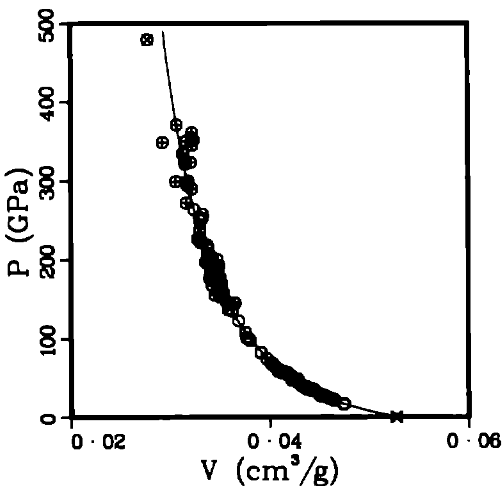

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
18.910	3.339	.556	35.106	.0441	22.688	.833	sf1 ⊕
18.930	3.359	.563	35.799	.0440	22.742	.832	im1 o
19.000	3.356	.570	36.345	.0437	22.887	.830	im1 o
18.980	3.360	.570	36.350	.0437	22.858	.830	im1 o
18.960	3.357	.570	36.280	.0438	22.838	.830	im1 o
18.970	3.393	.598	38.490	.0434	23.029	.824	im1 o
18.910	3.414	.598	38.606	.0436	22.926	.825	sf1 ⊕
18.910	3.409	.627	40.419	.0432	23.172	.816	sf1 ⊕
18.910	3.508	.665	44.114	.0429	23.333	.810	sf1 ⊕
18.910	3.577	.686	46.402	.0427	23.397	.808	sf1 ⊕
18.910	3.575	.693	46.849	.0426	23.457	.806	sf1 ⊕
18.910	3.633	.695	47.747	.0428	23.383	.809	sf1 ⊕
18.910	3.642	.696	47.934	.0428	23.378	.809	sf1 ⊕
18.910	3.612	.702	47.949	.0426	23.472	.806	sf1 ⊕
18.910	3.517	.709	47.153	.0422	23.685	.798	sf1 ⊕
18.910	3.678	.751	52.233	.0421	23.762	.796	sf1 ⊕
18.910	3.679	.754	52.456	.0420	23.785	.795	sf1 ⊕
18.910	3.683	.763	53.140	.0419	23.851	.793	sf1 ⊕
18.910	3.685	.770	53.656	.0418	23.905	.791	sf1 ⊕
18.910	3.766	.791	56.331	.0418	23.938	.790	sf1 ⊕
18.960	3.707	.805	56.579	.0413	24.219	.783	im1 o
18.910	3.711	.808	56.701	.0414	24.173	.782	sf1 ⊕
18.970	3.711	.817	57.515	.0411	24.325	.780	im1 o
18.950	3.754	.818	58.191	.0413	24.230	.782	im1 o
18.960	3.747	.832	59.108	.0410	24.372	.778	im1 o
18.990	3.707	.833	58.640	.0408	24.494	.775	im1 o
18.940	3.791	.875	62.826	.0406	24.623	.769	im1 o
18.970	3.880	.915	67.347	.0403	24.824	.764	im1 o
18.980	3.870	.917	67.356	.0402	24.874	.763	im1 o
18.970	3.895	.932	68.864	.0401	24.937	.761	im1 o
18.970	3.983	.986	74.500	.0397	25.211	.752	im1 o
18.930	4.083	1.059	81.851	.0391	25.559	.741	im1 o
18.940	4.085	1.061	82.089	.0391	25.585	.740	im1 o
18.960	4.292	1.197	97.407	.0380	26.293	.721	im1 o
18.970	4.309	1.214	99.234	.0379	26.411	.718	im1 o
19.010	4.324	1.226	100.776	.0377	26.533	.716	im1 o
18.930	4.313	1.235	100.832	.0377	26.525	.714	im1 o
18.970	4.441	1.277	107.582	.0376	26.626	.712	im1 o
18.930	4.632	1.398	122.582	.0369	27.113	.698	im1 o
19.000	4.784	1.489	135.344	.0363	27.586	.689	im1 o
19.000	4.757	1.519	137.292	.0358	27.913	.681	im1 o
18.910	4.980	1.543	145.307	.0365	27.399	.690	sf1 ⊕
18.910	4.980	1.543	145.307	.0365	27.399	.690	sf1 ⊕

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URANIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
18.930	4.851	1.559	143.162	.0358	27.895	.679	iml	○
18.890	4.886	1.589	146.659	.0357	27.994	.675	iml	○
18.910	4.898	1.652	153.010	.0350	28.534	.663	sf1	⊕
18.910	4.989	1.667	157.268	.0352	28.399	.666	sf1	⊕
18.910	5.023	1.669	158.530	.0353	28.320	.668	sf1	⊕
18.910	4.869	1.692	155.787	.0345	28.981	.652	sf1	⊕
18.910	5.042	1.693	161.418	.0351	28.469	.664	sf1	⊕
18.910	4.997	1.698	160.450	.0349	28.643	.660	sf1	⊕
18.910	5.091	1.732	166.741	.0349	28.661	.660	sf1	⊕
18.910	5.142	1.733	168.509	.0351	28.523	.663	sf1	⊕
18.910	5.183	1.739	170.440	.0351	28.458	.664	sf1	⊕
18.930	5.164	1.749	170.973	.0349	28.625	.661	iml	○
19.010	5.159	1.750	171.627	.0348	28.769	.661	iml	○
19.000	5.148	1.752	171.367	.0347	28.802	.660	iml	○
18.910	5.014	1.769	167.727	.0342	29.219	.647	sf1	⊕
18.910	5.230	1.782	176.239	.0349	28.683	.659	sf1	⊕
18.880	5.260	1.785	177.266	.0350	28.578	.661	iml	○
18.910	5.151	1.788	174.161	.0345	28.964	.653	sf1	⊕
18.910	5.188	1.790	175.608	.0346	28.871	.655	sf1	⊕
18.910	5.188	1.790	175.608	.0346	28.871	.655	sf1	⊕
18.910	5.106	1.823	176.019	.0340	29.410	.643	sf1	⊕
18.910	5.297	1.823	182.603	.0347	28.833	.656	sf1	⊕
18.910	5.329	1.838	185.218	.0346	28.866	.655	sf1	⊕
18.980	5.478	1.849	192.245	.0349	28.650	.662	iml	○
18.910	5.202	1.852	182.181	.0341	29.364	.644	sf1	⊕
18.860	5.369	1.860	188.342	.0347	28.857	.654	iml	○
18.890	5.555	1.910	200.424	.0347	28.788	.656	iml	○
18.910	5.367	1.921	194.962	.0340	29.452	.642	sf1	⊕
18.910	5.356	1.928	195.272	.0338	29.545	.640	sf1	⊕
18.910	5.386	1.939	197.486	.0338	29.547	.640	sf1	⊕
18.940	5.448	1.948	201.005	.0339	29.481	.642	iml	○
18.910	5.345	1.949	196.993	.0336	29.763	.635	sf1	⊕
18.910	5.516	1.950	203.400	.0342	29.251	.646	sf1	⊕
18.910	5.415	1.955	200.187	.0338	29.595	.639	sf1	⊕
18.910	5.453	1.959	202.005	.0339	29.512	.641	sf1	⊕
18.910	5.503	1.964	204.377	.0340	29.404	.643	sf1	⊕
18.910	5.427	1.966	201.760	.0337	29.652	.638	sf1	⊕
18.980	5.629	2.018	215.600	.0338	29.587	.641	iml	○
18.910	5.596	2.023	214.075	.0338	29.617	.638	sf1	⊕
18.990	5.665	2.037	219.137	.0337	29.652	.640	iml	○
18.990	5.642	2.092	224.140	.0331	30.181	.629	iml	○
18.910	5.602	2.098	222.249	.0331	30.232	.625	sf1	⊕
18.910	5.632	2.134	227.273	.0328	30.446	.621	sf1	⊕

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URANIUM
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ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
18.910	5.622	2.134	226.870	.0328	30.479	.620	s f 1	⊕
18.950	5.789	2.167	237.723	.0330	30.288	.626	s f 2	⊗
18.990	5.951	2.217	250.542	.0330	30.265	.627	iml	o
18.880	6.000	2.234	253.068	.0332	30.080	.628	iml	o
18.980	6.079	2.237	258.104	.0333	30.031	.632	iml	o
18.860	5.959	2.242	251.971	.0331	30.236	.624	iml	o
18.880	5.967	2.252	253.703	.0330	30.325	.623	iml	o
18.840	6.002	2.334	263.923	.0324	30.828	.611	iml	o
18.910	5.987	2.404	272.167	.0316	31.598	.598	s f 1	⊕
18.910	6.264	2.448	289.971	.0322	31.041	.609	s f 1	⊕
18.910	6.244	2.493	294.359	.0318	31.478	.601	s f 1	⊕
18.910	6.314	2.511	299.808	.0319	31.396	.602	s f 1	⊕
18.910	6.126	2.582	299.106	.0306	32.687	.579	s f 1	⊕
18.910	6.600	2.591	323.372	.0321	31.131	.607	s f 1	⊕
18.910	6.489	2.617	321.124	.0316	31.691	.597	s f 1	⊕
18.910	6.510	2.624	323.025	.0316	31.679	.597	s f 1	⊕
18.910	6.531	2.639	325.920	.0315	31.732	.596	s f 1	⊕
18.910	6.841	2.671	345.529	.0322	31.022	.610	s f 1	⊕
18.910	6.929	2.686	351.940	.0324	30.881	.612	s f 1	⊕
18.910	6.591	2.688	335.021	.0313	31.933	.592	s f 1	⊕
18.910	6.798	2.727	350.556	.0317	31.577	.599	s f 1	⊕
18.910	6.995	2.732	361.377	.0322	31.029	.609	s f 1	⊕
18.910	6.837	2.871	371.185	.0307	32.599	.580	s f 1	⊕
18.910	6.432	2.871	349.197	.0293	34.156	.554	s f 1	⊕
18.950	7.307	3.463	479.513	.0278	36.022	.526	s f 2	⊗

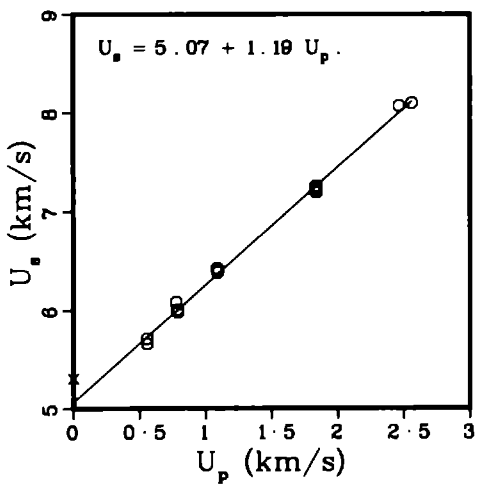
VANADIUM

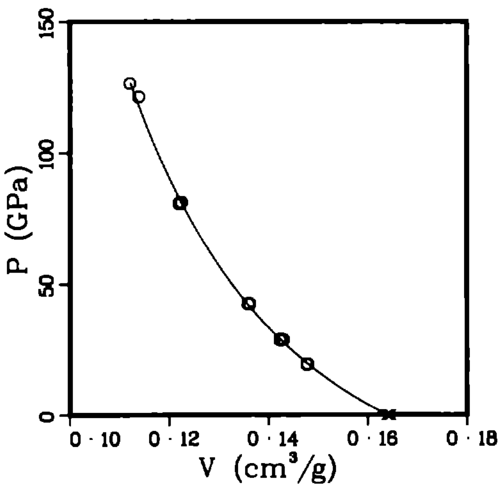
Average ρ_0 = 6.099 g/cm^3.

Sound velocities longitudinal 6.15 km/s.
shear 2.69 km/s.

References 4, 6, 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.079	5.307	0.000	0.000	.1645	6.079	1.000	ssp ×
6.100	5.711	.556	19.369	.1480	6.758	.903	im1 o
6.100	5.659	.559	19.297	.1477	6.769	.901	im1 o
6.100	6.085	.777	28.841	.1430	6.993	.872	im1 o
6.100	6.001	.787	28.809	.1424	7.021	.869	im1 o
6.100	6.002	.787	28.814	.1424	7.021	.869	im1 o
6.100	6.002	.789	28.887	.1424	7.023	.869	im1 o
6.100	5.982	.790	28.827	.1423	7.028	.868	im1 o
6.100	6.421	1.086	42.537	.1362	7.342	.831	im1 o
6.100	6.413	1.089	42.601	.1361	7.348	.830	im1 o
6.100	6.383	1.092	42.518	.1359	7.359	.829	im1 o
6.100	7.252	1.834	81.131	.1225	8.165	.747	im1 o
6.100	7.232	1.836	80.996	.1223	8.176	.746	im1 o
6.100	7.203	1.837	80.715	.1221	8.188	.745	im1 o
6.100	7.192	1.839	80.679	.1220	8.196	.744	im1 o
6.100	8.070	2.464	121.295	.1139	8.781	.695	im1 o
6.100	8.098	2.561	126.508	.1121	8.921	.684	im1 o





YTTERBIUM

Average ρ_0 = 7.019 g/cm^3.

Sound velocities longitudinal 1.94 km/s.
shear 1.12 km/s.

Reference 15

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
7.031	1.446	0.000	0.000	.1422	7.031	1.000	ssp	×
7.064	1.779	.348	4.373	.1139	8.782	.804	iml	o
7.038	1.768	.386	4.803	.1111	9.004	.782	iml	o
7.058	1.853	.488	6.382	.1044	9.581	.737	iml	o
7.031	1.860	.504	6.591	.1037	9.644	.729	iml	o
7.050	2.013	.681	9.665	.0939	10.654	.662	iml	o
7.028	2.078	.771	11.260	.0895	11.174	.629	iml	o
7.028	2.203	.906	14.027	.0838	11.937	.589	iml	o
7.028	2.271	.944	15.067	.0831	12.028	.584	iml	o
7.037	2.582	1.194	21.694	.0764	13.090	.538	iml	o
7.028	2.623	1.235	22.767	.0753	13.281	.529	iml	o
7.027	2.745	1.330	25.655	.0734	13.632	.515	iml	o
7.049	2.913	1.428	29.322	.0723	13.827	.510	iml	o
7.049	2.913	1.436	29.486	.0719	13.902	.507	iml	o
7.068	3.041	1.533	32.950	.0702	14.253	.496	iml	o
7.070	3.465	1.813	44.414	.0674	14.829	.477	iml	o
6.954	3.372	1.830	42.911	.0658	15.207	.457	iml	o
6.955	3.375	1.830	42.956	.0658	15.193	.458	iml	o
7.016	3.905	2.120	58.083	.0652	15.349	.457	iml	o

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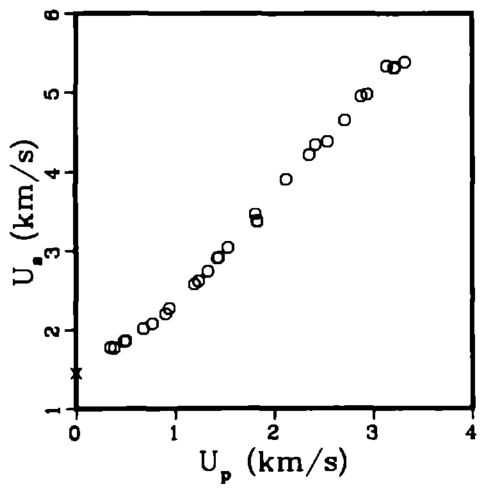
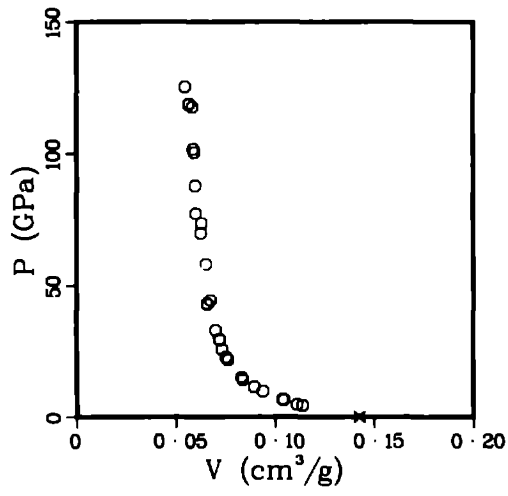




YTTERBIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.039	4.214	2.354	69.825	.0627	15.947	.441	iml o
7.019	4.341	2.417	73.645	.0631	15.837	.443	iml o
6.965	4.379	2.539	77.439	.0603	16.576	.420	iml o
6.958	4.652	2.716	87.913	.0598	16.719	.416	iml o
7.036	4.952	2.881	100.381	.0594	16.824	.418	iml o
6.943	4.976	2.942	101.641	.0589	16.985	.409	iml o
7.040	5.332	3.135	117.679	.0585	17.086	.412	iml o
6.961	5.315	3.211	118.800	.0569	17.584	.396	iml o
6.962	5.305	3.213	118.667	.0566	17.655	.394	iml o
7.019	5.381	3.319	125.356	.0546	18.317	.383	iml o

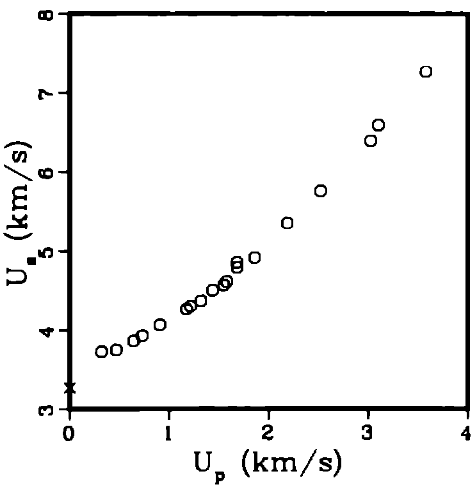
YTTRIUM

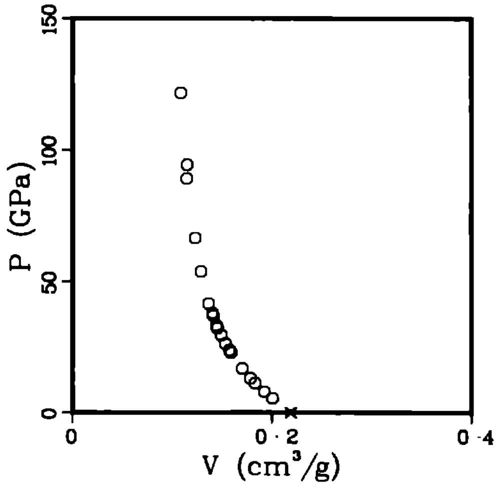
Average ρ_0 = 4.579 g/cm³.

Sound velocities longitudinal 4.38 km/s.
shear 2.52 km/s.

Reference 15

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp	
4.565	3.274	0.000	0.000	.2191	4.565	1.000	ssp	×
4.556	3.729	.320	5.437	.2007	4.984	.914	im1	o
4.548	3.749	.469	7.997	.1924	5.198	.875	im1	o
4.551	3.864	.642	11.290	.1832	5.458	.834	im1	o
4.564	3.928	.729	13.069	.1784	5.604	.814	im1	o
4.564	4.066	.906	16.813	.1703	5.873	.777	im1	o
4.562	4.268	1.172	22.820	.1590	6.289	.725	im1	o
4.564	4.306	1.213	23.839	.1574	6.354	.718	im1	o
4.561	4.375	1.317	26.280	.1532	6.525	.699	im1	o
4.570	4.507	1.435	29.557	.1491	6.705	.682	im1	o
4.553	4.571	1.547	32.196	.1453	6.882	.662	im1	o
4.553	4.616	1.578	33.164	.1446	6.918	.658	im1	o
4.663	4.853	1.681	38.040	.1402	7.134	.654	im1	o
4.599	4.791	1.683	37.083	.1411	7.089	.649	im1	o
4.558	4.915	1.860	41.669	.1364	7.333	.622	im1	o
4.595	5.354	2.187	53.804	.1287	7.768	.592	im1	o
4.576	5.758	2.522	66.451	.1228	8.142	.562	im1	o
4.598	6.395	3.028	89.036	.1145	8.733	.527	im1	o
4.605	6.592	3.104	94.226	.1149	8.703	.529	im1	o
4.672	7.269	3.583	121.681	.1085	9.213	.507	im1	o





ZINC

Average ρ_0 = 7.139 g/cm^3.

References 2, 4, 5, 6, 11, 12

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.141	3.907	.573	15.987	.1195	8.368	.853	iml o
7.135	3.974	.604	17.126	.1189	8.414	.848	iml o
7.135	4.004	.623	17.798	.1183	8.450	.844	iml o
7.141	3.971	.642	18.205	.1174	8.518	.838	iml o
7.135	3.981	.647	18.378	.1174	8.520	.837	sf1 ⊕
7.140	4.081	.647	18.853	.1179	8.485	.841	iml o
7.135	4.010	.665	19.027	.1169	8.553	.834	sf1 ⊕
7.141	4.365	.815	25.404	.1139	8.780	.813	iml o
7.135	4.427	.852	26.912	.1132	8.835	.808	iml o
7.135	4.397	.867	27.200	.1125	8.887	.803	iml o
7.135	4.412	.901	28.363	.1115	8.966	.796	sf1 ⊕
7.141	4.607	.980	32.241	.1102	9.070	.787	iml o
7.141	4.644	1.020	33.826	.1093	9.151	.780	iml o
7.141	4.735	1.143	38.648	.1062	9.413	.759	iml o
7.140	4.812	1.161	39.889	.1063	9.410	.759	iml o
7.141	4.757	1.168	39.677	.1057	9.465	.754	iml o
7.135	4.954	1.221	43.158	.1056	9.469	.754	iml o
7.140	5.750	1.782	73.160	.0967	10.347	.690	iml o
7.140	5.737	1.782	72.995	.0966	10.357	.689	iml o
7.140	5.711	1.786	72.827	.0963	10.389	.687	iml o
7.140	7.215	2.663	137.185	.0884	11.317	.631	iml o

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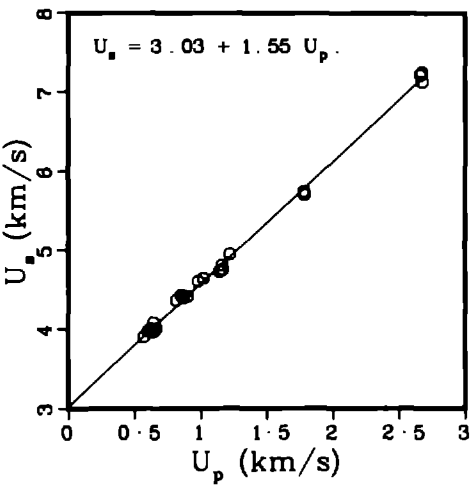

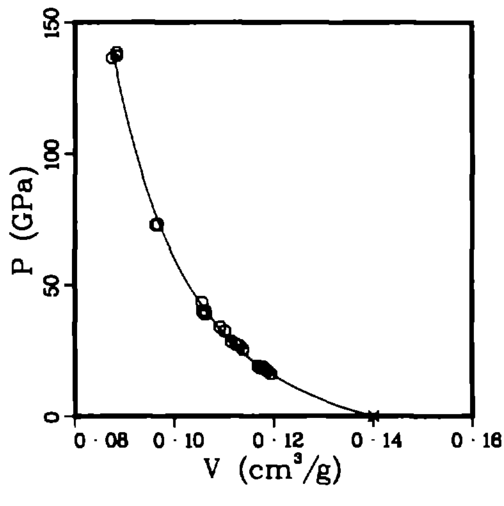

ZINC
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ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.140	7.250	2.676	138.523	.0884	11.317	.631	iml o
7.140	7.130	2.679	136.383	.0874	11.437	.624	iml o

ZIRCONIUM

Average ρ_0 = 6.506 g/cm^3.

Sound velocities longitudinal 4.77 km/s.
shear 2.39 km/s.

References 6, 11, 12, 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
6.510	3.891	0.000	0.000	.1536	6.510	1.000	ssp	×
6.510	4.338	.528	14.911	.1349	7.412	.878	iml	o
6.510	4.277	.536	14.924	.1344	7.443	.875	iml	o
6.506	4.376	.598	17.025	.1327	7.536	.863	iml	o
6.510	4.379	.608	17.332	.1323	7.560	.861	iml	o
6.488	4.440	.685	19.733	.1304	7.672	.846	iml	o
6.510	4.508	.738	21.658	.1285	7.784	.836	iml	o
6.510	4.518	.743	21.853	.1283	7.791	.836	iml	o
6.506	4.543	.803	23.734	.1265	7.903	.823	iml	o
6.509	4.594	.812	24.281	.1265	7.906	.823	iml	o
6.488	4.618	.927	27.774	.1232	8.117	.799	iml	o
6.510	4.731	1.114	34.310	.1174	8.515	.765	iml	o
6.503	4.735	1.127	34.702	.1172	8.534	.762	iml	o
6.510	4.858	1.208	38.204	.1154	8.665	.751	iml	o
6.505	4.867	1.225	38.783	.1150	8.693	.748	iml	o
6.488	4.861	1.244	39.233	.1147	8.719	.744	iml	o
6.505	5.638	1.863	68.326	.1029	9.715	.670	iml	o
6.512	5.675	1.870	69.107	.1030	9.712	.670	iml	o
6.505	5.670	1.908	70.373	.1020	9.804	.663	iml	o

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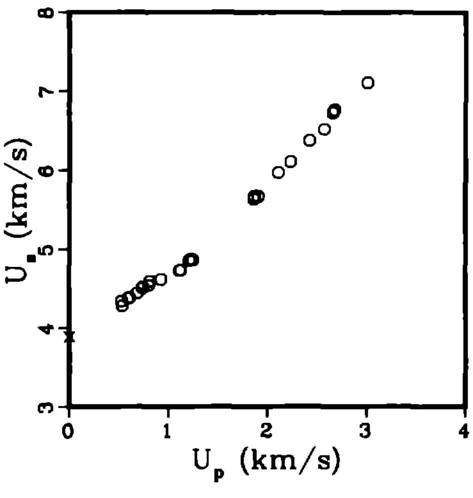

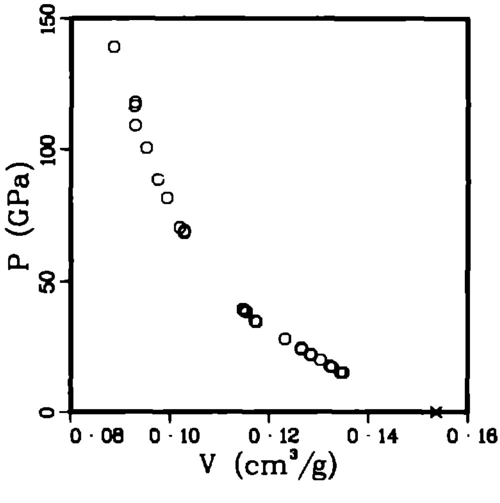

ZIRCONIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.509	5.971	2.105	81.811	.0995	10.053	.647	im1 o
6.510	6.108	2.230	88.672	.0975	10.254	.635	im1 o
6.506	6.374	2.424	100.521	.0953	10.499	.620	im1 o
6.510	6.522	2.573	109.245	.0930	10.752	.605	im1 o
6.510	6.730	2.661	116.585	.0929	10.767	.605	im1 o
6.506	6.768	2.678	117.919	.0929	10.766	.604	im1 o
6.505	7.107	3.008	139.063	.0887	11.279	.577	im1 o

ALLOYS

ALUMINUM, 921T

Average ρ_0 = 2.828 g/cm^3.

Sound velocities longitudinal 6.29 km/s.
shear 3.11 km/s.
References 13, 17, 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.813	5.164	0.000	0.000	.3555	2.813	1.000	ssp ×
2.838	5.518	.281	4.400	.3344	2.990	.949	im1 o
2.812	5.457	.353	5.417	.3326	3.006	.935	im1 o
2.812	5.509	.355	5.499	.3327	3.006	.936	im1 o
2.838	5.693	.462	7.464	.3238	3.089	.919	im1 o
2.812	5.776	.464	7.536	.3271	3.058	.920	im1 o
2.812	5.749	.468	7.566	.3267	3.061	.919	im1 o
2.842	5.857	.474	7.890	.3234	3.092	.919	im1 o
2.812	5.712	.477	7.662	.3259	3.068	.916	im1 o
2.814	5.755	.492	7.968	.3250	3.077	.915	im1 o
2.812	5.833	.494	8.103	.3255	3.072	.915	im1 o
2.810	5.725	.498	8.011	.3249	3.078	.913	sp1 ⊞
2.810	5.738	.526	8.481	.3232	3.094	.908	sp1 ⊞
2.810	5.977	.625	10.497	.3187	3.138	.895	sp1 ⊞
2.812	6.035	.642	10.895	.3178	3.147	.894	im1 o
2.811	5.884	.651	10.767	.3164	3.161	.889	sp1 ⊞
2.814	6.192	.725	12.633	.3138	3.187	.883	im1 o
2.838	6.174	.728	12.756	.3108	3.217	.882	im1 o
2.814	6.175	.730	12.685	.3134	3.191	.882	im1 o

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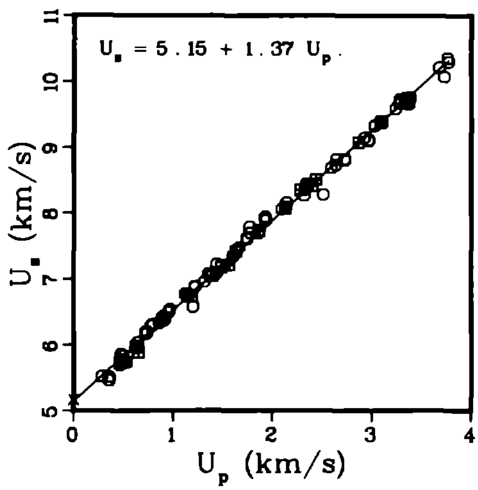
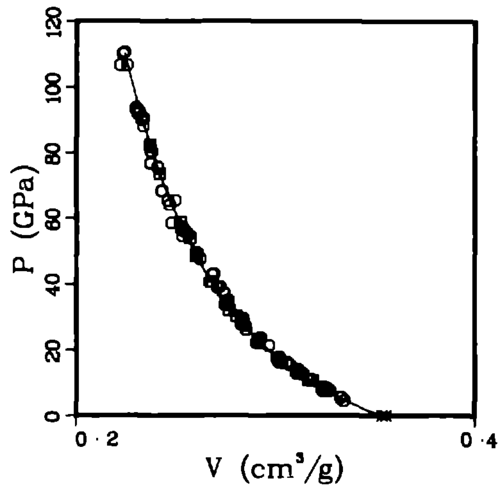




ALUMINUM , 921T
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.838	6.188	.737	12.943	.3104	3.222	.881	iml o
2.812	6.290	.779	13.779	.3116	3.209	.876	iml o
2.812	6.303	.792	14.037	.3109	3.216	.874	iml o
2.812	6.294	.792	14.017	.3109	3.217	.874	iml o
2.812	6.333	.862	15.351	.3072	3.255	.864	iml o
2.842	6.403	.893	16.250	.3028	3.303	.861	iml o
2.838	6.401	.899	16.331	.3029	3.302	.860	iml o
2.814	6.421	.899	16.244	.3056	3.272	.860	iml o
2.838	6.400	.899	16.329	.3029	3.302	.860	iml o
2.842	6.368	.899	16.270	.3022	3.309	.859	iml o
2.842	6.386	.912	16.552	.3016	3.315	.857	iml o
2.842	6.373	.913	16.536	.3015	3.317	.857	iml o
2.838	6.487	.953	17.545	.3006	3.327	.853	iml o
2.822	6.528	.967	17.814	.3019	3.313	.852	iml o
2.812	6.762	1.121	21.316	.2967	3.371	.834	iml o
2.842	6.757	1.151	22.103	.2919	3.426	.830	iml o
2.842	6.739	1.153	22.083	.2917	3.429	.829	iml o
2.828	6.723	1.188	22.587	.2911	3.435	.823	spl ⊞
2.814	6.572	1.201	22.211	.2904	3.443	.817	iml o
2.812	6.882	1.221	23.629	.2925	3.419	.823	iml o
2.812	6.872	1.221	23.595	.2924	3.420	.822	iml o
2.842	6.952	1.316	26.001	.2853	3.506	.811	iml o
2.838	7.076	1.358	27.271	.2847	3.512	.808	iml o
2.842	7.048	1.384	27.722	.2828	3.536	.804	iml o
2.828	7.041	1.398	27.837	.2834	3.529	.801	spl ⊞
2.814	7.083	1.437	28.642	.2833	3.530	.797	iml o
2.822	7.221	1.440	29.344	.2837	3.525	.801	iml o
2.828	7.176	1.486	30.156	.2804	3.567	.793	spl ⊞
2.828	7.211	1.566	31.935	.2768	3.613	.783	spl ⊞
2.842	7.348	1.608	33.580	.2749	3.638	.781	iml o
2.842	7.355	1.608	33.612	.2749	3.637	.781	iml o
2.828	7.417	1.631	34.211	.2758	3.625	.780	spl ⊞
2.828	7.416	1.635	34.290	.2756	3.628	.780	spl ⊞
2.814	7.468	1.658	34.843	.2765	3.617	.778	iml o
2.814	7.618	1.740	37.300	.2742	3.647	.772	iml o
2.814	7.605	1.742	37.280	.2740	3.650	.771	iml o
2.838	7.788	1.770	39.121	.2723	3.673	.773	iml o
2.838	7.697	1.775	38.773	.27[illegible]1	3.689	.769	iml o
2.842	7.696	1.857	40.616	.2670	3.746	.759	iml o
2.828	7.730	1.863	40.726	.2684	3.726	.759	spl ⊞
2.814	7.938	1.926	43.022	.2691	3.715	.757	iml o
2.814	7.885	1.929	42.801	.2684	3.725	.755	iml o
2.822	8.060	2.091	47.560	.2624	3.811	.741	iml o

(Continued)

ALUMINUM , 921T
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.828	8.064	2.128	48.529	.2603	3.842	.736	sp1	⊞
2.828	8.094	2.132	48.801	.2605	3.839	.737	sp1	⊞
2.838	8.163	2.141	49.600	.2599	3.847	.738	im1	○
2.828	8.354	2.281	53.889	.2571	3.890	.727	sp1	⊞
2.842	8.272	2.320	54.541	.2532	3.950	.720	im1	○
2.814	8.364	2.333	54.910	.2562	3.903	.721	im1	○
2.842	8.447	2.340	56.175	.2544	3.931	.723	im1	○
2.842	8.417	2.344	56.071	.2539	3.939	.722	im1	○
2.828	8.420	2.403	57.220	.2527	3.957	.715	sp1	⊞
2.828	8.511	2.440	58.729	.2522	3.965	.713	sp1	⊞
2.812	8.284	2.511	58.493	.2478	4.035	.697	im1	○
2.842	8.691	2.593	64.047	.2469	4.050	.702	im1	○
2.838	8.735	2.637	65.371	.2460	4.065	.698	im1	○
2.803	8.822	2.647	65.455	.2497	4.005	.700	im1	○
2.842	8.825	2.726	68.370	.2432	4.112	.691	im1	○
2.842	8.810	2.731	68.379	.2428	4.119	.690	im1	○
2.828	9.075	2.868	73.605	.2419	4.135	.684	sp1	⊞
2.822	9.150	2.930	75.656	.2409	4.151	.680	im1	○
2.838	9.116	2.971	76.863	.2375	4.210	.674	im1	○
2.838	9.098	2.972	76.737	.2373	4.215	.673	im1	○
2.842	9.338	3.025	80.279	.2379	4.204	.676	im1	○
2.842	9.332	3.026	80.254	.2378	4.206	.676	im1	○
2.828	9.378	3.088	81.897	.2372	4.216	.671	sp1	⊞
2.828	9.405	3.097	82.372	.2372	4.216	.671	sp1	⊞
2.838	9.591	3.237	88.109	.2334	4.284	.662	im1	○
2.842	9.685	3.278	90.226	.2328	4.296	.662	im1	○
2.838	9.731	3.279	90.555	.2336	4.280	.663	im1	○
2.842	9.671	3.280	90.151	.2325	4.301	.661	im1	○
2.842	9.747	3.331	92.272	.2316	4.317	.658	im1	○
2.838	9.751	3.356	92.872	.2311	4.327	.656	im1	○
2.822	9.662	3.371	91.914	.2307	4.334	.651	im1	○
2.838	9.714	3.376	93.071	.2299	4.350	.652	im1	○
2.842	9.756	3.381	93.743	.2299	4.349	.653	im1	○
2.838	10.212	3.676	106.537	.2255	4.434	.640	im1	○
2.838	10.074	3.727	106.555	.2220	4.504	.630	im1	○
2.838	10.351	3.763	110.542	.2243	4.459	.636	im1	○
2.838	10.298	3.771	110.210	.2233	4.478	.634	im1	○

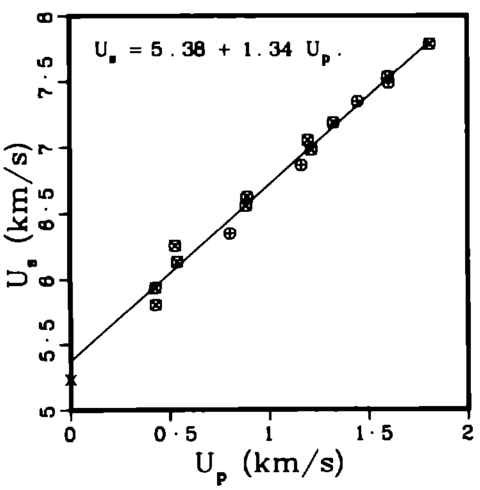
ALUMINUM , 1100

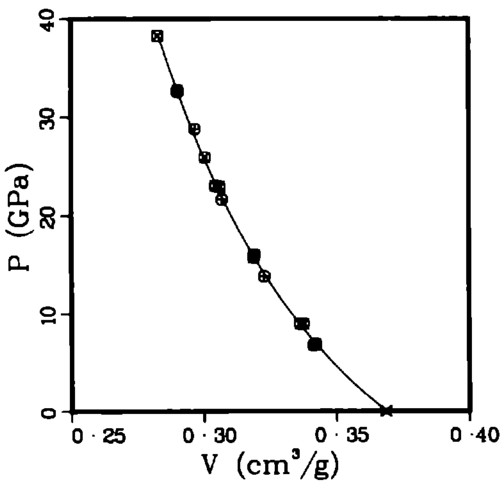
Average ρ_0 = 2.712 g/cm^3.

Sound velocities longitudinal 6.38 km/s .
shear 3.16 km/s .

Reference 29

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.715	5.234	0.000	0.000	.3683	2.715	1.000	s s p ×
2.713	5.934	.426	6.859	.3421	2.923	.928	s f 2 ⊠
2.713	5.804	.428	6.741	.3414	2.930	.926	s f 2 ⊠
2.713	6.254	.526	8.926	.3375	2.963	.916	s f 2 ⊠
2.713	6.132	.537	8.935	.3363	2.974	.912	s f 2 ⊠
2.706	6.347	.804	13.809	.3227	3.098	.873	s f 1 ⊕
2.713	6.558	.884	15.731	.3189	3.136	.865	s f 2 ⊠
2.713	6.624	.890	15.997	.3190	3.135	.866	s f 2 ⊠
2.706	6.862	1.164	21.614	.3069	3.259	.830	s f 1 ⊕
2.713	7.054	1.197	22.912	.3060	3.268	.830	s f 2 ⊠
2.713	6.979	1.214	22.990	.3044	3.285	.826	s f 2 ⊠
2.713	7.187	1.327	25.879	.3005	3.328	.815	s f 2 ⊠
2.706	7.348	1.448	28.792	.2967	3.370	.803	s f 1 ⊕
2.713	7.534	1.600	32.710	.2903	3.445	.788	s f 2 ⊠
2.706	7.489	1.606	32.546	.2903	3.445	.786	s f 1 ⊕
2.713	7.785	1.812	38.278	.2828	3.537	.767	s f 2 ⊠





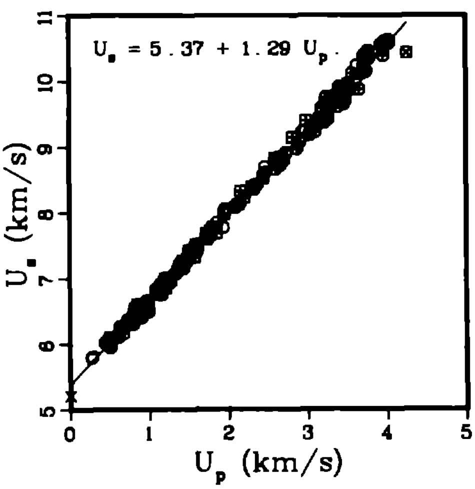
ALUMINUM , 2024

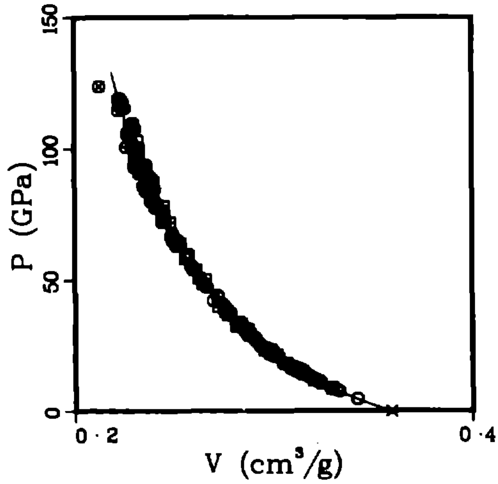
Average ρ_0 = 2.784 g/cm^3 .

Sound velocities longitudinal 6.36 km/s .
shear 3.16 km/s .
References 2 , 6 , 11 , 12 , 13 , 17 , 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.785	5.209	0.000	0.000	.3591	2.785	1.000	ssp ×
2.784	5.811	.278	4.497	.3420	2.924	.952	iml ○
2.784	5.782	.279	4.491	.3419	2.925	.952	iml ○
2.784	6.021	.440	7.375	.3329	3.003	.927	iml ○
2.782	6.054	.472	7.950	.3314	3.017	.922	iml ○
2.785	6.025	.497	8.339	.3294	3.035	.918	sp1 ⊞
2.785	6.098	.502	8.525	.3295	3.035	.918	sp1 ⊞
2.784	5.996	.503	8.397	.3291	3.039	.916	iml ○
2.785	6.055	.507	8.550	.3290	3.040	.916	sp1 ⊞
2.783	5.947	.509	8.424	.3286	3.043	.914	iml ○
2.784	5.953	.509	8.436	.3285	3.044	.914	iml ○
2.785	6.125	.608	10.371	.3234	3.092	.901	iml ○
2.785	6.103	.609	10.351	.3232	3.094	.900	iml ○
2.782	6.262	.626	10.905	.3235	3.091	.900	iml ○
2.782	6.228	.627	10.864	.3233	3.093	.899	iml ○
2.784	6.226	.650	11.267	.3217	3.109	.896	iml ○
2.782	6.164	.671	11.506	.3203	3.122	.891	sp1 ⊞
2.782	6.277	.677	11.822	.3207	3.118	.892	iml ○
2.785	6.367	.722	12.803	.3183	3.141	.887	iml ○

(Continued)





ALUMINUM , 2024
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.784	6.323	.727	12.798	.3179	3.146	.885	im1	○
2.784	6.310	.728	12.789	.3178	3.147	.885	im1	○
2.785	6.348	.768	13.578	.3156	3.168	.879	sp1	⊞
2.783	6.388	.778	13.831	.3156	3.169	.878	im1	○
2.785	6.312	.786	13.817	.3144	3.181	.875	sf1	⊕
2.785	6.304	.790	13.870	.3141	3.184	.875	sf1	⊕
2.784	6.365	.792	14.034	.3145	3.180	.876	im1	○
2.785	6.314	.792	13.927	.3140	3.184	.875	sf1	⊕
2.785	6.308	.793	13.931	.3139	3.185	.874	sf1	⊕
2.785	6.342	.798	14.095	.3139	3.186	.874	sf1	⊕
2.785	6.418	.798	14.264	.3144	3.180	.876	sf1	⊕
2.785	6.353	.799	14.137	.3139	3.186	.874	sf1	⊕
2.785	6.393	.800	14.244	.3141	3.183	.875	sf1	⊕
2.782	6.459	.800	14.375	.3149	3.175	.876	im1	○
2.782	6.393	.802	14.264	.3144	3.181	.875	im1	○
2.785	6.355	.802	14.194	.3138	3.187	.874	sf1	⊕
2.785	6.397	.802	14.288	.3140	3.184	.875	sf1	⊕
2.785	6.432	.803	14.384	.3142	3.182	.875	sf1	⊕
2.785	6.432	.803	14.384	.3142	3.182	.875	sf1	⊕
2.785	6.394	.805	14.335	.3139	3.186	.874	sf1	⊕
2.785	6.422	.809	14.469	.3138	3.186	.874	sf1	⊕
2.785	6.422	.809	14.469	.3138	3.186	.874	sf1	⊕
2.785	6.540	.812	14.790	.3145	3.180	.876	sf2	⊠
2.782	6.470	.814	14.652	.3142	3.182	.874	sf2	⊠
2.785	6.366	.818	14.503	.3129	3.196	.872	sf1	⊕
2.785	6.436	.831	14.895	.3127	3.198	.871	sf1	⊕
2.785	6.483	.833	15.040	.3129	3.196	.872	sf1	⊕
2.785	6.419	.839	14.999	.3121	3.204	.869	sf1	⊕
2.785	6.482	.842	15.200	.3124	3.201	.870	sf2	⊠
2.785	6.589	.843	15.469	.3131	3.194	.872	sf2	⊠
2.785	6.439	.844	15.135	.3120	3.205	.869	sf2	⊠
2.785	6.602	.848	15.592	.3129	3.195	.872	sf2	⊠
2.785	6.415	.850	15.186	.3115	3.210	.867	sf1	⊕
2.785	6.443	.854	15.324	.3115	3.211	.867	sf1	⊕
2.785	6.488	.858	15.503	.3116	3.209	.868	sf1	⊕
2.785	6.445	.859	15.418	.3112	3.213	.867	sf1	⊕
2.785	6.470	.859	15.478	.3114	3.211	.867	sf1	⊕
2.785	6.446	.860	15.439	.3112	3.214	.867	sf1	⊕
2.785	6.472	.862	15.537	.3112	3.213	.867	sf1	⊕
2.782	6.486	.863	15.572	.3116	3.209	.867	sp1	⊞
2.785	6.418	.864	15.443	.3107	3.218	.865	sf1	⊕
2.784	6.518	.865	15.696	.3115	3.210	.867	im1	○
2.785	6.561	.871	15.915	.3114	3.211	.867	sf1	⊕

(Continued)

ALUMINUM , 2024
(Continued)

ρ_0 (g/cm3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm3/g)	ρ (g/cm3)	V/Vo	Exp
2.785	6.522	.873	15.857	.3110	3.215	.866	sp1 ⊞
2.785	6.544	.873	15.910	.3112	3.214	.867	sf2 ⊠
2.785	6.541	.888	16.176	.3103	3.222	.864	sf1 ⊕
2.782	6.589	.891	16.333	.3108	3.217	.865	im1 ○
2.785	6.442	.892	16.003	.3093	3.233	.862	sf1 ⊕
2.784	6.589	.896	16.436	.3104	3.222	.864	im1 ○
2.784	6.579	.897	16.429	.3102	3.224	.864	im1 ○
2.785	6.402	.901	16.064	.3085	3.241	.859	sf1 ⊕
2.785	6.534	.910	16.559	.3091	3.236	.861	im1 ○
2.785	6.530	.910	16.549	.3090	3.236	.861	im1 ○
2.784	6.617	.953	17.556	.3075	3.252	.856	im1 ○
2.784	6.616	.953	17.553	.3075	3.253	.856	im1 ○
2.782	6.659	.966	17.895	.3073	3.254	.855	im1 ○
2.782	6.607	.975	17.921	.3064	3.264	.852	sp1 ⊞
2.784	6.560	.979	17.880	.3056	3.272	.851	im1 ○
2.784	6.507	.988	17.898	.3047	3.282	.848	im1 ○
2.780	6.490	.990	17.862	.3048	3.280	.847	im1 ○
2.782	6.824	1.081	20.522	.3025	3.306	.842	im1 ○
2.785	6.779	1.107	20.900	.3004	3.329	.837	sf1 ⊕
2.785	6.844	1.110	21.157	.3008	3.324	.838	sf1 ⊕
2.785	6.843	1.116	21.268	.3005	3.328	.837	sf1 ⊕
2.785	6.846	1.119	21.335	.3004	3.329	.837	sf1 ⊕
2.784	6.840	1.121	21.347	.3003	3.330	.836	im1 ○
2.785	6.818	1.124	21.343	.2999	3.335	.835	sf1 ⊕
2.770	6.850	1.126	21.365	.3017	3.315	.836	sf2 ⊠
2.785	6.756	1.128	21.224	.2991	3.343	.833	sf1 ⊕
2.785	6.823	1.130	21.472	.2996	3.338	.834	sf1 ⊕
2.785	6.826	1.134	21.558	.2994	3.340	.834	sf1 ⊕
2.785	6.831	1.136	21.612	.2994	3.341	.834	sf1 ⊕
2.785	6.795	1.141	21.592	.2988	3.347	.832	sf1 ⊕
2.785	6.783	1.144	21.611	.2985	3.350	.831	sf1 ⊕
2.789	6.861	1.146	21.929	.2987	3.348	.833	sp1 ⊞
2.789	6.893	1.157	22.243	.2984	3.352	.832	sp1 ⊞
2.785	6.752	1.157	21.757	.2975	3.361	.829	sf1 ⊕
2.780	6.915	1.159	22.280	.2994	3.340	.832	sp1 ⊞
2.777	7.005	1.198	23.305	.2985	3.350	.829	sf2 ⊠
2.789	6.857	1.206	23.064	.2955	3.384	.824	sp1 ⊞
2.784	7.014	1.220	23.823	.2967	3.370	.826	im1 ○
2.784	6.981	1.220	23.711	.2964	3.374	.825	im1 ○
2.785	6.955	1.260	24.406	.2940	3.401	.819	im1 ○
2.777	6.938	1.263	24.334	.2945	3.395	.818	im1 ○
2.784	6.943	1.277	24.684	.2931	3.411	.816	im1 ○
2.782	7.062	1.318	25.894	.2924	3.420	.813	im1 ○

(Continued)

ALUMINUM , 2024
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.781	7.092	1.352	26.665	.2910	3.436	.809	im1 ○
2.784	7.143	1.362	27.085	.2907	3.440	.809	im1 ○
2.784	7.139	1.362	27.070	.2907	3.440	.809	im1 ○
2.782	7.225	1.383	27.798	.2906	3.441	.809	im1 ○
2.789	7.268	1.426	28.906	.2882	3.470	.804	sp 1 ⊞
2.785	7.228	1.432	28.826	.2879	3.473	.802	sf 1 ⊕
2.785	7.156	1.437	28.639	.2870	3.485	.799	im1 ○
2.785	7.268	1.445	29.249	.2877	3.476	.801	sf 1 ⊕
2.782	7.211	1.446	29.008	.2874	3.480	.799	im1 ○
2.785	7.269	1.461	29.577	.2869	3.486	.799	sf 1 ⊕
2.785	7.295	1.465	29.764	.2870	3.485	.799	sf 1 ⊕
2.785	7.305	1.467	29.845	.2870	3.485	.799	sf 1 ⊕
2.785	7.266	1.479	29.929	.2860	3.497	.796	sf 1 ⊕
2.785	7.268	1.481	29.977	.2859	3.498	.796	sf 1 ⊕
2.785	7.342	1.498	30.630	.2858	3.499	.796	sf 1 ⊕
2.779	7.426	1.498	30.914	.2873	3.481	.798	sf 2 ⊗
2.779	7.426	1.516	31.285	.2864	3.492	.796	sf 2 ⊗
2.785	7.366	1.539	31.572	.2840	3.521	.791	sf 1 ⊕
2.785	7.462	1.557	32.357	.2841	3.519	.791	sf 1 ⊕
2.785	7.444	1.558	32.300	.2839	3.522	.791	sf 1 ⊕
2.785	7.413	1.568	32.372	.2831	3.532	.788	sf 1 ⊕
2.785	7.426	1.574	32.553	.2830	3.534	.788	sf 1 ⊕
2.785	7.479	1.574	32.785	.2835	3.527	.790	sf 1 ⊕
2.789	7.326	1.578	32.242	.2813	3.555	.785	sp 1 ⊞
2.785	7.416	1.588	32.798	.2822	3.544	.786	sf 1 ⊕
2.779	7.523	1.590	33.241	.2838	3.524	.789	sf 2 ⊗
2.785	7.407	1.605	33.109	.2813	3.555	.783	sf 1 ⊕
2.779	7.508	1.617	33.738	.2823	3.542	.785	sp 1 ⊞
2.789	7.678	1.722	36.875	.2781	3.595	.776	sp 1 ⊞
2.781	7.612	1.728	36.580	.2780	3.598	.773	im1 ○
2.789	7.596	1.728	36.608	.2770	3.610	.773	sp 1 ⊞
2.781	7.615	1.728	36.594	.2780	3.597	.773	im1 ○
2.785	7.690	1.742	37.308	.2777	3.601	.773	im1 ○
2.784	7.616	1.744	36.978	.2769	3.611	.771	im1 ○
2.789	7.659	1.770	37.809	.2757	3.627	.769	sp 1 ⊞
2.784	7.758	1.779	38.423	.2768	3.612	.771	im1 ○
2.789	7.775	1.812	39.292	.2750	3.637	.767	sp 1 ⊞
2.789	7.690	1.851	39.699	.2723	3.673	.759	sp 1 ⊞
2.782	7.850	1.858	40.576	.2744	3.645	.763	im1 ○
2.785	7.773	1.939	41.975	.2695	3.711	.751	im1 ○
2.779	7.973	1.948	43.162	.2719	3.678	.756	sp 1 ⊞
2.782	8.054	1.957	43.849	.2721	3.675	.757	im1 ○
2.782	8.015	1.959	43.681	.2716	3.682	.756	im1 ○

(Continued)

ALUMINUM , 2024
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.782	8.114	2.095	47.291	.2666	3.750	.742	im1	○
2.781	8.076	2.096	47.075	.2663	3.756	.740	im1	○
2.789	8.127	2.130	48.279	.2646	3.780	.738	sp1	⊞
2.784	8.150	2.154	48.873	.2643	3.784	.736	im1	○
2.784	8.149	2.154	48.867	.2643	3.784	.736	im1	○
2.789	8.332	2.156	50.101	.2658	3.763	.741	sp1	⊞
2.789	8.231	2.206	50.642	.2625	3.810	.732	sp1	⊞
2.779	8.396	2.306	53.805	.2610	3.831	.725	sp1	⊞
2.782	8.358	2.327	54.107	.2594	3.855	.722	im1	○
2.785	8.421	2.335	54.762	.2595	3.854	.723	im1	○
2.784	8.436	2.371	55.685	.2582	3.872	.719	im1	○
2.781	8.570	2.446	58.296	.2570	3.892	.715	im1	○
2.789	8.529	2.449	58.255	.2556	3.912	.713	sp1	⊞
2.783	8.699	2.467	59.724	.2574	3.885	.716	im1	○
2.783	8.618	2.477	59.408	.2560	3.906	.713	im1	○
2.789	8.829	2.595	63.899	.2532	3.950	.706	sp1	⊞
2.782	8.748	2.604	63.373	.2525	3.961	.702	im1	○
2.789	8.762	2.604	63.635	.2520	3.968	.703	sp1	⊞
2.785	8.744	2.605	63.437	.2521	3.967	.702	sf1	⊕
2.785	8.664	2.608	62.929	.2510	3.984	.699	sf1	⊕
2.784	8.848	2.641	65.055	.2520	3.969	.702	im1	○
2.784	8.797	2.645	64.778	.2512	3.981	.699	im1	○
2.789	8.803	2.650	65.062	.2506	3.990	.699	sp1	⊞
2.785	8.724	2.664	64.725	.2494	4.009	.695	sf1	⊕
2.785	8.764	2.671	65.193	.2496	4.006	.695	sf1	⊕
2.785	8.853	2.687	66.250	.2501	3.999	.696	sf1	⊕
2.785	8.792	2.709	66.332	.2484	4.025	.692	sf1	⊕
2.785	8.816	2.710	66.537	.2487	4.021	.693	sf1	⊕
2.782	8.909	2.735	67.787	.2491	4.014	.693	im1	○
2.782	8.916	2.738	67.914	.2491	4.015	.693	im1	○
2.789	9.144	2.817	71.841	.2481	4.031	.692	sp1	⊞
2.785	8.971	2.878	71.905	.2439	4.100	.679	sf1	⊕
2.785	9.070	2.911	73.532	.2438	4.101	.679	sf1	⊕
2.782	9.231	2.935	75.373	.2452	4.079	.682	im1	○
2.784	9.236	2.974	76.471	.2435	4.106	.678	im1	○
2.789	9.401	2.987	78.317	.2446	4.088	.682	sp1	⊞
2.785	9.177	3.030	77.441	.2405	4.158	.670	sf1	⊕
2.785	9.180	3.031	77.491	.2405	4.158	.670	sf1	⊕
2.785	9.198	3.035	77.746	.2406	4.156	.670	sf1	⊕
2.785	9.317	3.081	79.945	.2403	4.161	.669	sf1	⊕
2.785	9.317	3.086	80.075	.2401	4.164	.669	sf1	⊕
2.785	9.228	3.108	79.876	.2381	4.199	.663	sf1	⊕
2.785	9.369	3.148	82.140	.2384	4.194	.664	sf1	⊕

(Continued)

ALUMINUM, 2024
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.785	9.446	3.148	82.815	.2394	4.177	.667	sf1	⊕
2.781	9.596	3.181	84.890	.2404	4.160	.669	im1	o
2.781	9.549	3.187	84.633	.2396	4.174	.666	im1	o
2.785	9.365	3.217	83.904	.2357	4.242	.656	sf1	⊕
2.789	9.666	3.225	86.941	.2389	4.185	.666	sp1	⊞
2.784	9.762	3.238	88.000	.2401	4.166	.668	im1	o
2.785	9.409	3.251	85.189	.2350	4.255	.654	sf1	⊕
2.785	9.477	3.260	86.043	.2356	4.245	.656	sf1	⊕
2.784	9.426	3.269	85.785	.2346	4.262	.653	im1	o
2.779	9.617	3.274	87.500	.2373	4.213	.660	im1	o
2.789	9.642	3.287	88.392	.2363	4.232	.659	sp1	⊞
2.784	9.758	3.293	89.459	.2380	4.202	.663	im1	o
2.784	9.721	3.297	89.228	.2374	4.213	.661	im1	o
2.782	9.775	3.347	91.018	.2364	4.231	.658	im1	o
2.780	9.751	3.361	91.109	.2357	4.242	.655	im1	o
2.782	9.746	3.376	91.535	.2349	4.256	.654	im1	o
2.780	9.803	3.376	92.004	.2358	4.240	.656	im1	o
2.784	9.670	3.381	91.021	.2336	4.281	.650	im1	o
2.784	9.609	3.387	90.607	.2326	4.299	.648	im1	o
2.782	9.821	3.395	92.758	.2352	4.252	.654	im1	o
2.781	9.916	3.400	93.760	.2363	4.232	.657	im1	o
2.781	9.872	3.406	93.508	.2355	4.246	.655	im1	o
2.778	9.866	3.419	93.707	.2352	4.251	.653	sp1	⊞
2.785	9.654	3.463	93.108	.2303	4.343	.641	sf1	⊕
2.785	9.697	3.472	93.765	.2305	4.338	.642	sf1	⊕
2.785	9.727	3.481	94.299	.2306	4.337	.642	sf1	⊕
2.785	9.732	3.487	94.510	.2304	4.340	.642	sf1	⊕
2.785	9.870	3.500	96.208	.2317	4.315	.645	sf1	⊕
2.785	9.880	3.508	96.525	.2316	4.318	.645	sf1	⊕
2.785	9.861	3.508	96.340	.2313	4.323	.644	sf1	⊕
2.785	9.960	3.510	97.362	.2325	4.301	.648	sf2	⊠
2.785	9.880	3.538	97.351	.2305	4.339	.642	sf1	⊕
2.785	10.117	3.563	100.391	.2326	4.299	.648	sf1	⊕
2.780	10.040	3.618	100.983	.2301	4.346	.640	im1	o
2.784	10.238	3.629	103.436	.2319	4.313	.646	im1	o
2.785	9.876	3.658	100.612	.2261	4.423	.630	sf1	⊕
2.785	10.113	3.680	103.646	.2284	4.378	.636	sf1	⊕
2.778	10.190	3.717	105.220	.2287	4.373	.635	sp1	⊞
2.784	10.388	3.718	107.525	.2306	4.336	.642	im1	o
2.789	10.138	3.736	105.635	.2264	4.417	.631	im1	o
2.785	10.162	3.745	105.988	.2267	4.410	.631	sf1	⊕
2.789	10.370	3.748	108.399	.2290	4.368	.639	sp1	⊞
2.784	10.458	3.772	109.822	.2296	4.355	.639	im1	o

(Continued)

ALUMINUM , 2024
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.784	10.409	3.777	109.452	.2289	4.370	.637	im1	○
2.784	10.431	3.778	109.713	.2291	4.365	.638	im1	○
2.784	10.341	3.786	108.996	.2277	4.392	.634	im1	○
2.785	10.552	3.930	115.492	.2253	4.438	.628	sf1	⊕
2.785	10.513	3.966	116.119	.2236	4.472	.623	sf1	⊕
2.785	10.384	3.967	114.723	.2219	4.507	.618	sf1	⊕
2.785	10.611	3.983	117.704	.2243	4.459	.625	sf1	⊕
2.785	10.572	3.988	117.419	.2236	4.472	.623	sf1	⊕
2.785	10.542	3.991	117.174	.2231	4.482	.621	sf1	⊕
2.785	10.572	4.001	117.802	.2232	4.481	.622	sf1	⊕
2.785	10.631	4.026	119.199	.2231	4.483	.621	sf1	⊕
2.785	10.572	4.041	118.979	.2218	4.508	.618	sf1	⊕
2.785	10.430	4.260	123.743	.2124	4.708	.592	sf2	⊠

ALUMINUM , 2024 , sintered , ρ_0 = 2.6 g/cm^3 .

Average ρ_0 = 2.559 g/cm^3 .

Sound velocities longitudinal 5.25 km/s .
shear 2.80 km/s .

References 13 , 17 , 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.507	4.136	0.000	0.000	.3989	2.507	1.000	ssp	×
2.571	4.782	.724	8.901	.3301	3.030	.849	im1	o
2.647	5.358	1.001	14.197	.3072	3.255	.813	im1	o
2.524	5.160	1.026	13.362	.3174	3.150	.801	im1	o
2.575	5.985	1.330	20.497	.3020	3.311	.778	im1	o
2.566	6.854	1.761	30.971	.2896	3.453	.743	im1	o
2.472	6.926	1.990	34.071	.2883	3.469	.713	im1	o
2.554	7.553	2.229	42.998	.2760	3.623	.705	im1	o
2.465	7.912	2.579	50.298	.2734	3.657	.674	im1	o
2.554	8.318	2.698	57.317	.2645	3.780	.676	im1	o
2.605	8.366	2.787	60.738	.2560	3.906	.667	im1	o
2.583	8.808	3.031	68.958	.2539	3.938	.656	im1	o
2.506	8.718	3.052	66.678	.2593	3.856	.650	im1	o
2.603	9.095	3.233	76.539	.2476	4.039	.645	im1	o
2.535	9.146	3.302	76.557	.2521	3.967	.639	im1	o
2.585	9.586	3.555	88.092	.2434	4.109	.629	im1	o
2.543	9.583	3.590	87.487	.2459	4.066	.625	im1	o
2.522	9.544	3.619	87.109	.2462	4.062	.621	im1	o
2.510	9.629	3.643	88.047	.2477	4.038	.622	im1	o

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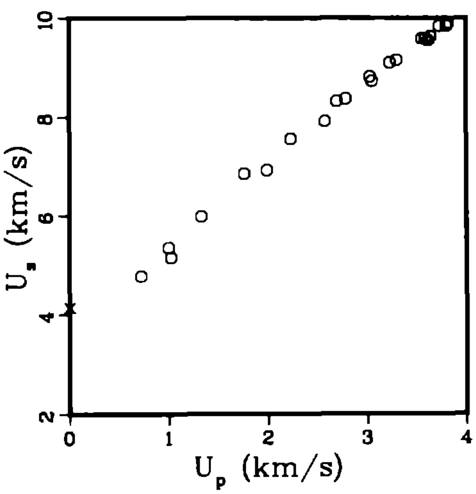

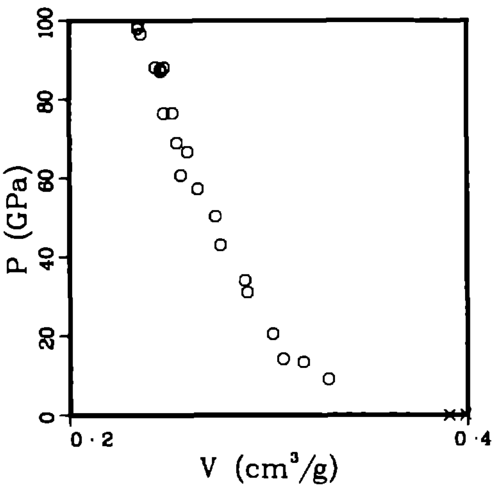

ALUMINUM, 2024, sintered, ρ_0 = 2.6 g/cm^3.
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.631	9.842	3.731	96.612	.2360	4.237	.621	im1 o
2.618	9.843	3.804	98.025	.2344	4.267	.614	im1 o
2.617	9.899	3.817	98.882	.2348	4.259	.614	im1 o

ALUMINUM , 2024 , sintered , ρ_0 = 2.2 g/cm^3 .

Average ρ_0 = 2.224 g/cm^3 .

Sound velocities longitudinal 4.04 km/s .
shear 2.28 km/s .

References 13 , 17 , 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.158	3.064	0.000	0.000	.4634	2.158	1.000	ssp ×
2.241	3.474	.849	6.610	.3372	2.966	.756	im1 o
2.261	4.303	1.140	11.091	.3251	3.076	.735	im1 o
2.183	4.098	1.182	10.574	.3260	3.068	.712	im1 o
2.062	4.889	1.552	15.646	.3310	3.021	.683	im1 o
2.271	6.120	1.927	26.782	.3017	3.315	.685	im1 o
2.136	6.537	1.981	27.661	.3263	3.065	.697	im1 o
2.247	6.401	2.124	30.550	.2974	3.363	.668	im1 o
2.193	6.905	2.442	36.978	.2947	3.393	.646	im1 o
2.260	7.627	2.702	46.574	.2857	3.500	.646	im1 o
2.266	7.914	2.878	51.612	.2808	3.561	.636	im1 o
2.186	7.882	3.044	52.448	.2808	3.561	.614	im1 o
2.301	8.471	3.214	62.647	.2697	3.708	.621	im1 o
2.203	8.299	3.262	59.638	.2755	3.630	.607	im1 o
2.280	8.533	3.481	67.724	.2597	3.851	.592	im1 o
2.198	8.798	3.533	68.321	.2723	3.673	.598	im1 o
2.287	9.271	3.770	79.934	.2594	3.854	.593	im1 o
2.208	9.271	3.830	78.402	.2658	3.762	.587	im1 o
2.217	9.259	3.839	78.804	.2640	3.787	.585	im1 o

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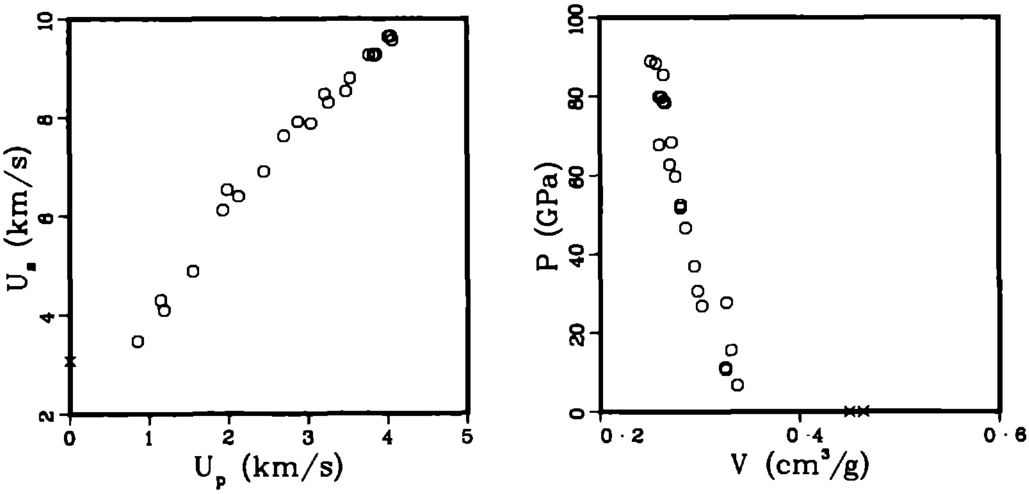

ALUMINUM, 2024, sintered, ρ_0 = 2.2 g/cm^3.
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.229	9.277	3.860	79.819	.2620	3.817	.584	iml o
2.211	9.640	4.012	85.512	.2641	3.787	.584	iml o
2.265	9.648	4.045	88.394	.2564	3.900	.581	iml o
2.289	9.568	4.064	89.006	.2513	3.979	.575	iml o

ALUMINUM, 2024, sintered, $\rho_0 = 2.0$ g/cm^3.

Average $\rho_0 = 1.955$ g/cm^3.

Sound velocities longitudinal 3.46 km/s.
shear 1.96 km/s.

References 13, 17, 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.947	2.617	0.000	0.000	.5136	1.947	1.000	ssp	×
1.993	2.912	.921	5.345	.3431	2.915	.684	im1	o
1.957	2.766	.926	5.012	.3399	2.942	.665	im1	o
1.966	3.620	1.254	8.925	.3324	3.008	.654	im1	o
1.929	3.625	1.270	8.881	.3368	2.969	.650	im1	o
1.908	4.397	1.642	13.776	.3284	3.045	.627	im1	o
2.010	5.624	2.068	23.377	.3146	3.179	.632	im1	o
1.970	5.494	2.158	23.356	.3082	3.244	.607	im1	o
1.995	5.993	2.263	27.057	.3120	3.205	.622	im1	o
1.981	6.611	2.566	33.605	.3089	3.238	.612	im1	o
1.916	7.054	2.938	39.708	.3045	3.284	.583	im1	o
1.959	7.474	3.089	45.228	.2995	3.339	.587	im1	o
1.880	7.563	3.250	46.210	.3033	3.297	.570	im1	o
2.019	8.000	3.405	54.998	.2845	3.515	.574	im1	o
2.037	8.041	3.418	55.985	.2822	3.543	.575	im1	o
1.933	8.479	3.694	60.544	.2919	3.425	.564	im1	o
1.888	8.376	3.785	59.856	.2903	3.445	.548	im1	o
2.065	8.918	3.987	73.423	.2678	3.735	.553	im1	o
1.996	9.016	4.006	72.092	.2784	3.592	.556	im1	o

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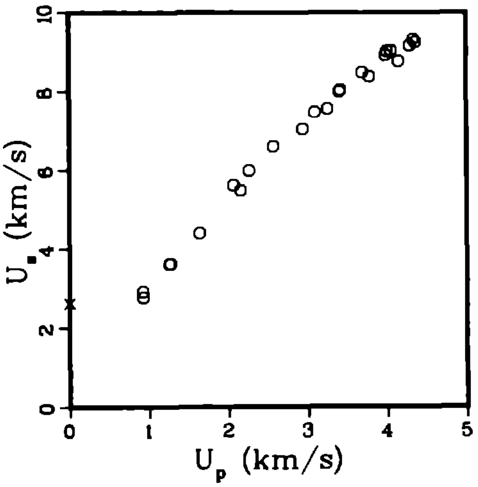

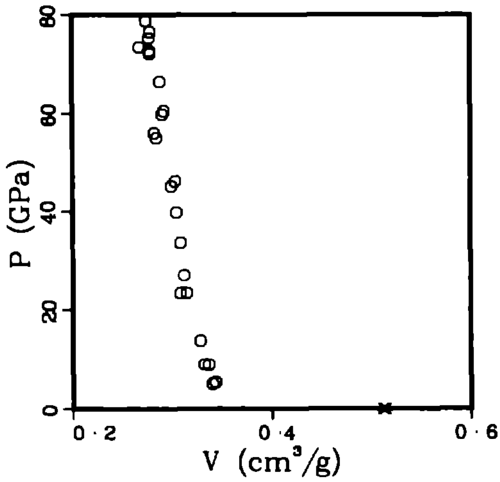

ALUMINUM, 2024, sintered, ρ_0 = 2.0 g/cm^3.
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.983	9.031	4.057	72.655	.2777	3.600	.551	iml o
1.825	8.765	4.151	66.400	.2884	3.467	.526	iml o
1.916	9.158	4.289	75.258	.2775	3.604	.532	iml o
1.951	9.321	4.334	78.815	.2742	3.647	.535	iml o
1.899	9.247	4.361	76.579	.2782	3.594	.528	iml o

ALUMINUM, 2024, sintered, ρ_0 = 1.7 g/cm^3.

Average ρ_0 = 1.661 g/cm^3.

Sound velocities longitudinal 2.82 km/s.
shear 1.53 km/s.

References 13, 17, 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.706	2.198	0.000	0.000	.5862	1.706	1.000	ssp ×
1.659	2.473	.983	4.033	.3632	2.753	.603	im1 o
1.622	2.310	1.012	3.792	.3464	2.887	.562	im1 o
1.699	3.335	1.340	7.593	.3521	2.840	.598	im1 o
1.618	2.978	1.379	6.645	.3319	3.013	.537	im1 o
1.648	4.050	1.747	11.660	.3450	2.898	.569	im1 o
1.663	5.153	2.248	19.264	.3390	2.950	.564	im1 o
1.687	5.127	2.307	19.954	.3260	3.067	.550	im1 o
1.626	5.636	2.454	22.489	.3472	2.880	.565	im1 o
1.700	6.260	2.739	29.148	.3309	3.022	.562	im1 o
1.661	6.677	3.124	34.647	.3204	3.121	.532	im1 o
1.671	7.092	3.302	39.131	.3198	3.127	.534	im1 o
1.687	7.408	3.384	42.291	.3220	3.106	.543	im1 o
1.685	7.604	3.667	46.984	.3073	3.254	.518	im1 o
1.691	7.742	3.674	48.099	.3107	3.218	.525	im1 o
1.657	8.162	3.924	53.200	.3141	3.184	.520	im1 o
1.656	8.198	3.971	53.910	.3114	3.212	.516	im1 o
1.707	8.762	4.240	63.417	.3023	3.308	.516	im1 o
1.596	8.708	4.349	60.442	.3136	3.188	.501	im1 o

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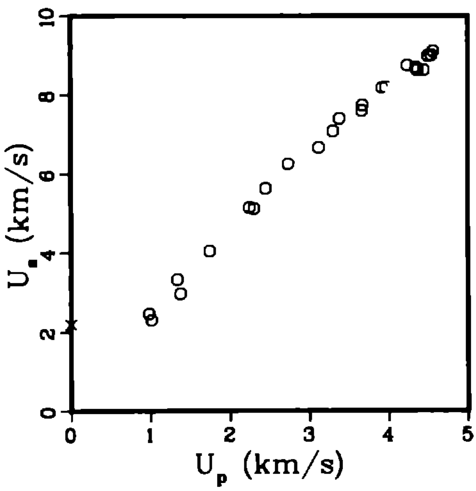
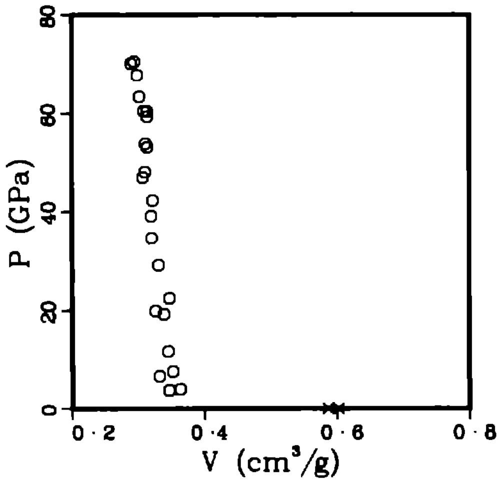




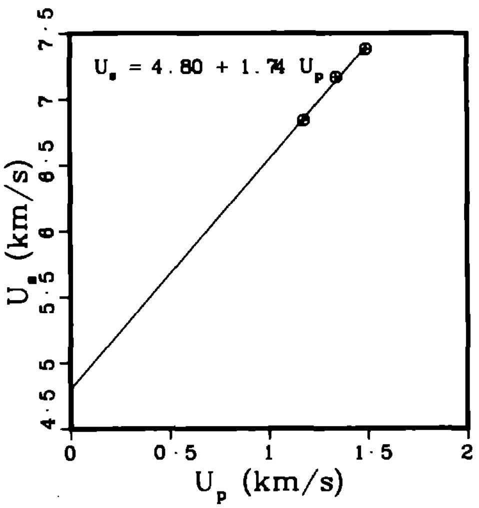
ALUMINUM, 2024, sintered, ρ_0 = 1.7 g/cm^3.
(Continued)

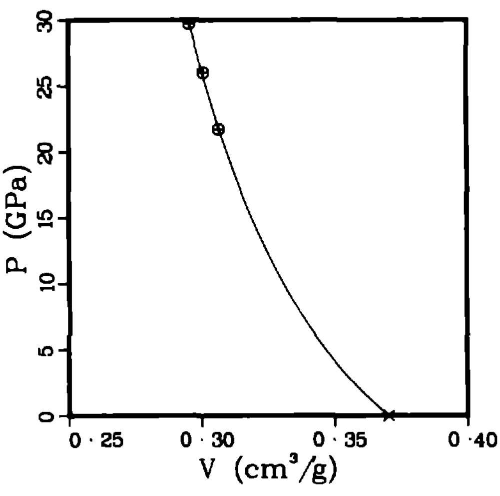
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.603	8.647	4.366	60.518	.3088	3.238	.495	im1 o
1.544	8.643	4.450	59.384	.3142	3.183	.485	im1 o
1.673	9.002	4.502	67.802	.2988	3.347	.500	im1 o
1.713	9.016	4.543	70.164	.2896	3.453	.496	im1 o
1.694	9.118	4.567	70.541	.2946	3.394	.499	im1 o

ALUMINUM , 3003

Average ρ_0 = 2.700 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.700	6.839	1.178	21.752	.3066	3.262	.828	s f 1 ⊕
2.700	7.167	1.344	26.008	.3009	3.323	.812	s f 1 ⊕
2.700	7.382	1.491	29.718	.2956	3.383	.798	s f 1 ⊕





ALUMINUM , 6061

Average ρ_0 = 2.703 g/cm^3 .

Sound velocities longitudinal 6.40 km/s .
shear 3.15 km/s .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.703	5.266	0.000	0.000	.3700	2.703	1.000	ssp	×
2.703	5.928	.442	7.082	.3424	2.921	.925	im1	o
2.703	5.975	.497	8.027	.3392	2.948	.917	im1	o
2.703	6.176	.657	10.968	.3306	3.025	.894	im1	o
2.703	6.652	.999	17.962	.3144	3.181	.850	im1	o
2.703	6.956	1.198	22.525	.3062	3.265	.828	im1	o
2.703	7.655	1.741	36.024	.2858	3.499	.773	im1	o
2.703	7.963	1.925	41.434	.2805	3.565	.758	im1	o
2.703	7.970	1.935	41.686	.2801	3.570	.757	im1	o
2.703	8.431	2.288	52.141	.2696	3.710	.729	im1	o
2.703	8.663	2.473	57.908	.2643	3.783	.715	im1	o
2.703	9.146	2.752	68.034	.2586	3.866	.699	im1	o
2.703	9.069	2.780	68.148	.2566	3.898	.693	im1	o
2.703	9.289	2.886	72.462	.2550	3.921	.689	im1	o
2.703	9.529	3.120	80.361	.2488	4.019	.673	im1	o
2.703	9.830	3.151	83.724	.2514	3.978	.679	im1	o
2.703	9.649	3.376	88.050	.2405	4.158	.650	im1	o
2.703	9.969	3.435	92.560	.2425	4.124	.655	im1	o
2.703	9.843	3.449	91.763	.2403	4.161	.650	im1	o
2.703	10.269	3.470	96.317	.2449	4.083	.662	im1	o

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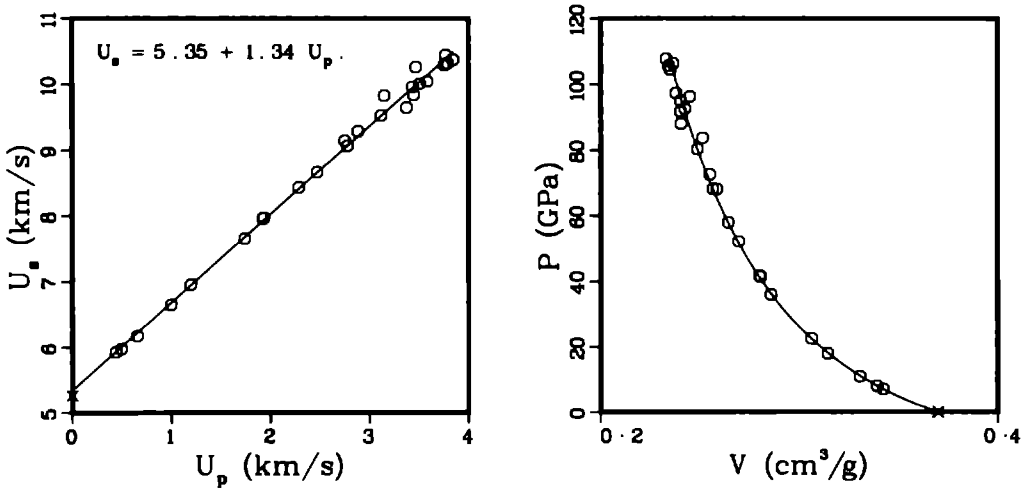

ALUMINUM , 6061
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.703	10.014	3.510	95.008	.2403	4.162	.649	iml o
2.703	10.047	3.585	97.358	.2379	4.203	.643	iml o
2.703	10.301	3.758	104.636	.2350	4.255	.635	iml o
2.703	10.448	3.769	106.440	.2365	4.228	.639	iml o
2.703	10.325	3.789	105.745	.2342	4.270	.633	iml o
2.703	10.377	3.844	107.820	.2329	4.293	.630	iml o

ALUMINUM , 7075

Average ρ_0 = 2.804 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
2.807	5.130	.059	.850	.3522	2.840	.988	qzi +
2.807	5.310	.134	1.997	.3473	2.880	.975	qzi +
2.807	5.420	.194	2.952	.3435	2.911	.964	qzi +
2.807	5.380	.201	3.035	.3429	2.916	.963	qzi +
2.807	5.460	.212	3.249	.3424	2.920	.961	qzi +
2.807	5.530	.290	4.502	.3376	2.962	.948	qzi +
2.807	5.800	.413	6.724	.3309	3.022	.929	qzi +
2.803	6.004	.422	7.102	.3317	3.015	.930	im1 o
2.803	6.137	.647	11.130	.3191	3.133	.895	im1 o
2.803	6.527	.919	16.813	.3065	3.262	.859	im1 o
2.803	6.921	1.215	23.570	.2941	3.400	.824	im1 o
2.803	7.564	1.690	35.831	.2771	3.609	.777	im1 o
2.803	7.798	1.832	40.043	.2729	3.664	.765	im1 o
2.803	7.976	2.027	45.317	.2661	3.758	.746	im1 o
2.803	8.243	2.241	51.779	.2598	3.850	.728	im1 o
2.303	8.325	2.373	55.374	.2551	3.921	.715	im1 o
2.803	8.472	2.557	60.721	.2491	4.015	.698	im1 o
2.803	8.919	2.808	70.200	.2444	4.091	.685	im1 o
2.803	9.770	3.373	92.371	.2336	4.281	.655	im1 o
2.803	9.866	3.399	93.997	.2339	4.276	.655	im1 o
2.803	9.801	3.405	93.543	.2328	4.295	.653	im1 o
2.803	10.019	3.535	99.274	.2309	4.331	.647	im1 o

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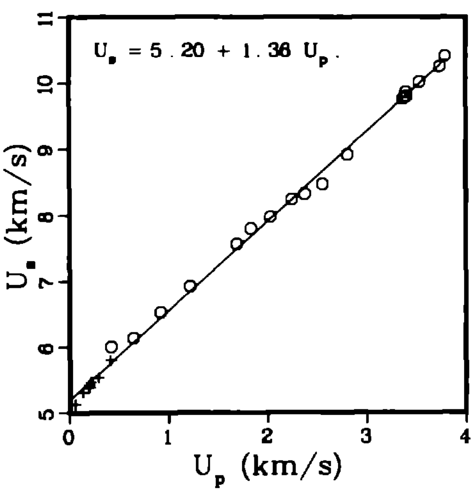
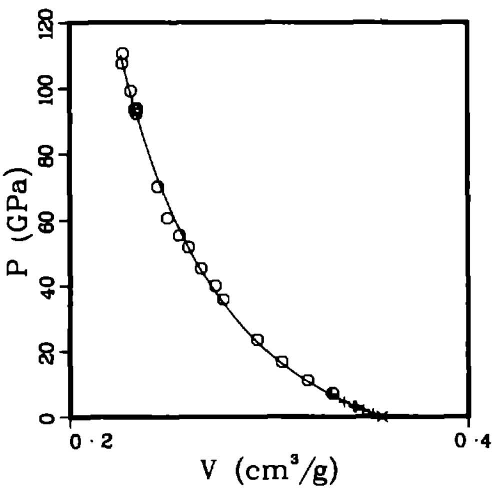




ALUMINUM , 7075
(Continued)

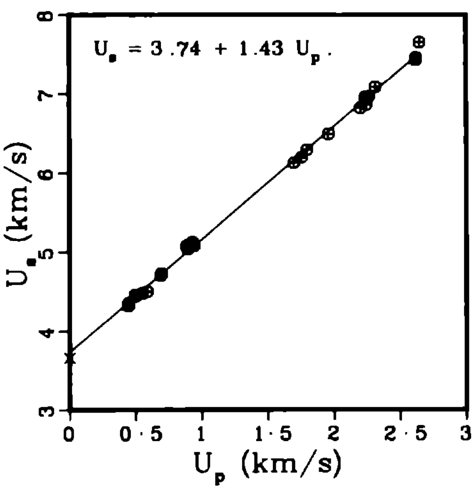
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.803	10.254	3.742	107.552	.2266	4.414	.635	iml o
2.803	10.410	3.792	110.648	.2268	4.409	.636	iml o

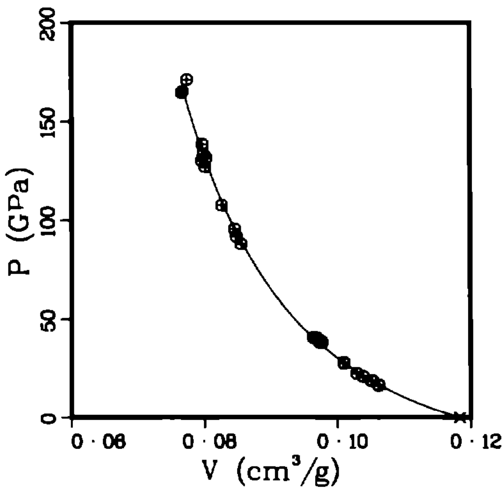
BRASS, free-machining, high-leaded
61.5/36.0/2.5 wt% Cu/Zn/Pb
Average ρ_0 = 8.450 g/cm^3.

Sound velocities longitudinal 4.41 km/s.
shear 2.13 km/s.
References 4, 5, 6

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
8.450	3.660	0.000	0.000	.1183	8.450	1.000	s s p ×
8.450	4.327	.445	16.271	.1062	9.419	.897	s f 1 ⊕
8.450	4.357	.446	16.420	.1062	9.414	.898	s f 1 ⊕
8.450	4.458	.495	18.647	.1052	9.505	.889	s f 1 ⊕
8.450	4.448	.498	18.718	.1051	9.515	.888	s f 1 ⊕
8.450	4.482	.550	20.830	.1038	9.632	.877	s f 1 ⊕
8.450	4.503	.588	22.374	.1029	9.719	.869	s f 1 ⊕
8.450	4.708	.692	27.530	.1009	9.906	.853	s f 1 ⊕
8.450	4.730	.694	27.738	.1010	9.903	.853	s f 1 ⊕
8.450	5.074	.885	37.945	.0977	10.235	.826	s f 1 ⊕
8.450	5.091	.894	38.459	.0976	10.250	.824	s f 1 ⊕
8.450	5.043	.896	38.182	.0973	10.276	.822	s f 1 ⊕
8.450	5.129	.928	40.220	.0969	10.317	.819	s f 1 ⊕
8.450	5.111	.930	40.165	.0968	10.330	.818	s f 1 ⊕
8.450	5.084	.944	40.554	.0964	10.377	.814	s f 1 ⊕
8.450	6.132	1.699	88.034	.0856	11.689	.723	s f 1 ⊕
8.450	6.198	1.756	91.967	.0848	11.790	.717	s f 1 ⊕
8.450	6.298	1.798	95.686	.0846	11.826	.715	s f 1 ⊕

(Continued)





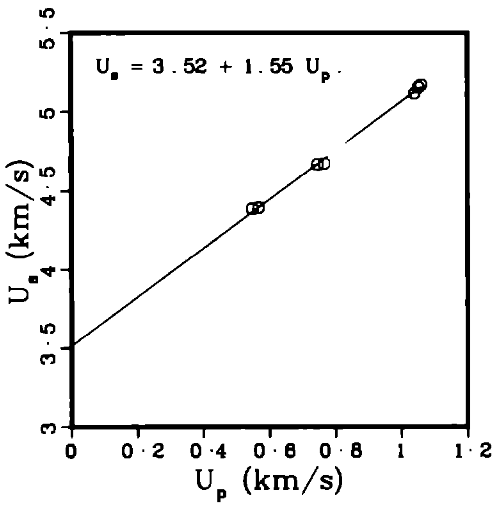
BRASS , free–machining , high–leaded
(Continued)

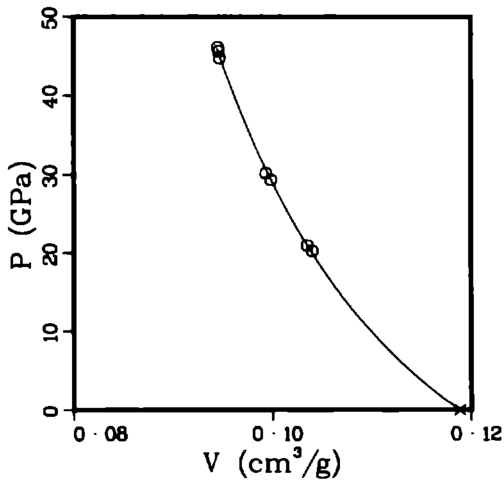
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
8.450	6.497	1.960	107.603	.0826	12.100	.698	s f 1 ⊕
8.450	6.824	2.203	127.031	.0801	12.478	.677	s f 1 ⊕
8.450	6.960	2.237	131.562	.0803	12.452	.679	s f 1 ⊕
8.450	6.866	2.246	130.308	.0796	12.558	.673	s f 1 ⊕
8.450	6.968	2.264	133.303	.0799	12.517	.675	s f 1 ⊕
8.450	7.088	2.314	138.594	.0797	12.546	.674	s f 1 ⊕
8.450	7.433	2.620	164.559	.0766	13.050	.648	s f 1 ⊕
8.450	7.461	2.622	165.305	.0768	13.029	.649	s f 1 ⊕
8.450	7.656	2.648	171.308	.0774	12.918	.654	s f 1 ⊕

BRASS , muntz metal
60 . 6/39 . 3 wt% Cu/Zn
Average ρ_0 = 8.413 g/cm^3 .

References 6 , 11 , 12

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
8.413	4.387	.548	20.225	.1040	9.614	.875	im1 o
8.413	4.393	.567	20.955	.1035	9.660	.871	im1 o
8.413	4.669	.746	29.303	.0999	10.013	.840	im1 o
8.413	4.674	.767	30.160	.0994	10.065	.836	im1 o
8.413	5.117	1.040	44.771	.0947	10.559	.797	im1 o
8.413	5.158	1.052	45.651	.0946	10.568	.796	im1 o
8.413	5.173	1.060	46.132	.0945	10.581	.795	im1 o





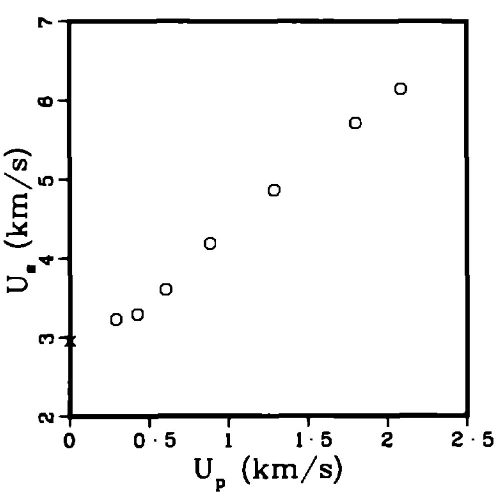
GOLD-5.8 wt% GERMANIUM

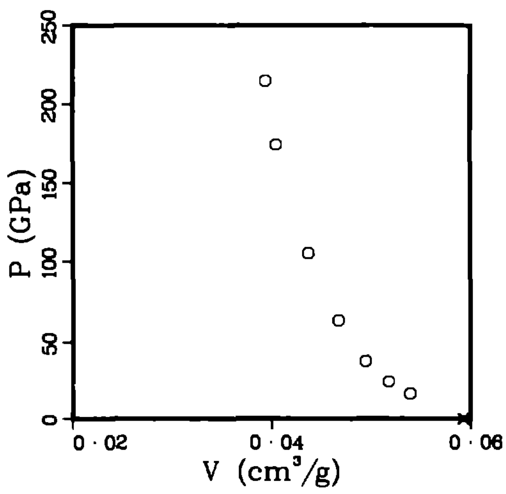
Average ρ_0 = 16.851 g/cm^3.

Sound velocities longitudinal 3.33 km/s.
shear 1.33 km/s.

References 13, 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
16.880	2.955	0.000	0.000	.0592	16.880	1.000	ssp ×
16.880	3.230	.290	15.811	.0539	18.545	.910	im1 o
16.820	3.294	.425	23.547	.0518	19.312	.871	im1 o
16.850	3.609	.602	36.609	.0494	20.223	.833	im1 o
16.880	4.187	.885	62.549	.0467	21.404	.789	im1 o
16.830	4.865	1.286	105.295	.0437	22.877	.736	im1 o
16.910	5.715	1.803	174.243	.0405	24.704	.685	im1 o
16.760	6.140	2.086	214.663	.0394	25.384	.660	im1 o

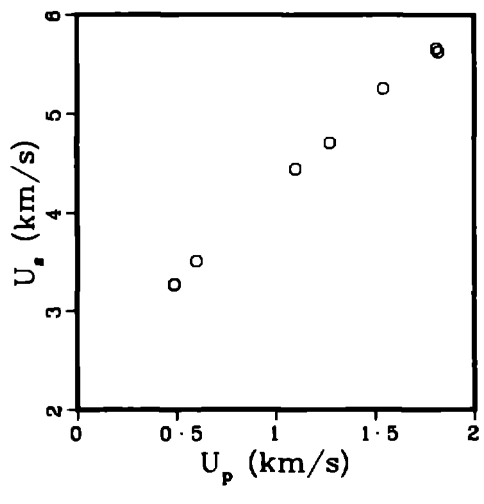


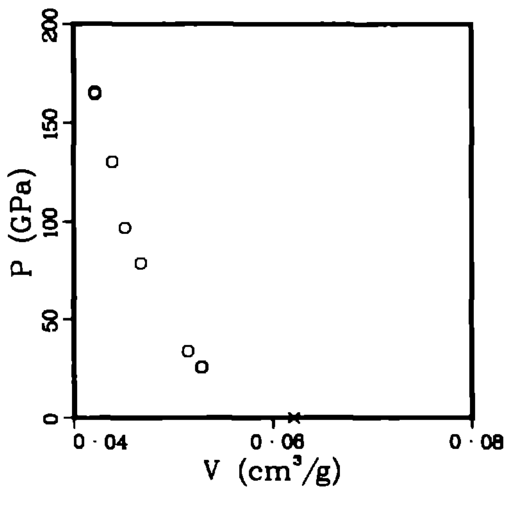


GOLD–7.9 wt% GERMANIUM

Average ρ_0 = 16.111 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
16.120	3.270	.487	25.671	.0528	18.941	.851	im1 o
16.090	3.271	.488	25.684	.0529	18.911	.851	im1 o
16.110	3.508	.599	33.852	.0515	19.427	.829	im1 o
16.100	4.442	1.101	78.739	.0467	21.406	.752	im1 o
16.160	4.707	1.274	96.907	.0451	22.157	.729	im1 o
16.090	5.255	1.542	130.381	.0439	22.772	.707	im1 o
16.160	5.661	1.809	165.491	.0421	23.749	.680	im1 o
16.060	5.629	1.819	164.441	.0421	23.727	.677	im1 o





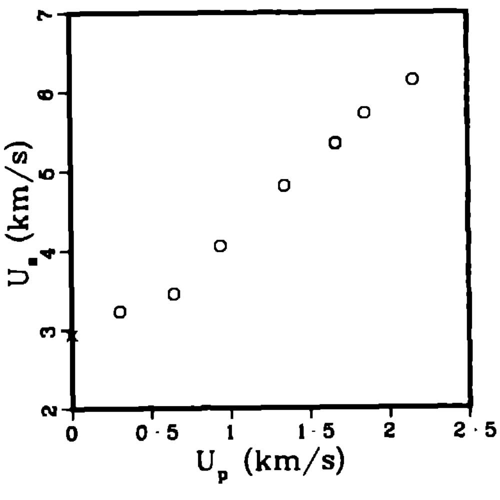
GOLD–9.3 wt% GERMANIUM

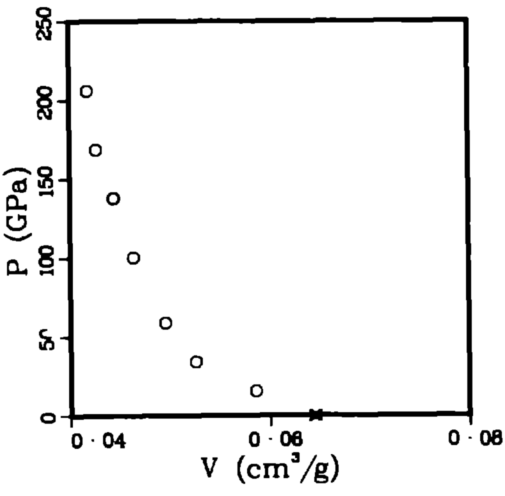
Average ρ_0 = 15.536 g/cm^3.

Sound velocities longitudinal 3.39 km/s.
shear 1.47 km/s.

References 13, 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
15.490	2.934	0.000	0.000	.0646	15.490	1.000	ssp ×
15.460	3.229	.304	15.176	.0586	17.067	.906	im1 o
15.480	3.450	.643	34.340	.0526	19.026	.814	im1 o
15.510	4.054	.939	59.042	.0495	20.185	.768	im1 o
15.550	4.813	1.344	100.588	.0464	21.575	.721	im1 o
15.490	5.344	1.669	138.157	.0444	22.525	.688	im1 o
15.480	5.341	1.670	138.073	.0444	22.522	.687	im1 o
15.840	5.731	1.857	168.577	.0427	23.433	.676	im1 o
15.520	6.149	2.159	206.039	.0418	23.918	.649	im1 o



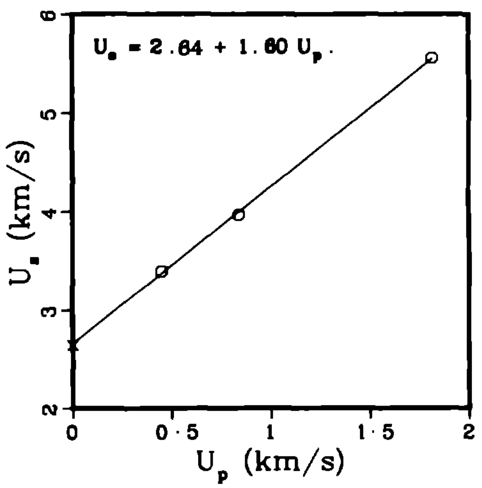


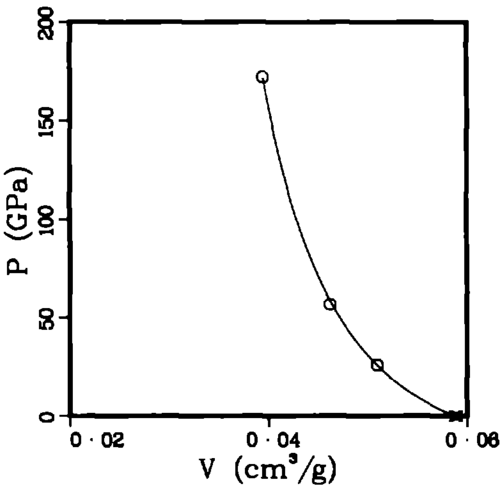
GOLD-20.6 wt% LEAD

Average ρ_0 = 17.025 g/cm^3.

Sound velocities	longitudinal	2.98 km/s.
	shear	1.19 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
16.950	2.644	0.000	0.000	.0590	16.950	1.000	ssp ×
17.050	3.395	.448	25.932	.0509	19.642	.868	im1 o
17.050	3.966	.840	56.801	.0462	21.632	.788	im1 o
17.050	5.555	1.816	171.998	.0395	25.331	.673	im1 o



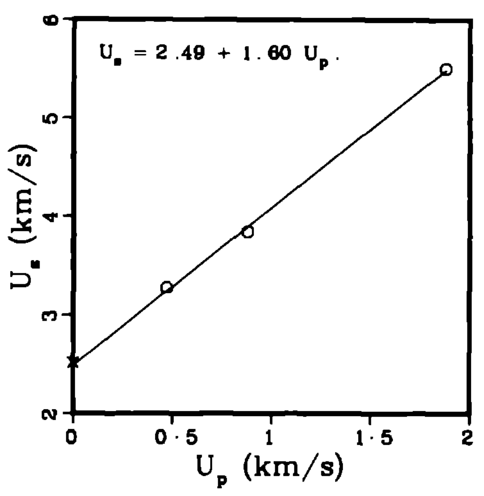


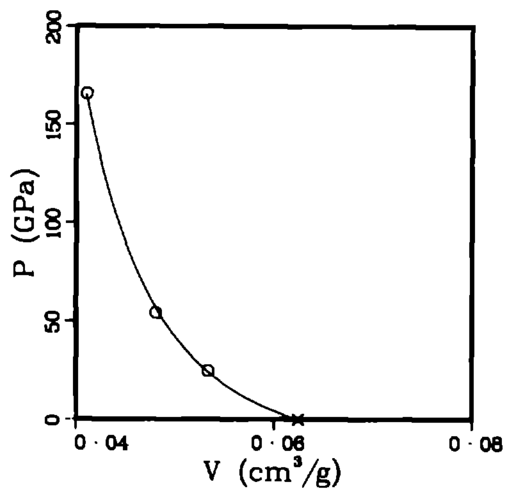
GOLD-33.5 wt% LEAD

Average ρ_0 = 16.032 g/cm^3.

Sound velocities	longitudinal	2.85 km/s.
	shear	1.15 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
16.010	2.522	0.000	0.000	.0625	16.010	1.000	ssp ×
16.040	3.277	.471	24.757	.0534	18.732	.856	im1 o
16.040	3.844	.879	54.197	.0481	20.795	.771	im1 o
16.040	5.503	1.877	165.679	.0411	24.343	.659	im1 o

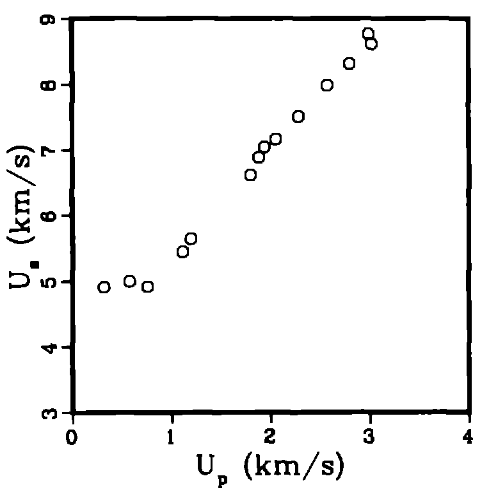


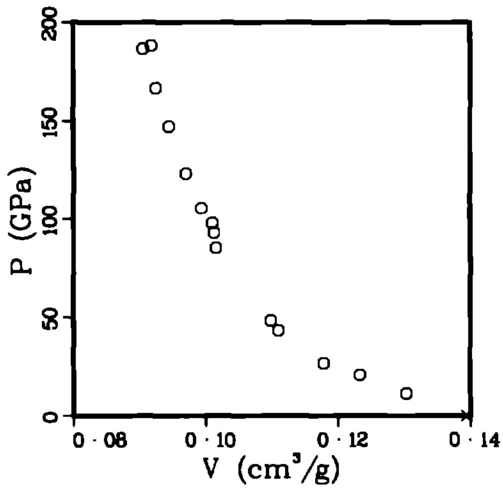


IRON , cast

Average ρ_0 = 7.174 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.174	4.909	.319	11.234	.1303	7.673	.935	im1 o
7.174	4.997	.577	20.685	.1233	8.111	.885	im1 o
7.174	4.917	.760	26.809	.1178	8.486	.845	im1 o
7.174	5.445	1.111	43.398	.1110	9.013	.796	im1 o
7.175	5.642	1.196	48.416	.1098	9.105	.788	im1 o
7.175	6.620	1.797	85.355	.1015	9.848	.729	im1 o
7.175	6.889	1.883	93.074	.1013	9.874	.727	im1 o
7.175	7.044	1.939	97.998	.1010	9.900	.725	im1 o
7.175	7.163	2.055	105.616	.0994	10.062	.713	im1 o
7.175	7.518	2.285	123.257	.0970	10.308	.696	im1 o
7.175	7.987	2.572	147.393	.0945	10.583	.678	im1 o
7.174	8.311	2.799	166.885	.0924	10.817	.663	im1 o
7.174	8.767	2.993	188.243	.0918	10.893	.659	im1 o
7.174	8.618	3.020	186.713	.0905	11.044	.650	im1 o





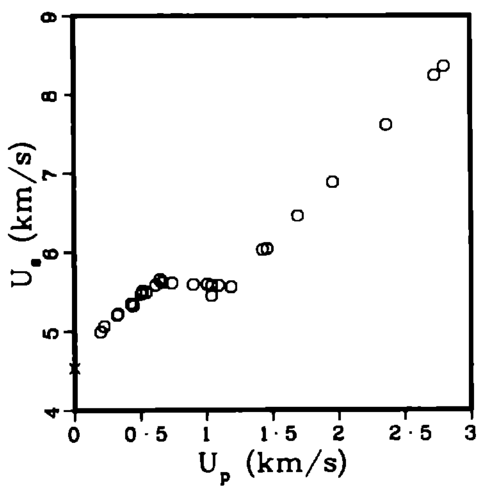
IRON–40.0 wt% COBALT

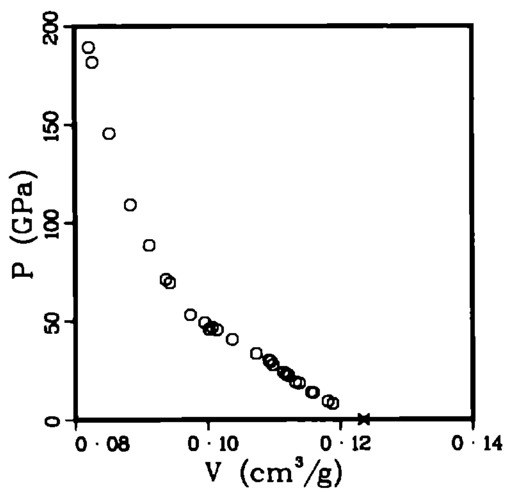
Average ρ_0 = 8.091 g/cm^3.

Sound velocities	longitudinal	6.20 km/s.
	shear	3.66 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
8.102	4.536	0.000	0.000	.1234	8.102	1.000	ssp	×
8.079	4.994	.199	8.029	.1188	8.414	.960	im1	o
8.089	5.064	.226	9.258	.1181	8.467	.955	im1	o
8.088	5.206	.324	13.642	.1159	8.625	.938	im1	o
8.103	5.222	.330	13.964	.1156	8.650	.937	im1	o
8.083	5.353	.429	18.562	.1138	8.787	.920	im1	o
8.094	5.323	.445	19.173	.1132	8.832	.916	im1	o
8.087	5.477	.508	22.501	.1122	8.914	.907	im1	o
8.106	5.513	.515	23.015	.1118	8.941	.907	im1	o
8.087	5.496	.543	24.134	.1114	8.974	.901	im1	o
8.105	5.590	.614	27.818	.1098	9.105	.890	im1	o
8.089	5.658	.647	29.612	.1095	9.133	.886	im1	o
8.078	5.625	.663	30.126	.1092	9.157	.882	im1	o
8.092	5.616	.739	33.584	.1073	9.318	.868	im1	o
8.092	5.597	.900	40.762	.1037	9.643	.839	im1	o
8.093	5.601	1.005	45.556	.1014	9.863	.821	im1	o
8.087	5.580	1.037	46.795	.1007	9.933	.814	im1	o
8.081	5.458	1.038	45.782	.1002	9.979	.810	im1	o
8.083	5.585	1.091	49.252	.0995	10.045	.805	im1	o
8.081	5.565	1.186	53.335	.0974	10.270	.787	im1	o

(Continued)





IRON-40 . 0 wt% COBALT
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
8.098	6.029	1.424	69.524	.0943	10.602	.764	im1 o
8.096	6.039	1.458	71.284	.0937	10.673	.759	im1 o
8.093	6.459	1.691	88.393	.0912	10.963	.738	im1 o
8.100	6.885	1.957	109.139	.0884	11.317	.716	im1 o
8.093	7.616	2.363	145.647	.0852	11.734	.690	im1 o
8.090	8.241	2.729	181.942	.0827	12.095	.669	im1 o
8.094	8.357	2.801	189.464	.0821	12.175	.665	im1 o

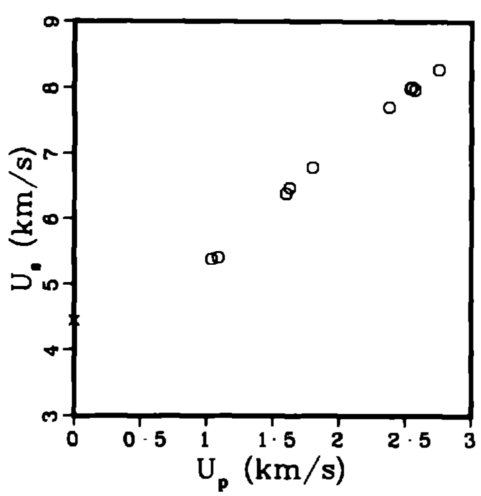
IRON–10.0 wt% NICKEL

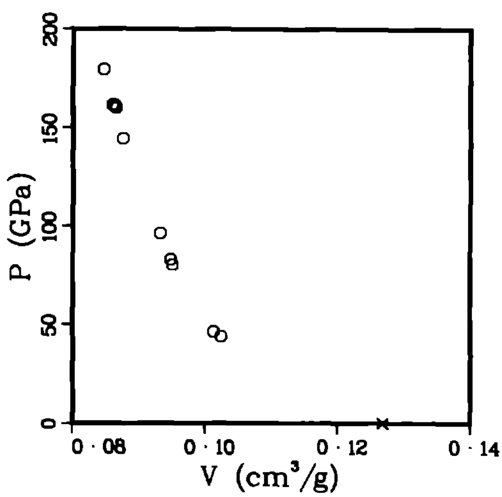
Average ρ_0 = 7.886 g/cm^3.

Sound velocities longitudinal 5.76 km/s.
shear 3.17 km/s.

References 6, 13, 22

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
7.883	4.447	0.000	0.000	.1269	7.883	1.000	ssp	×
7.883	5.386	1.038	44.071	.1024	9.765	.807	im1	o
7.885	5.411	1.090	46.506	.1013	9.874	.799	im1	o
7.883	6.381	1.598	80.382	.0951	10.517	.750	im1	o
7.895	6.473	1.626	83.096	.0948	10.543	.749	im1	o
7.883	6.791	1.801	96.414	.0932	10.728	.735	im1	o
7.896	7.707	2.380	144.834	.0875	11.424	.691	im1	o
7.885	8.001	2.541	160.306	.0865	11.555	.682	im1	o
7.896	8.016	2.553	161.590	.0863	11.586	.682	im1	o
7.870	7.976	2.577	161.761	.0860	11.626	.677	im1	o
7.883	8.275	2.754	179.648	.0846	11.815	.667	im1	o





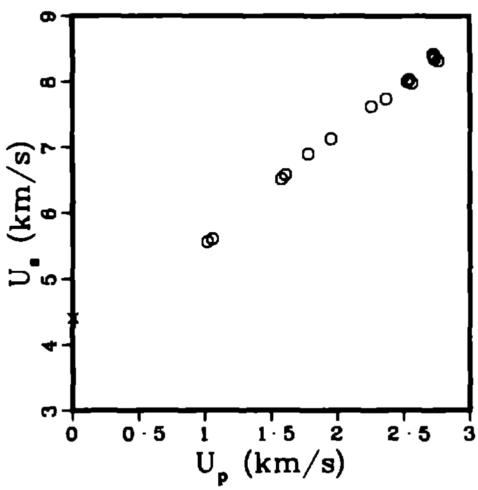
IRON-17.9 wt% NICKEL

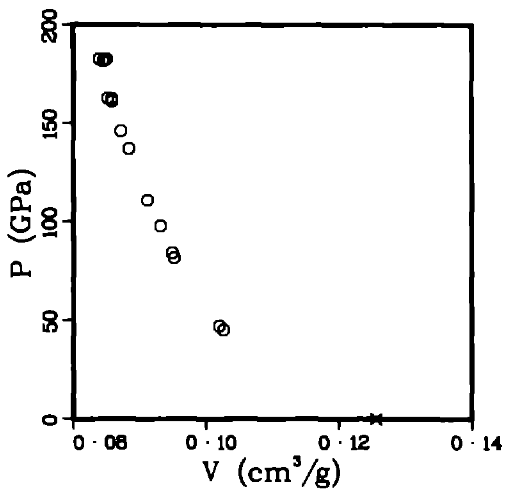
Average ρ_0 = 7.962 g/cm^3.

Sound velocities longitudinal 5.56 km/s.
shear 2.94 km/s.

References 6, 13, 22

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.962	4.403	0.000	0.000	.1256	7.962	1.000	ssp ×
7.962	5.565	1.019	45.150	.1026	9.747	.817	im1 o
7.962	5.607	1.056	47.143	.1019	9.809	.812	im1 o
7.962	6.517	1.578	81.880	.0952	10.506	.758	im1 o
7.962	6.581	1.609	84.308	.0949	10.539	.756	im1 o
7.962	6.898	1.782	97.871	.0932	10.735	.742	im1 o
7.962	7.126	1.955	110.921	.0911	10.972	.726	im1 o
7.962	7.624	2.257	137.005	.0884	11.310	.704	im1 o
7.962	7.738	2.369	145.954	.0871	11.475	.694	im1 o
7.962	8.000	2.531	161.215	.0859	11.647	.684	im1 o
7.962	8.030	2.543	162.586	.0858	11.652	.683	im1 o
7.962	7.976	2.565	162.890	.0852	11.736	.678	im1 o
7.962	8.419	2.723	182.528	.0850	11.768	.677	im1 o
7.962	8.384	2.730	182.237	.0847	11.806	.674	im1 o
7.962	8.350	2.732	181.631	.0845	11.834	.673	im1 o
7.962	8.316	2.760	182.745	.0839	11.917	.668	im1 o





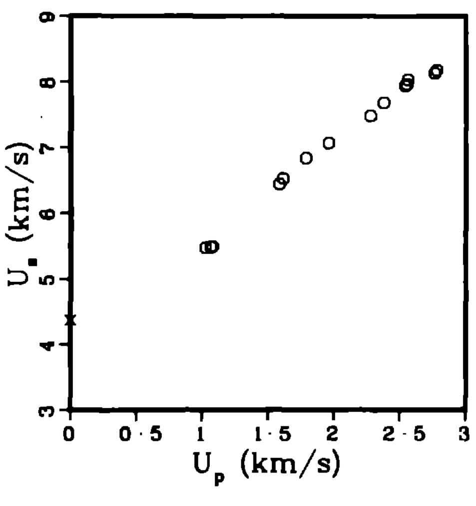
IRON-26.2 wt% NICKEL

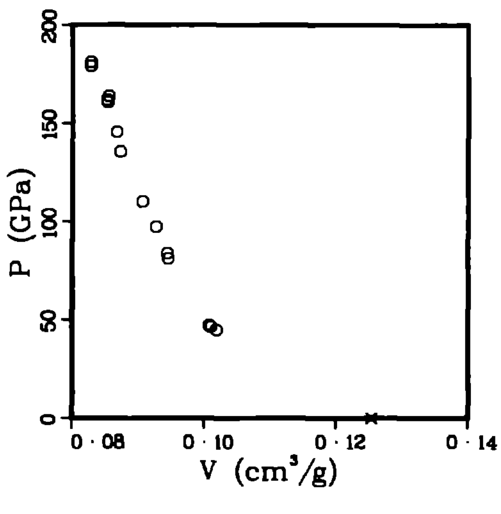
Average ρ_0 = 7.974 g/cm^3.

Sound velocities longitudinal 5.38 km/s.
shear 2.72 km/s.

References 6, 13, 22

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.974	4.368	0.000	0.000	.1254	7.974	1.000	ssp ×
7.974	5.477	1.026	44.809	.1019	9.812	.813	im1 o
7.974	5.486	1.065	46.589	.1011	9.895	.806	im1 o
7.974	5.491	1.078	47.200	.1008	9.922	.804	im1 o
7.974	6.442	1.585	81.419	.0946	10.576	.754	im1 o
7.974	6.528	1.614	84.016	.0944	10.593	.753	im1 o
7.974	6.841	1.787	97.481	.0926	10.793	.739	im1 o
7.974	7.066	1.960	110.435	.0906	11.035	.723	im1 o
7.974	7.481	2.273	135.592	.0873	11.454	.696	im1 o
7.974	7.687	2.374	145.517	.0867	11.537	.691	im1 o
7.974	7.943	2.537	160.687	.0854	11.716	.681	im1 o
7.974	7.959	2.550	161.836	.0852	11.733	.680	im1 o
7.974	8.033	2.557	163.789	.0855	11.697	.682	im1 o
7.974	8.130	2.761	178.992	.0828	12.075	.660	im1 o
7.974	8.176	2.777	181.048	.0828	12.075	.660	im1 o

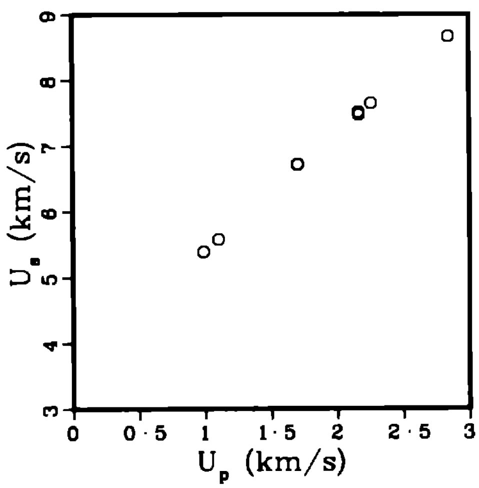


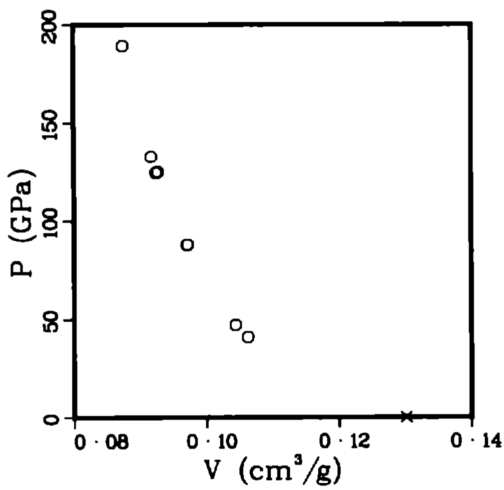


IRON–2.9 wt% SILICON

Average ρ_0 = 7.685 g/cm^3

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.685	5.385	.988	40.887	.1062	9.412	.817	im1 o
7.685	5.572	1.102	47.189	.1044	9.580	.802	im1 o
7.685	6.718	1.702	87.871	.0972	10.293	.747	im1 o
7.685	6.708	1.703	87.791	.0971	10.300	.746	im1 o
7.685	7.516	2.162	124.878	.0927	10.788	.712	im1 o
7.685	7.476	2.166	124.443	.0924	10.820	.710	im1 o
7.685	7.650	2.259	132.807	.0917	10.905	.705	im1 o
7.685	8.666	2.843	189.339	.0874	11.437	.672	im1 o

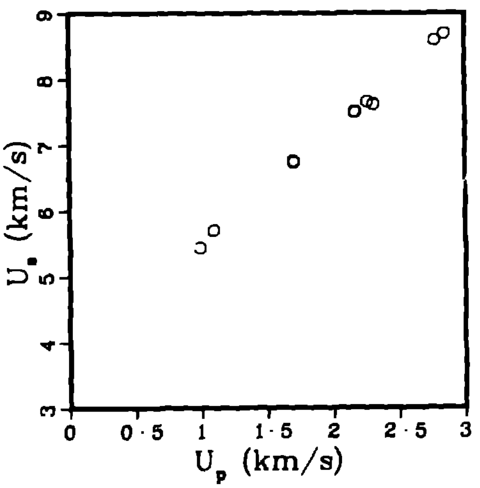


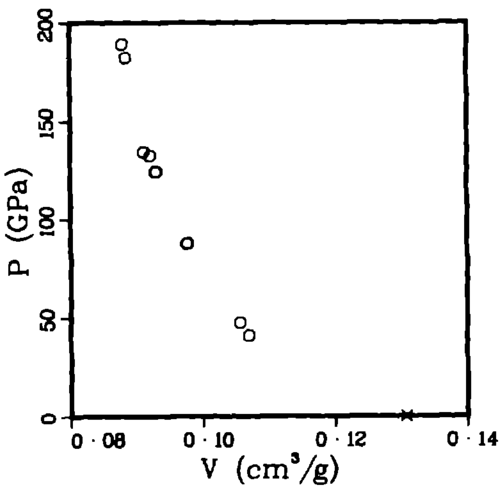


IRON–3.8 wt% SILICON

Average ρ_0 = 7.652 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
7.652	5.434	.986	40.999	.1070	9.348	.819	iml	o
7.652	5.698	1.094	47.700	.1056	9.470	.808	iml	o
7.652	6.753	1.701	87.897	.0978	10.228	.748	iml	o
7.652	6.734	1.703	87.753	.0976	10.242	.747	iml	o
7.652	7.515	2.165	124.498	.0930	10.749	.712	iml	o
7.652	7.493	2.168	124.305	.0929	10.767	.711	iml	o
7.652	7.658	2.262	132.551	.0921	10.860	.705	iml	o
7.652	7.619	2.308	134.558	.0911	10.977	.697	iml	o
7.652	8.585	2.774	182.231	.0885	11.305	.677	iml	o
7.652	8.692	2.845	189.224	.0879	11.375	.673	iml	o

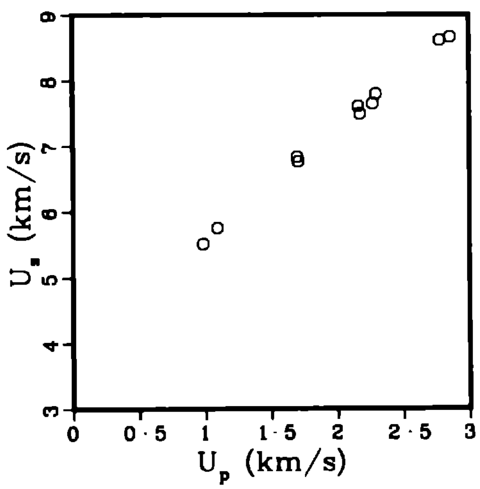


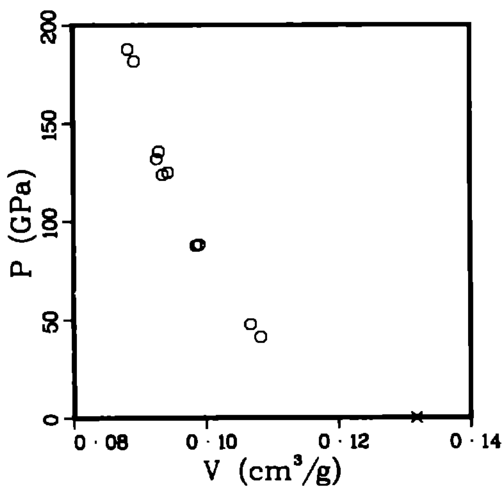


IRON-4.6 wt% SILICON

Average ρ_0 = 7.589 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.589	5.509	.984	41.139	.1082	9.239	.821	im1 o
7.589	5.753	1.093	47.720	.1067	9.369	.810	im1 o
7.589	6.832	1.699	88.090	.0990	10.101	.751	im1 o
7.589	6.762	1.706	87.546	.0985	10.150	.748	im1 o
7.589	7.608	2.162	124.828	.0943	10.602	.716	im1 o
7.589	7.493	2.175	123.680	.0935	10.693	.710	im1 o
7.589	7.648	2.271	131.810	.0926	10.794	.703	im1 o
7.589	7.794	2.295	135.746	.0930	10.756	.706	im1 o
7.589	8.616	2.779	181.710	.0893	11.202	.677	im1 o
7.589	8.664	2.857	187.851	.0883	11.323	.670	im1 o

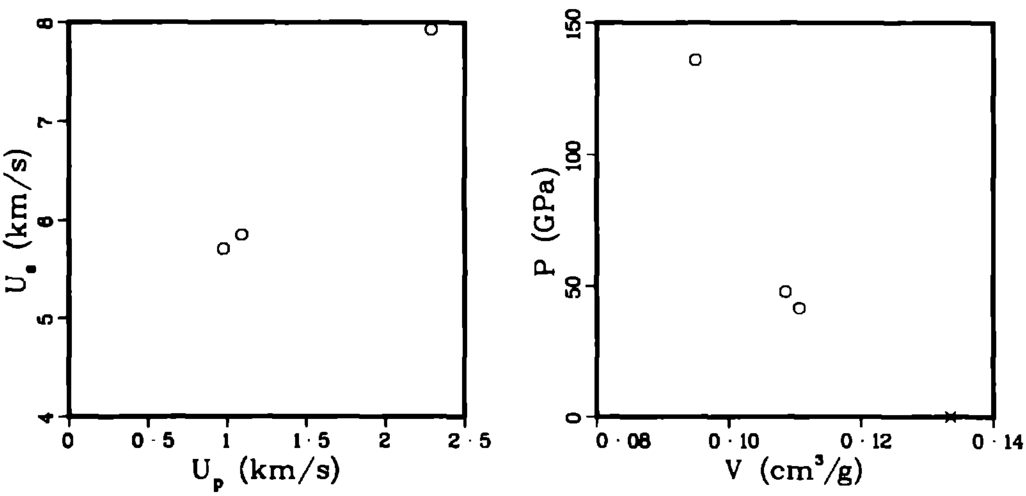




IRON–6.9 wt% SILICON

Average ρ_0 = 7.490 g/cm^3.

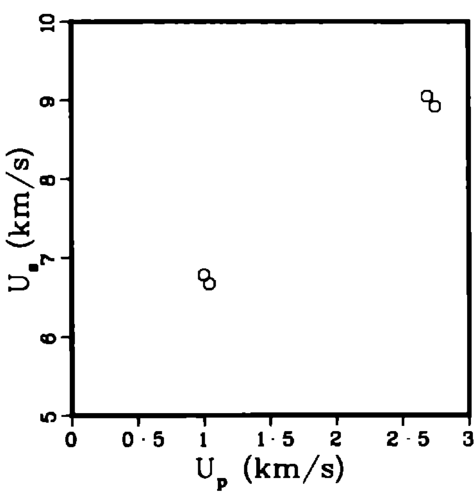
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.490	5.706	.975	41.669	.1107	9.034	.829	im1 ○
7.490	5.850	1.092	47.848	.1086	9.209	.813	im1 ○
7.490	7.929	2.291	136.058	.0949	10.534	.711	im1 ○

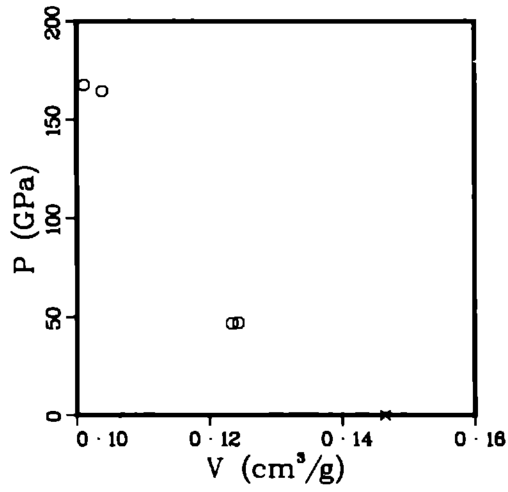


IRON-20 wt% SILICON

Average ρ_0 = 6.828 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.910	6.783	.999	46.824	.1234	8.103	.853	im1 o
6.788	6.671	1.039	47.049	.1244	8.040	.844	im1 o
6.770	9.049	2.687	164.610	.1038	9.629	.703	im1 o
6.844	8.921	2.748	167.780	.1011	9.891	.692	im1 o



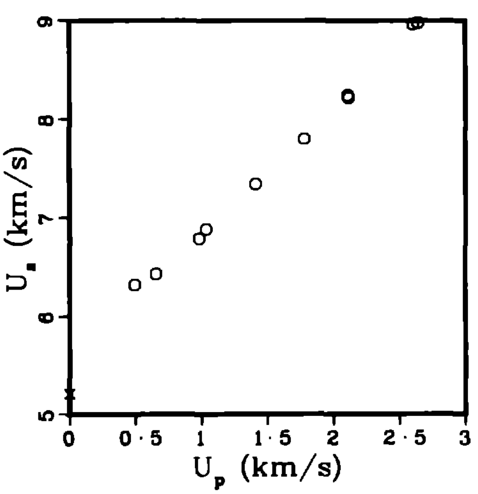


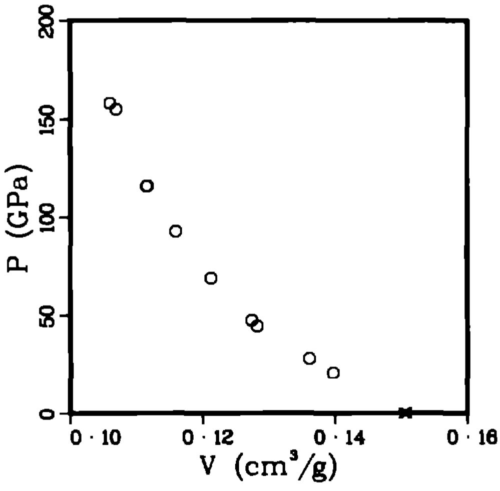
IRON–25 wt% SILICON

Average ρ_0 = 6.647 g/cm^3.

Sound velocities	longitudinal	6.87 km/s.
	shear	3.88 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.632	5.208	0.000	0.000	.1508	6.632	1.000	ssp ×
6.599	6.320	.495	20.644	.1397	7.160	.922	iml o
6.598	6.430	.656	27.831	.1361	7.348	.898	iml o
6.669	6.786	.982	44.441	.1282	7.797	.855	iml o
6.669	6.880	1.034	47.443	.1274	7.849	.850	iml o
6.660	7.343	1.411	69.004	.1213	8.244	.808	iml o
6.659	7.802	1.781	92.529	.1159	8.629	.772	iml o
6.668	8.245	2.108	115.893	.1116	8.958	.744	iml o
6.660	8.220	2.114	115.731	.1115	8.966	.743	iml o
6.637	8.966	2.605	155.017	.1069	9.355	.709	iml o
6.662	8.979	2.642	158.039	.1059	9.439	.706	iml o





IRON-10.0 wt% VANADIUM

Average ρ_0 = 7.705 g/cm^3.

Sound velocities longitudinal 6.30 km/s.
shear 3.70 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.706	4.630	0.000	0.000	.1298	7.706	1.000	ssp ×
7.710	5.089	.231	9.064	.1238	8.077	.955	im1 o
7.707	5.205	.332	13.318	.1215	8.232	.936	im1 o
7.711	5.181	.339	13.543	.1212	8.251	.935	im1 o
7.705	5.310	.441	18.043	.1190	8.403	.917	im1 o
7.675	5.320	.456	18.619	.1191	8.395	.914	im1 o
7.705	5.426	.525	21.949	.1172	8.530	.903	im1 o
7.719	5.454	.530	22.313	.1170	8.550	.903	im1 o
7.704	5.507	.555	23.546	.1167	8.567	.899	im1 o
7.703	5.504	.565	23.954	.1165	8.584	.897	im1 o
7.698	5.416	.638	26.600	.1146	8.726	.882	im1 o
7.709	5.430	.674	28.214	.1136	8.801	.876	im1 o
7.703	5.399	.690	28.696	.1132	8.832	.872	im1 o
7.707	5.416	.767	32.015	.1114	8.979	.858	im1 o
7.703	5.387	.934	38.757	.1073	9.319	.827	im1 o
7.709	5.581	1.010	43.454	.1062	9.412	.819	im1 o
7.707	5.509	1.054	44.751	.1049	9.530	.809	im1 o
7.706	5.576	1.058	45.461	.1051	9.511	.810	im1 o
7.704	5.563	1.059	45.386	.1051	9.515	.810	im1 o
7.704	5.602	1.111	47.948	.1041	9.610	.802	im1 o

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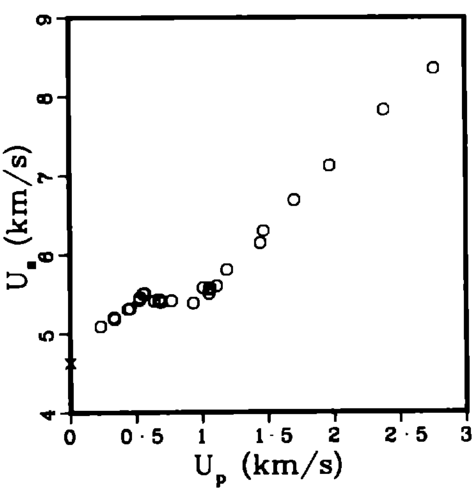
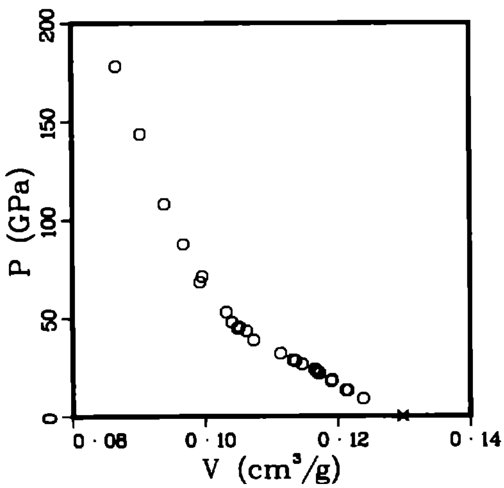




IRON-10.0 wt% VANADIUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.706	5.806	1.188	53.152	.1032	9.688	.795	im1 o
7.711	6.142	1.442	68.295	.0992	10.077	.765	im1 o
7.705	6.299	1.466	71.151	.0996	10.042	.767	im1 o
7.707	6.688	1.701	87.677	.0968	10.336	.746	im1 o
7.703	7.122	1.970	108.076	.0939	10.648	.723	im1 o
7.702	7.829	2.383	143.692	.0903	11.072	.696	im1 o
7.719	8.354	2.764	178.235	.0867	11.536	.669	im1 o

MAGNESIUM , AZ31B

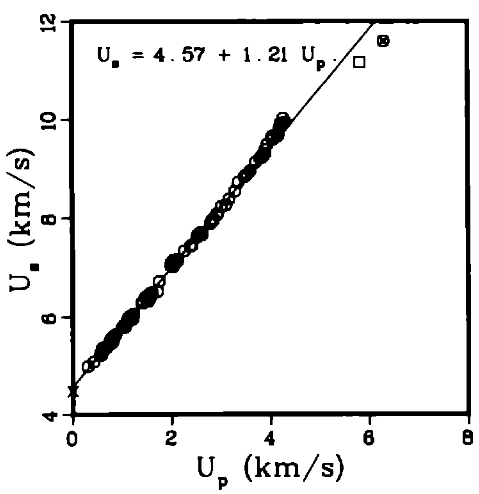
Average ρ_0 = 1.776 g/cm^3.

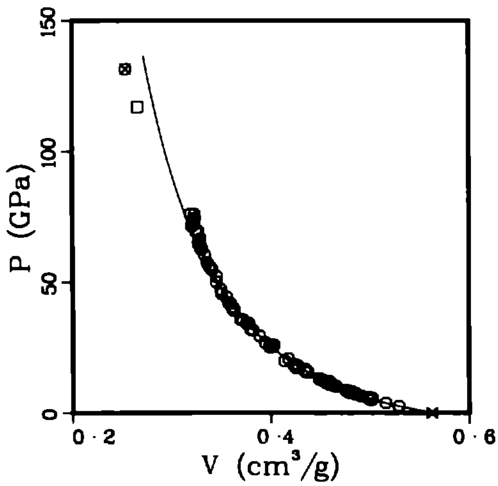
Sound velocities longitudinal 5.70 km/s.
shear 3.05 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.780	4.482	0.000	0.000	.5618	1.780	1.000	ssp ×
1.776	4.988	.302	2.675	.5290	1.890	.939	im1 o
1.776	5.079	.426	3.843	.5158	1.939	.916	im1 o
1.777	5.215	.566	5.245	.5017	1.993	.891	im1 o
1.777	5.260	.572	5.346	.5016	1.994	.891	im1 o
1.776	5.231	.581	5.398	.5005	1.998	.889	im1 o
1.770	5.352	.597	5.655	.5020	1.992	.888	im1 o
1.780	5.300	.597	5.632	.4985	2.006	.887	im1 o
1.770	5.329	.614	5.791	.4999	2.000	.885	im1 o
1.770	5.364	.636	6.038	.4980	2.008	.881	im1 o
1.777	5.369	.684	6.526	.4911	2.036	.873	im1 o
1.777	5.459	.746	7.237	.4858	2.058	.863	im1 o
1.776	5.540	.767	7.547	.4851	2.061	.862	im1 o
1.776	5.465	.791	7.677	.4816	2.077	.855	im1 o
1.780	5.517	.816	8.013	.4787	2.089	.852	im1 o
1.778	5.563	.820	8.111	.4795	2.085	.853	im1 o
1.770	5.603	.835	8.281	.4808	2.080	.851	im1 o
1.778	5.630	.867	8.679	.4758	2.102	.846	im1 o
1.777	5.783	1.000	10.276	.4654	2.149	.827	im1 o

(Continued)





MAGNESIUM , AZ31B
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.776	5.840	1.048	10.870	.4620	2.164	.821	im1 o
1.778	5.780	1.057	10.863	.4596	2.176	.817	im1 o
1.776	5.895	1.115	11.674	.4566	2.190	.811	im1 o
1.770	5.948	1.117	11.760	.4589	2.179	.812	im1 o
1.780	5.908	1.118	11.757	.4555	2.195	.811	im1 o
1.770	5.932	1.126	11.823	.4577	2.185	.810	im1 o
1.766	5.990	1.136	12.017	.4589	2.179	.810	im1 o
1.776	5.997	1.178	12.546	.4525	2.210	.804	im1 o
1.770	5.962	1.218	12.853	.4496	2.224	.796	im1 o
1.778	6.050	1.226	13.188	.4485	2.230	.797	im1 o
1.776	6.280	1.402	15.637	.4374	2.286	.777	im1 o
1.780	6.284	1.422	15.906	.4347	2.301	.774	im1 o
1.770	6.394	1.474	16.682	.4347	2.300	.769	im1 o
1.778	6.316	1.533	17.215	.4259	2.348	.757	im1 o
1.776	6.460	1.560	17.898	.4271	2.341	.759	im1 o
1.770	6.421	1.563	17.764	.4274	2.339	.757	im1 o
1.776	6.461	1.570	18.015	.4262	2.346	.757	im1 o
1.774	6.391	1.573	17.834	.4250	2.353	.754	im1 o
1.776	6.480	1.607	18.494	.4234	2.362	.752	im1 o
1.775	6.464	1.608	18.450	.4232	2.363	.751	im1 o
1.778	6.505	1.719	19.882	.4138	2.417	.736	im1 o
1.770	6.708	1.749	20.766	.4177	2.394	.739	im1 o
1.798	7.050	1.990	25.225	.3992	2.505	.718	sf2 ⊠
1.770	7.002	2.034	25.208	.4009	2.495	.710	im1 o
1.780	7.038	2.039	25.544	.3990	2.506	.710	im1 o
1.770	7.144	2.045	25.859	.4032	2.480	.714	im1 o
1.770	7.095	2.074	26.046	.3998	2.501	.708	im1 o
1.780	7.118	2.123	26.898	.3942	2.537	.702	im1 o
1.777	7.324	2.265	29.478	.3887	2.573	.691	im1 o
1.777	7.425	2.392	31.561	.3815	2.622	.678	im1 o
1.776	7.431	2.416	31.885	.3800	2.632	.675	im1 o
1.770	7.444	2.417	31.846	.3815	2.621	.675	im1 o
1.778	7.615	2.528	34.228	.3757	2.662	.668	im1 o
1.770	7.657	2.534	34.343	.3780	2.645	.669	im1 o
1.780	7.705	2.599	35.645	.3723	2.686	.663	im1 o
1.776	7.668	2.632	35.844	.3698	2.704	.657	im1 o
1.776	7.892	2.798	39.217	.3634	2.752	.645	im1 o
1.776	7.947	2.832	39.970	.3624	2.759	.644	im1 o
1.776	7.933	2.833	39.914	.3620	2.763	.643	im1 o
1.777	7.978	2.854	40.461	.3614	2.767	.642	im1 o
1.777	8.081	2.927	42.032	.3589	2.786	.638	im1 o
1.777	8.078	2.942	42.231	.3578	2.795	.636	im1 o
1.780	8.232	3.018	44.223	.3558	2.810	.633	im1 o

(Continued)

MAGNESIUM , AZ31B
(Continued)

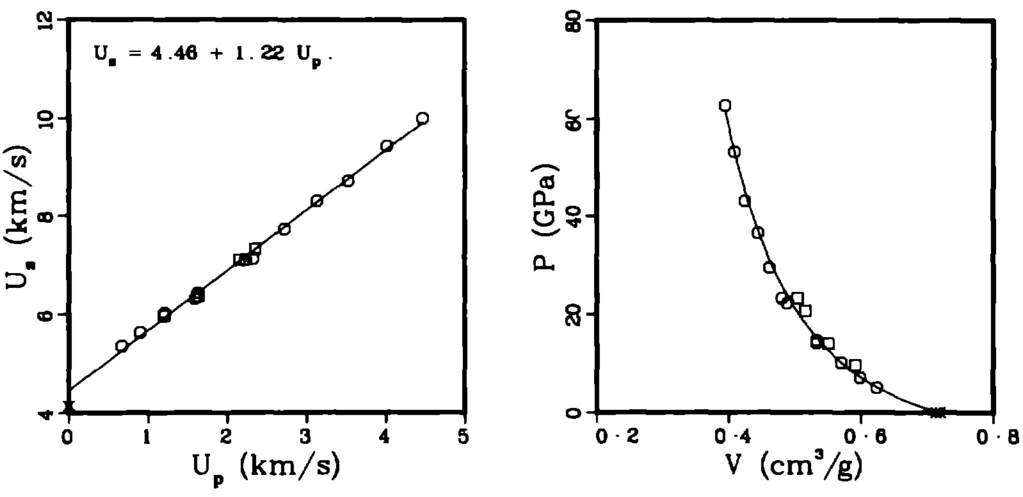
ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.778	8.259	3.111	45.683	.3506	2.852	.623	im1 o
1.777	8.378	3.171	47.209	.3498	2.859	.622	im1 o
1.780	8.540	3.292	50.042	.3452	2.897	.615	im1 o
1.780	8.720	3.359	52.137	.3454	2.895	.615	im1 o
1.775	8.834	3.487	54.677	.3410	2.933	.605	im1 o
1.777	8.883	3.542	55.911	.3384	2.955	.601	im1 o
1.778	8.951	3.604	57.357	.3360	2.976	.597	im1 o
1.780	9.126	3.707	60.218	.3336	2.998	.594	im1 o
1.777	9.217	3.805	62.321	.3304	3.026	.587	im1 o
1.770	9.244	3.853	63.042	.3295	3.035	.583	im1 o
1.770	9.292	3.873	63.699	.3295	3.035	.583	im1 o
1.775	9.317	3.908	64.629	.3271	3.057	.581	im1 o
1.777	9.389	3.908	65.202	.3285	3.044	.584	im1 o
1.775	9.494	3.945	66.481	.3293	3.037	.584	im1 o
1.780	9.633	4.048	69.410	.3257	3.070	.580	im1 o
1.776	9.660	4.050	69.482	.3270	3.058	.581	im1 o
1.775	9.599	4.062	69.209	.3250	3.077	.577	im1 o
1.775	9.699	4.158	71.583	.3219	3.107	.571	im1 o
1.775	9.668	4.166	71.491	.3206	3.119	.569	im1 o
1.776	9.760	4.180	72.455	.3219	3.106	.572	im1 o
1.776	9.840	4.206	73.503	.3224	3.102	.573	im1 o
1.777	9.924	4.215	74.331	.3237	3.089	.575	im1 o
1.777	10.023	4.263	75.928	.3234	3.092	.575	im1 o
1.775	9.945	4.307	76.029	.3194	3.131	.567	im1 o
1.799	11.166	5.820	116.910	.2661	3.758	.479	im2 □
1.799	11.600	6.304	131.554	.2538	3.940	.457	sf2 ⊗

MAGNESIUM-14 wt% Li-1 wt% Al

Average ρ_0 = 1.391 g/cm^3.

Sound velocities longitudinal 6.35 km/s.
shear 4.17 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.403	4.140	0.000	0.000	.7128	1.403	1.000	ssp	×
1.403	5.358	.668	5.022	.6239	1.603	.875	im1	o
1.403	5.632	.899	7.104	.5990	1.669	.840	im1	o
1.350	5.962	1.205	9.699	.5910	1.692	.798	im2	□
1.403	6.021	1.208	10.205	.5698	1.755	.799	im1	o
1.403	6.317	1.595	14.136	.5328	1.877	.748	im1	o
1.403	6.432	1.624	14.655	.5328	1.877	.748	im1	o
1.350	6.360	1.631	14.004	.5508	1.816	.744	im2	□
1.350	7.107	2.153	20.657	.5163	1.937	.697	im2	□
1.403	7.108	2.233	22.269	.4888	2.046	.686	im1	o
1.403	7.131	2.328	23.291	.4801	2.083	.674	im1	o
1.350	7.329	2.348	23.231	.5034	1.986	.680	im2	□
1.403	7.731	2.720	29.503	.4620	2.165	.648	im1	o
1.403	8.309	3.135	36.546	.4438	2.253	.623	im1	o
1.403	8.721	3.525	43.130	.4247	2.355	.596	im1	o
1.403	9.427	4.019	53.156	.4089	2.446	.574	im1	o
1.403	10.005	4.467	62.703	.3945	2.535	.554	im1	o



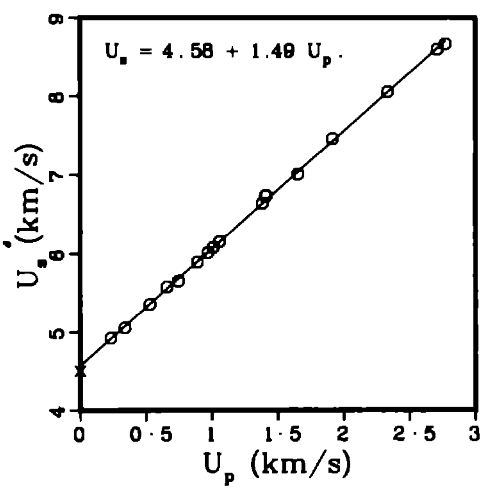
STEEL, 304

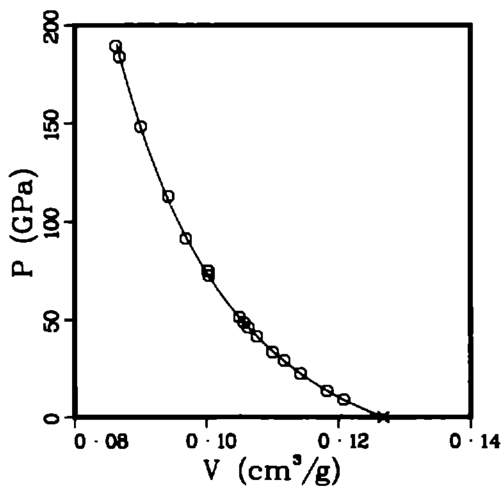
Average ρ_0 = 7.890 g/cm^3.

Sound velocities longitudinal 5.77 km/s.
shear 3.12 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
7.890	4.507	0.000	0.000	.1267	7.890	1.000	ssp	×
7.890	4.925	.232	9.015	.1208	8.280	.953	iml	o
7.890	5.056	.339	13.523	.1182	8.457	.933	iml	o
7.890	5.355	.529	22.351	.1142	8.755	.901	iml	o
7.890	5.577	.659	28.998	.1118	8.947	.882	iml	o
7.890	5.651	.745	33.217	.1100	9.088	.868	iml	o
7.890	5.891	.889	41.321	.1076	9.292	.849	iml	o
7.890	6.011	.969	45.957	.1063	9.406	.839	iml	o
7.890	6.080	1.010	48.451	.1057	9.462	.834	iml	o
7.890	6.152	1.057	51.306	.1050	9.527	.828	iml	o
7.890	6.639	1.383	72.444	.1003	9.966	.792	iml	o
7.890	6.732	1.409	74.840	.1002	9.978	.791	iml	o
7.890	6.734	1.409	74.862	.1002	9.978	.791	iml	o
7.890	7.007	1.653	91.386	.0968	10.326	.764	iml	o
7.890	7.460	1.915	112.716	.0942	10.615	.743	iml	o
7.890	8.054	2.334	148.317	.0900	11.109	.710	iml	o
7.890	8.600	2.711	183.952	.0868	11.522	.685	iml	o
7.890	8.667	2.772	189.557	.0862	11.600	.680	iml	o

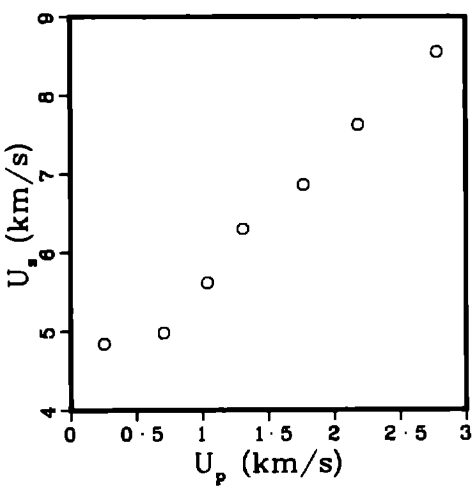


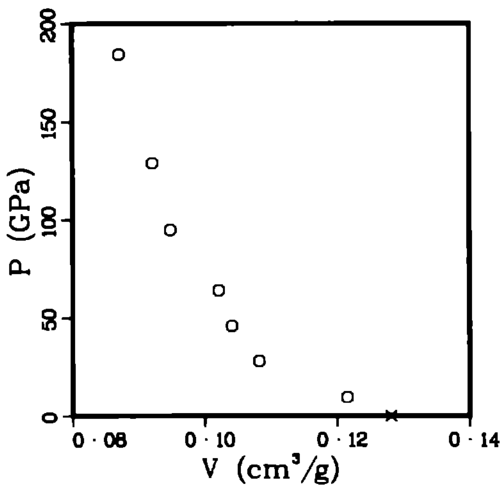


STEEL, 304, ferritic phase

Average ρ_0 = 7.805 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.798	4.842	.254	9.591	.1215	8.230	.948	iml o
7.929	4.978	.706	27.866	.1082	9.239	.858	iml o
7.828	5.616	1.039	45.677	.1041	9.605	.815	iml o
7.757	6.300	1.309	63.970	.1021	9.791	.792	iml o
7.827	6.862	1.769	95.011	.0948	10.546	.742	iml o
7.748	7.629	2.184	129.095	.0921	10.856	.714	iml o
7.750	8.555	2.782	184.450	.0871	11.485	.675	iml o





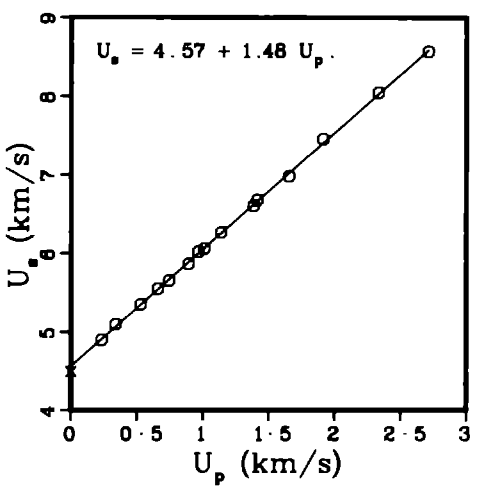
STEEL, 304L

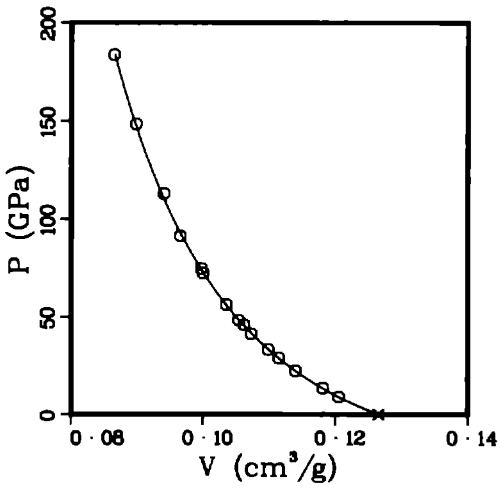
Average ρ_0 = 7.903 g/cm^3.

Sound velocities longitudinal 5.79 km/s.
shear 3.16 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.903	4.496	0.000	0.000	.1265	7.903	1.000	ssp ×
7.903	4.900	.232	8.984	.1205	8.296	.953	im1 o
7.903	5.099	.338	13.621	.1181	8.464	.934	im1 o
7.903	5.352	.529	22.375	.1140	8.770	.901	im1 o
7.903	5.551	.660	28.954	.1115	8.969	.881	im1 o
7.903	5.654	.744	33.245	.1099	9.101	.868	im1 o
7.903	5.865	.891	41.299	.1073	9.319	.848	im1 o
7.903	6.018	.967	45.991	.1062	9.416	.839	im1 o
7.903	6.057	1.011	48.395	.1054	9.486	.833	im1 o
7.903	6.263	1.139	56.377	.1035	9.660	.818	im1 o
7.903	6.605	1.385	72.296	.1000	10.000	.790	im1 o
7.903	6.678	1.413	74.573	.0998	10.024	.788	im1 o
7.903	6.979	1.654	91.226	.0965	10.358	.763	im1 o
7.903	7.458	1.914	112.812	.0941	10.631	.743	im1 o
7.903	8.048	2.334	148.450	.0898	11.131	.710	im1 o
7.903	8.572	2.713	183.791	.0865	11.562	.684	im1 o





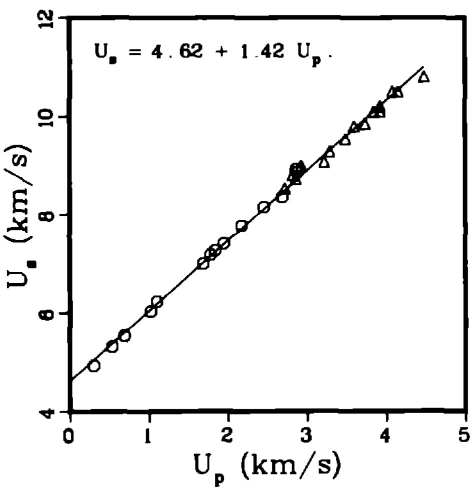
STEEL, 347

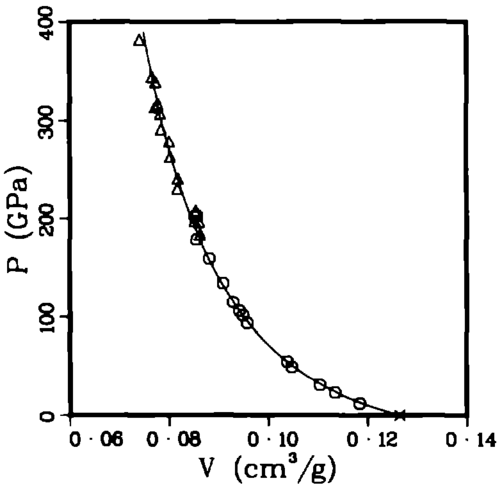
Average ρ_0 = 7.910 g/cm^3.

Reference 31

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
7.925	4.935	.304	11.889	.1184	8.445	.938	im1	o
7.925	5.320	.537	22.640	.1134	8.815	.899	im1	o
7.925	5.540	.692	30.382	.1104	9.056	.875	im1	o
7.925	6.030	1.022	48.839	.1048	9.542	.831	im1	o
7.926	6.231	1.101	54.375	.1039	9.627	.823	im1	o
7.925	6.999	1.689	93.684	.0957	10.446	.759	im1	o
7.923	7.180	1.781	101.316	.0949	10.537	.752	im1	o
7.928	7.268	1.841	106.080	.0942	10.617	.747	im1	o
7.925	7.409	1.950	114.497	.0930	10.756	.737	im1	o
7.925	7.770	2.170	133.623	.0909	10.996	.721	im1	o
7.925	8.157	2.456	158.766	.0882	11.339	.699	im1	o
7.926	8.361	2.689	178.198	.0856	11.684	.678	im1	o
7.894	8.530	2.720	183.153	.0863	11.590	.681	im3	Δ
7.894	8.800	2.820	195.898	.0861	11.617	.680	im3	Δ
7.890	8.720	2.860	196.770	.0852	11.741	.672	im3	Δ
7.926	8.922	2.863	202.459	.0857	11.671	.679	im1	o
7.926	8.860	2.879	202.176	.0852	11.741	.675	im1	o
7.892	8.990	2.930	207.881	.0854	11.708	.674	im3	Δ
7.891	9.070	3.220	230.460	.0817	12.234	.645	im3	Δ
7.887	9.280	3.290	240.800	.0818	12.219	.645	im3	Δ
7.896	9.540	3.490	262.894	.0803	12.451	.634	im3	Δ

(Continued)





STEEL, 347
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.895	9.800	3.600	278.536	.0801	12.479	.633	im3 △
7.903	9.850	3.740	291.139	.0785	12.741	.620	im3 △
7.895	10.100	3.850	306.997	.0784	12.758	.619	im3 △
7.894	10.200	3.930	316.439	.0779	12.842	.615	im3 △
7.898	10.100	3.930	313.495	.0773	12.929	.611	im3 △
7.907	10.500	4.080	338.736	.0773	12.932	.611	im3 △
7.895	10.500	4.150	344.025	.0766	13.055	.605	im3 △
7.898	10.800	4.480	382.137	.0741	13.497	.585	im3 △

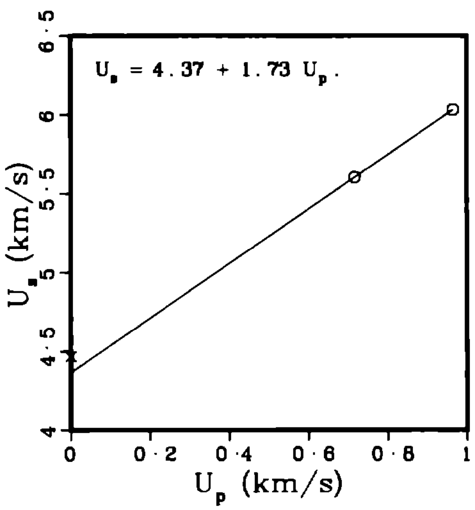
STEEL, 348

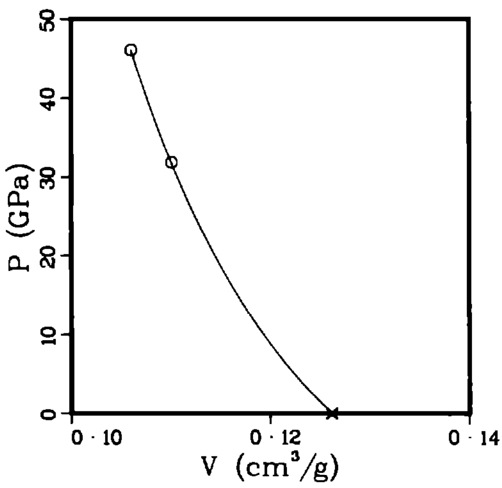
Average ρ_0 = 7.923 g/cm^3.

Sound velocities longitudinal 5.74 km/s.
shear 3.12 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.928	4.469	0.000	0.000	.1261	7.928	1.000	ssp ×
7.920	5.605	.717	31.829	.1101	9.082	.872	im1 o
7.920	6.033	.965	46.109	.1061	9.428	.840	im1 o

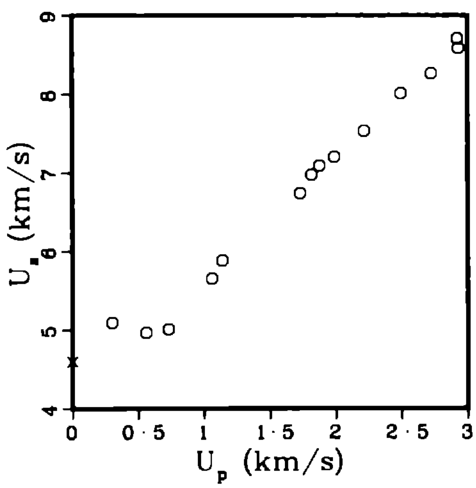


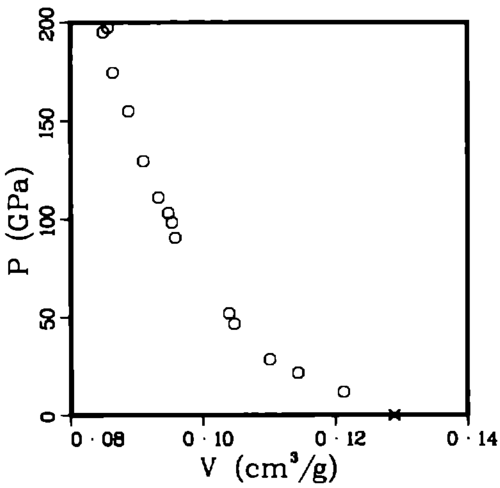


STEEL, maraging, Almar

Average ρ_0 = 7.758 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.758	4.600	0.000	0.000	.1289	7.758	1.000	ssp ×
7.758	5.094	.302	11.935	.1213	8.247	.941	im1 o
7.758	4.966	.560	21.575	.1144	8.744	.887	im1 o
7.758	5.009	.730	28.368	.1101	9.082	.854	im1 o
7.758	5.655	1.060	46.504	.1047	9.548	.813	im1 o
7.758	5.883	1.139	51.984	.1039	9.621	.806	im1 o
7.758	6.740	1.730	90.460	.0958	10.437	.743	im1 o
7.758	6.976	1.817	98.336	.0953	10.490	.740	im1 o
7.758	7.088	1.876	103.159	.0948	10.550	.735	im1 o
7.758	7.201	1.989	111.116	.0933	10.719	.724	im1 o
7.758	7.537	2.215	129.516	.0910	10.987	.706	im1 o
7.758	8.011	2.494	155.000	.0888	11.265	.689	im1 o
7.758	8.264	2.724	174.641	.0864	11.573	.670	im1 o
7.758	8.709	2.922	197.423	.0857	11.675	.664	im1 o
7.758	8.589	2.929	195.169	.0849	11.773	.659	im1 o

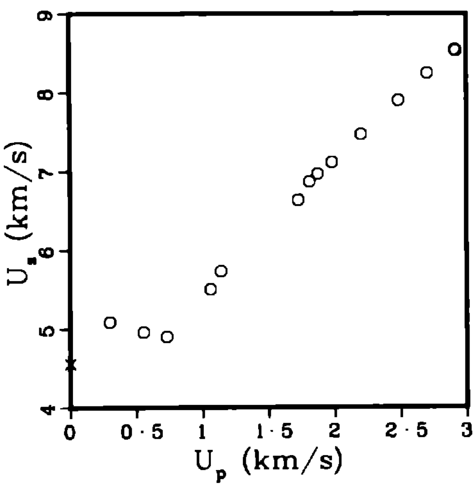


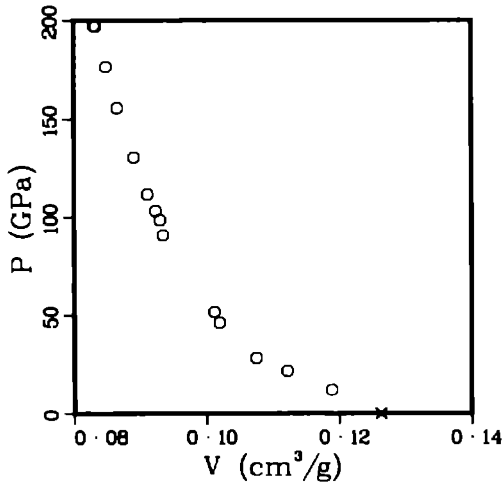


STEEL, maraging, HP 9-4-20

Average ρ_0 = 7.918 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.918	4.560	0.000	0.000	.1263	7.918	1.000	ssp ×
7.918	5.088	.299	12.046	.1189	8.412	.941	iml o
7.918	4.959	.555	21.792	.1122	8.916	.888	iml o
7.918	4.902	.730	28.334	.1075	9.303	.851	iml o
7.918	5.507	1.062	46.308	.1019	9.810	.807	iml o
7.918	5.736	1.141	51.822	.1012	9.884	.801	iml o
7.918	6.639	1.727	90.784	.0934	10.702	.740	iml o
7.918	6.872	1.813	98.650	.0930	10.756	.736	iml o
7.918	6.967	1.874	103.379	.0923	10.831	.731	iml o
7.918	7.116	1.983	111.731	.0911	10.977	.721	iml o
7.918	7.475	2.204	130.448	.0891	11.229	.705	iml o
7.918	7.903	2.487	155.626	.0866	11.554	.685	iml o
7.918	8.247	2.705	176.636	.0849	11.783	.672	iml o
7.918	8.550	2.911	197.071	.0833	12.005	.660	iml o
7.918	8.537	2.921	197.448	.0831	12.036	.658	iml o

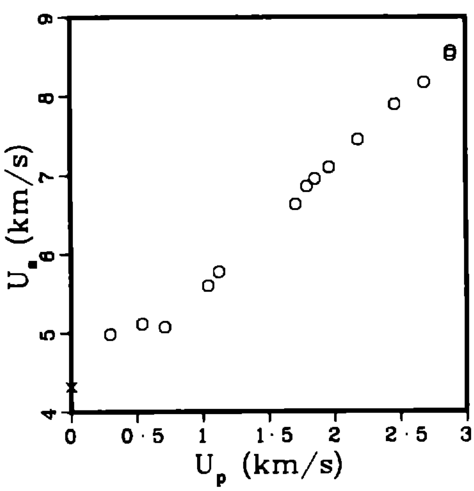


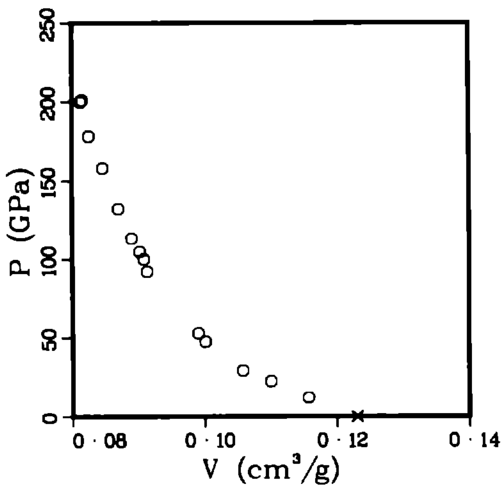


STEEL, maraging, Vascomax 250

Average ρ_0 = 8.129 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
8.129	4.320	0.000	0.000	.1230	8.129	1.000	ssp ×
8.129	4.983	.298	12.071	.1157	8.646	.940	im1 ○
8.129	5.112	.541	22.481	.1100	9.091	.894	im1 ○
8.129	5.071	.712	29.350	.1057	9.457	.860	im1 ○
8.129	5.600	1.043	47.480	.1001	9.990	.814	im1 ○
8.129	5.776	1.125	52.822	.0991	10.095	.805	im1 ○
8.129	6.636	1.709	92.190	.0913	10.949	.742	im1 ○
8.129	6.862	1.795	100.127	.0908	11.009	.738	im1 ○
8.129	6.956	1.855	104.892	.0902	11.085	.733	im1 ○
8.129	7.102	1.964	113.386	.0890	11.236	.723	im1 ○
8.129	7.457	2.183	132.329	.0870	11.494	.707	im1 ○
8.129	7.896	2.463	158.092	.0846	11.814	.688	im1 ○
8.129	8.171	2.687	178.476	.0826	12.112	.671	im1 ○
8.129	8.518	2.886	199.835	.0813	12.295	.661	im1 ○
8.129	8.567	2.888	201.124	.0815	12.263	.663	im1 ○

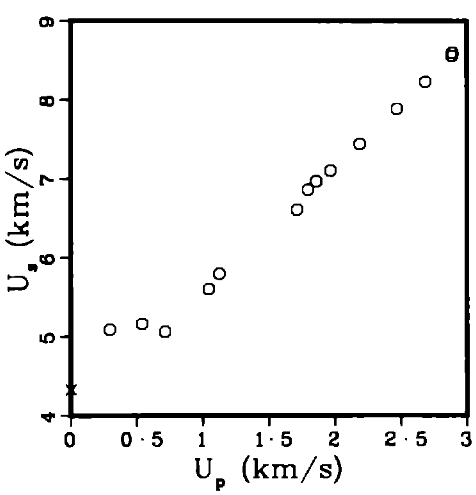


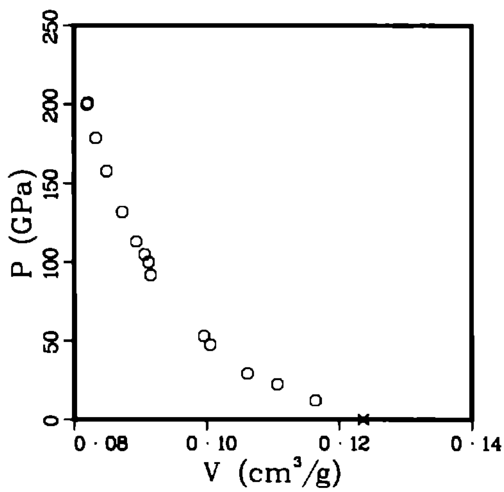


STEEL, maraging, Vascomax 300

Average ρ_0 = 8.091 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
8.091	4.330	0.000	0.000	.1236	8.091	1.000	ssp	×
8.091	5.088	.296	12.185	.1164	8.591	.942	im1	o
8.091	5.162	.540	22.554	.1107	9.036	.895	im1	o
8.091	5.060	.714	29.231	.1062	9.420	.859	im1	o
8.091	5.603	1.045	47.374	.1005	9.946	.813	im1	o
8.091	5.796	1.126	52.804	.0996	10.042	.806	im1	o
8.091	6.611	1.714	91.681	.0916	10.923	.741	im1	o
8.091	6.863	1.798	99.840	.0912	10.963	.738	im1	o
8.091	6.966	1.858	104.720	.0906	11.034	.733	im1	o
8.091	7.102	1.967	113.028	.0894	11.190	.723	im1	o
8.091	7.445	2.189	131.860	.0873	11.461	.706	im1	o
8.091	7.885	2.469	157.516	.0849	11.779	.687	im1	o
8.091	8.227	2.685	178.726	.0833	12.011	.674	im1	o
8.091	8.558	2.886	199.835	.0819	12.208	.663	im1	o
8.091	8.597	2.889	200.954	.0821	12.186	.664	im1	o





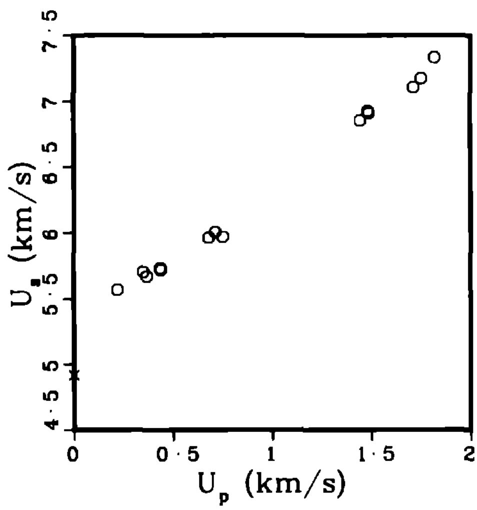
TUNGSTEN CARBIDE-5 wt% Co

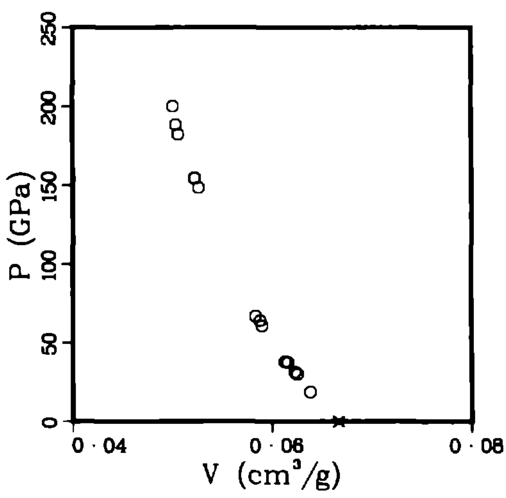
Average ρ_0 = 15.013 g/cm^3.

Sound velocities longitudinal 6.89 km/s.
shear 4.18 km/s.

References 13, 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
15.000	4.917	0.000	0.000	.0667	15.000	1.000	ssp ×
15.050	5.569	.220	18.439	.0638	15.669	.960	im1 o
15.010	5.706	.351	30.062	.0625	15.994	.938	im1 o
15.010	5.671	.369	31.410	.0623	16.055	.935	im1 o
15.000	5.734	.437	37.586	.0616	16.237	.924	im1 o
15.060	5.720	.440	37.903	.0613	16.315	.923	im1 o
15.020	5.965	.679	60.835	.0590	16.949	.886	im1 o
14.990	6.008	.712	64.123	.0588	17.005	.881	im1 o
14.990	5.971	.750	67.129	.0583	17.143	.874	im1 o
14.990	6.857	1.445	148.526	.0527	18.992	.789	im1 o
15.030	6.927	1.484	154.503	.0523	19.128	.786	im1 o
15.020	6.912	1.489	154.585	.0522	19.144	.785	im1 o
15.000	7.108	1.712	182.533	.0506	19.759	.759	im1 o
15.010	7.175	1.751	188.577	.0504	19.856	.756	im1 o
15.010	7.334	1.819	200.242	.0501	19.961	.752	im1 o

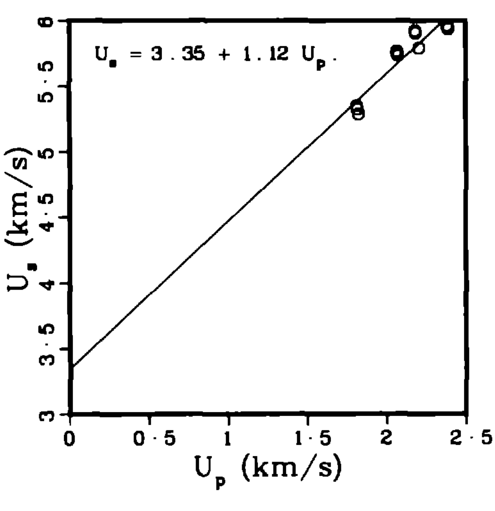


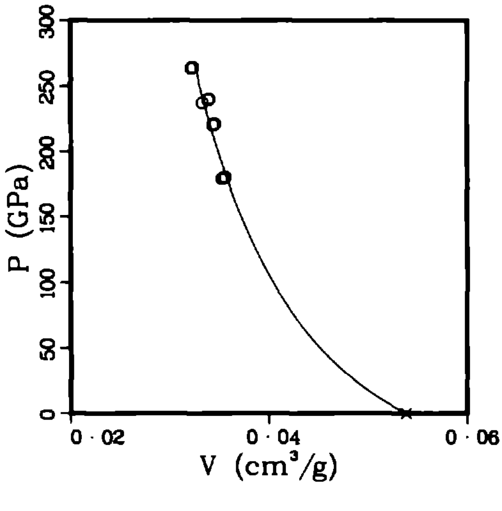


URANIUM-2.0 wt% Mo

Average ρ_0 = 18.580 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
18.580	5.353	1.813	180.319	.0356	28.096	.661	im1	o
18.580	5.328	1.818	179.972	.0355	28.203	.659	im1	o
18.580	5.290	1.824	179.278	.0353	28.358	.655	im1	o
18.580	5.769	2.065	221.343	.0346	28.938	.642	im1	o
18.580	5.746	2.069	220.888	.0344	29.035	.640	im1	o
18.580	5.735	2.071	220.678	.0344	29.082	.639	im1	o
18.580	5.924	2.181	240.058	.0340	29.406	.632	im1	o
18.580	5.908	2.184	239.739	.0339	29.477	.630	im1	o
18.580	5.793	2.205	237.333	.0333	29.998	.619	im1	o
18.580	5.962	2.384	264.085	.0323	30.960	.600	im1	o
18.580	5.959	2.385	264.063	.0323	30.979	.600	im1	o
18.580	5.939	2.389	263.618	.0322	31.084	.598	im1	o





URANIUM-3.0 wt% Mo

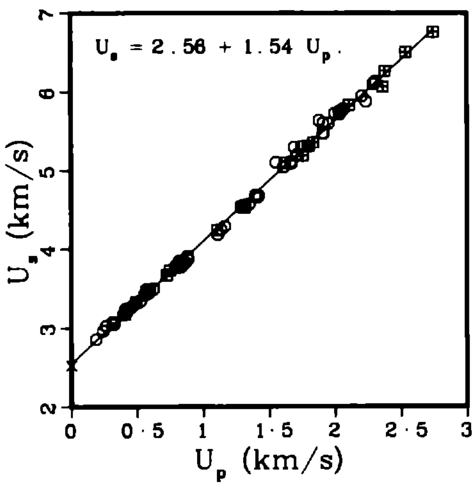
Average ρ_0 = 18.447 g/cm^3.

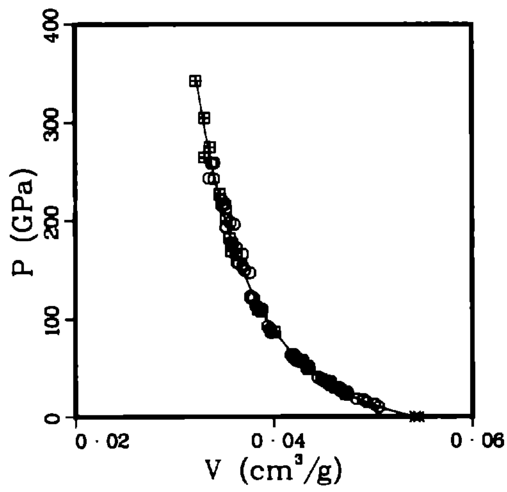
Sound velocities longitudinal 3.31 km/s.
shear 1.85 km/s.

References 13, 17, 18

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
18.330	2.528	0.000	0.000	.0546	18.330	1.000	ssp ×
18.480	2.858	.188	9.929	.0506	19.781	.934	im1 ○
18.320	2.962	.240	13.023	.0502	19.935	.919	im1 ○
18.480	3.029	.265	14.834	.0494	20.252	.913	im1 ○
18.330	3.075	.314	17.699	.0490	20.415	.898	im1 ○
18.480	3.049	.324	18.256	.0484	20.677	.894	im1 ○
18.480	3.168	.394	23.067	.0474	21.105	.876	im1 ○
18.450	3.174	.406	23.775	.0473	21.156	.872	sp1 ⊞
18.480	3.246	.412	24.714	.0472	21.167	.873	im1 ○
18.480	3.226	.414	24.681	.0472	21.201	.872	im1 ○
18.480	3.197	.416	24.578	.0471	21.244	.870	im1 ○
18.330	3.236	.426	25.269	.0474	21.109	.868	im1 ○
18.450	3.262	.453	27.263	.0467	21.425	.861	im1 ○
18.330	3.295	.473	28.568	.0467	21.402	.856	im1 ○
18.450	3.334	.491	30.203	.0462	21.636	.853	sp1 ⊞
18.480	3.348	.526	32.544	.0456	21.925	.843	im1 ○
18.450	3.425	.555	35.071	.0454	22.018	.838	im1 ○
18.330	3.490	.567	36.272	.0457	21.886	.838	im1 ○
18.450	3.441	.579	36.759	.0451	22.183	.832	im1 ○

(Continued)





URANIUM-3.0 wt% Mo
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
18.480	3.492	.591	38.139	.0450	22.245	.831	im1	o
18.480	3.463	.595	38.078	.0448	22.314	.828	im1	o
18.480	3.497	.624	40.326	.0445	22.494	.822	im1	o
18.450	3.670	.723	48.955	.0435	22.976	.803	sp1	⊞
18.450	3.732	.749	51.573	.0433	23.083	.799	sp1	⊞
18.490	3.795	.797	55.925	.0427	23.405	.790	im1	o
18.450	3.804	.816	57.270	.0426	23.489	.785	im1	o
18.330	3.849	.820	57.853	.0429	23.292	.787	im1	o
18.480	3.798	.821	57.624	.0424	23.576	.784	im1	o
18.450	3.770	.823	57.245	.0424	23.602	.782	im1	o
18.480	3.846	.835	59.347	.0424	23.605	.783	im1	o
18.450	3.783	.838	58.489	.0422	23.700	.778	im1	o
18.480	3.820	.844	59.581	.0422	23.721	.779	im1	o
18.480	3.828	.863	61.050	.0419	23.859	.775	im1	o
18.450	3.907	.881	63.506	.0420	23.822	.775	im1	o
18.480	3.869	.884	63.205	.0417	23.953	.772	im1	o
18.450	4.241	1.107	86.619	.0401	24.967	.739	sp1	⊞
18.480	4.182	1.113	86.016	.0397	25.182	.734	im1	o
18.480	4.246	1.137	89.216	.0396	25.238	.732	im1	o
18.480	4.288	1.166	92.396	.0394	25.382	.728	im1	o
18.450	4.537	1.292	108.150	.0388	25.796	.715	sp1	⊞
18.480	4.548	1.300	109.261	.0386	25.877	.714	im1	o
18.330	4.560	1.313	109.747	.0388	25.742	.712	im1	o
18.450	4.529	1.317	110.049	.0384	26.015	.709	sp1	⊞
18.450	4.572	1.351	113.961	.0382	26.189	.705	im1	o
18.480	4.685	1.398	121.037	.0380	26.340	.702	im1	o
18.480	4.656	1.412	121.493	.0377	26.524	.697	im1	o
18.480	4.679	1.421	122.871	.0377	26.540	.696	im1	o
18.480	5.102	1.555	146.613	.0376	26.582	.695	im1	o
18.330	5.045	1.614	149.254	.0371	26.953	.680	im1	o
18.480	5.096	1.623	152.845	.0369	27.116	.682	im1	o
18.480	5.105	1.666	157.171	.0365	27.433	.674	im1	o
18.480	5.087	1.672	157.181	.0363	27.528	.671	im1	o
18.450	5.300	1.692	165.452	.0369	27.102	.681	im1	o
18.480	5.196	1.715	164.678	.0363	27.585	.670	im1	o
18.480	5.309	1.749	171.595	.0363	27.559	.671	im1	o
18.480	5.187	1.757	168.419	.0358	27.946	.661	sp1	⊞
18.450	5.309	1.801	176.410	.0358	27.922	.661	im1	o
18.450	5.310	1.802	176.541	.0358	27.927	.661	sp1	⊞
18.450	5.358	1.838	181.696	.0356	28.084	.657	sp1	⊞
18.480	5.640	1.881	196.051	.0361	27.727	.666	im1	o
18.480	5.478	1.911	193.457	.0352	28.381	.651	im1	o
18.480	5.604	1.912	198.010	.0357	28.050	.659	im1	o

(Continued)

URANIUM-3.0 wt% Mo
(Continued)

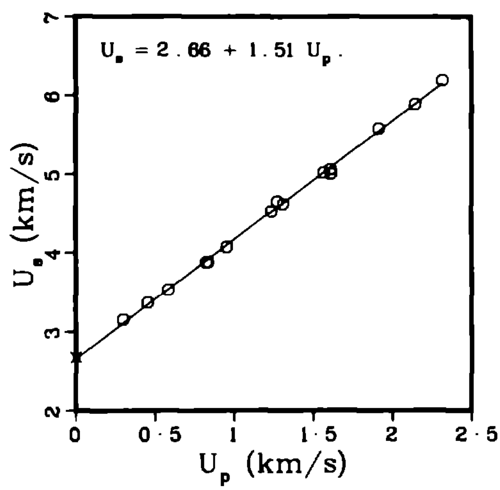
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
18.450	5.473	1.915	193.371	.0352	28.380	.650	im1 ○
18.480	5.603	1.953	202.220	.0353	28.368	.651	im1 ○
18.480	5.729	2.001	211.850	.0352	28.399	.651	im1 ○
18.480	5.753	2.036	216.458	.0350	28.602	.646	im1 ○
18.480	5.718	2.037	215.247	.0348	28.707	.644	im1 ○
18.320	5.767	2.053	216.902	.0352	28.447	.644	im1 ○
18.480	5.783	2.067	220.900	.0348	28.759	.643	im1 ○
18.450	5.833	2.109	226.968	.0346	28.899	.638	sp1 ⊞
18.480	5.946	2.206	242.400	.0340	29.380	.629	im1 ○
18.480	5.878	2.238	243.104	.0335	29.842	.619	im1 ○
18.480	6.099	2.292	258.330	.0338	29.606	.624	im1 ○
18.320	6.122	2.306	258.630	.0340	29.391	.623	im1 ○
18.320	6.131	2.308	259.234	.0340	29.380	.624	im1 ○
18.450	6.064	2.365	264.598	.0331	30.246	.610	sp1 ⊞
18.450	6.267	2.381	275.306	.0336	29.755	.620	sp1 ⊞
18.450	6.510	2.538	304.838	.0331	30.239	.610	sp1 ⊞
18.450	6.762	2.747	342.713	.0322	31.073	.594	sp1 ⊞

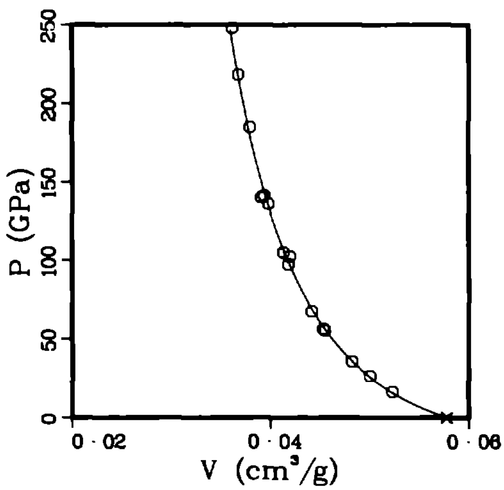
URANIUM-8.3 wt% Mo

Average ρ_0 = 17.312 g/cm^3.

Sound velocities longitudinal 3.08 km/s.
shear 1.32 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
17.320	2.676	0.000	0.000	.0577	17.320	1.000	ssp ×
17.300	3.157	.300	16.385	.0523	19.117	.905	iml o
17.290	3.370	.456	26.570	.0500	19.996	.865	iml o
17.320	3.530	.582	35.583	.0482	20.739	.835	iml o
17.300	3.877	.825	55.334	.0455	21.976	.787	iml o
17.300	3.883	.836	56.159	.0454	22.047	.785	iml o
17.320	4.072	.954	67.283	.0442	22.619	.766	iml o
17.370	4.524	1.238	97.284	.0418	23.914	.726	iml o
17.320	4.653	1.271	102.430	.0420	23.829	.727	iml o
17.330	4.618	1.310	104.839	.0413	24.193	.716	iml o
17.290	5.020	1.567	136.009	.0398	25.136	.688	iml o
17.310	5.061	1.611	141.133	.0394	25.393	.682	iml o
17.350	5.007	1.612	140.037	.0391	25.588	.678	iml o
17.290	5.581	1.916	184.885	.0380	26.329	.657	iml o
17.290	5.889	2.144	218.304	.0368	27.188	.636	iml o
17.290	6.191	2.317	248.017	.0362	27.631	.626	iml o

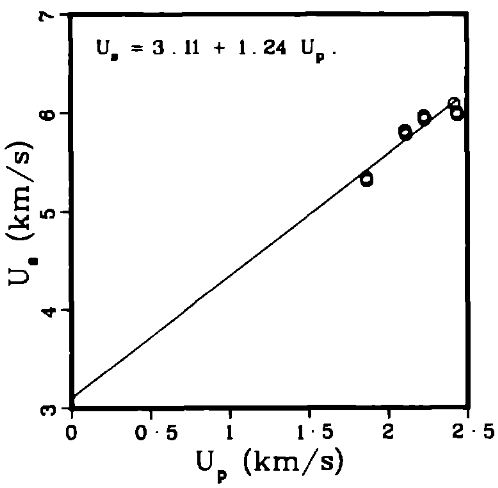


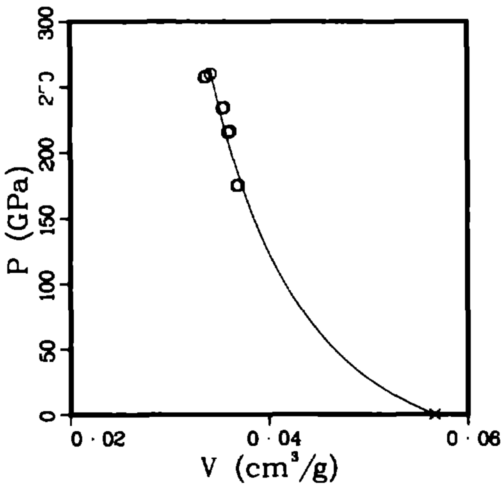


URANIUM-4.7 wt% Nb

Average ρ_0 = 17.650 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
17.650	5.340	1.862	175.495	.0369	27.099	.651	iml	o
17.650	5.334	1.863	175.392	.0369	27.123	.651	iml	o
17.650	5.311	1.867	175.011	.0367	27.218	.648	iml	o
17.650	5.818	2.108	216.466	.0361	27.679	.638	iml	o
17.650	5.814	2.109	216.419	.0361	27.697	.637	iml	o
17.650	5.793	2.112	215.945	.0360	27.777	.635	iml	o
17.650	5.775	2.116	215.681	.0359	27.857	.634	iml	o
17.650	5.970	2.227	234.660	.0355	28.151	.627	iml	o
17.650	5.948	2.231	234.215	.0354	28.244	.625	iml	o
17.650	5.934	2.234	233.978	.0353	28.307	.624	iml	o
17.650	6.088	2.419	259.929	.0341	29.287	.603	iml	o
17.650	6.006	2.434	258.018	.0337	29.677	.595	iml	o
17.650	5.976	2.440	257.362	.0335	29.829	.592	iml	o



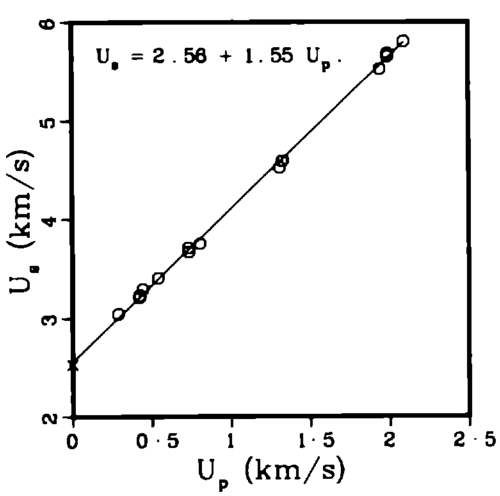


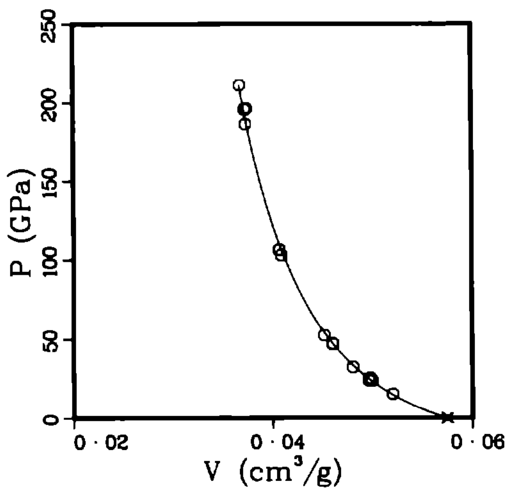
URANIUM-6.0 wt% Nb

Average ρ_0 = 17.411 g/cm^3.

Sound velocities longitudinal 2.90 km/s.
shear 1.23 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
17.390	2.528	0.000	0.000	.0575	17.390	1.000	ssp ×
17.400	3.045	.289	15.312	.0520	19.225	.905	im1 o
17.390	3.230	.424	23.816	.0500	20.018	.869	im1 o
17.490	3.214	.424	23.834	.0496	20.148	.868	im1 o
17.390	3.290	.443	25.345	.0498	20.096	.865	im1 o
17.500	3.404	.542	32.287	.0480	20.814	.841	im1 o
17.450	3.706	.731	47.274	.0460	21.738	.803	im1 o
17.360	3.666	.736	46.840	.0460	21.721	.799	im1 o
17.380	3.751	.806	52.545	.0452	22.137	.785	im1 o
17.370	4.521	1.311	102.953	.0409	24.464	.710	im1 o
17.470	4.593	1.327	106.478	.0407	24.568	.711	im1 o
17.470	4.588	1.328	106.442	.0407	24.587	.711	im1 o
17.370	5.528	1.942	186.473	.0373	26.777	.649	im1 o
17.410	5.665	1.989	196.170	.0373	26.830	.649	im1 o
17.380	5.684	1.989	196.489	.0374	26.736	.650	im1 o
17.390	5.669	1.990	196.182	.0373	26.796	.649	im1 o
17.390	5.656	1.991	195.830	.0373	26.837	.648	im1 o
17.400	5.806	2.093	211.444	.0368	27.208	.640	im1 o





URANIUM-1.0 wt% Rh

Average ρ_0 = 18.825 g/cm^3.

Sound velocities	longitudinal	3.45 km/s.
	shear	2.07 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
18.830	2.488	0.000	0.000	.0531	18.830	1.000	ssp	×
18.820	3.372	.571	36.236	.0441	22.657	.831	iml	o
18.830	3.733	.805	56.585	.0417	24.007	.784	iml	o
18.800	4.399	1.191	98.497	.0388	25.780	.729	iml	o
18.810	4.324	1.200	97.601	.0384	26.035	.722	iml	o
18.810	4.387	1.256	103.644	.0379	26.356	.714	iml	o
18.830	5.162	1.710	166.213	.0355	28.158	.669	iml	o
18.810	5.170	1.710	166.294	.0356	28.106	.669	iml	o
18.840	5.132	1.714	165.721	.0354	28.288	.666	iml	o
18.830	5.141	1.720	166.505	.0353	28.297	.665	iml	o
18.820	5.126	1.722	166.124	.0353	28.341	.664	iml	o
18.810	5.456	1.906	195.608	.0346	28.909	.651	iml	o
18.820	5.422	1.910	194.900	.0344	29.055	.648	iml	o
18.830	5.421	1.919	195.887	.0343	29.148	.646	iml	o
18.820	5.424	1.919	195.891	.0343	29.124	.646	iml	o
18.830	5.388	1.923	195.100	.0342	29.280	.643	iml	o
18.840	5.566	1.982	207.839	.0342	29.259	.644	iml	o
18.820	5.547	1.986	207.328	.0341	29.316	.642	iml	o
18.810	5.514	1.991	206.503	.0340	29.440	.639	iml	o
18.850	5.986	2.261	255.122	.0330	30.292	.622	iml	o

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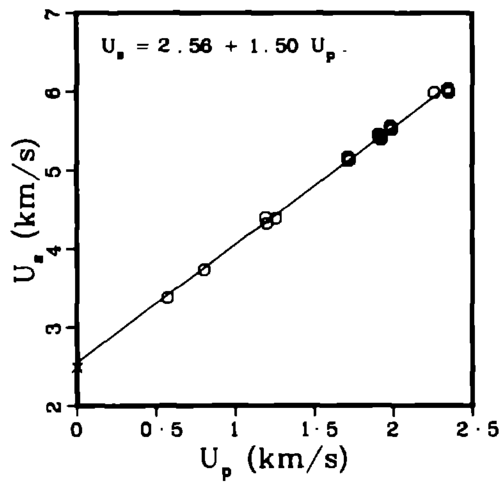
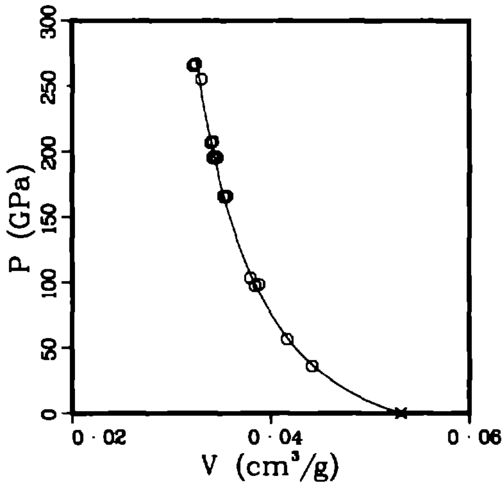




URANIUM-1.0 wt% Rh
(Continued)

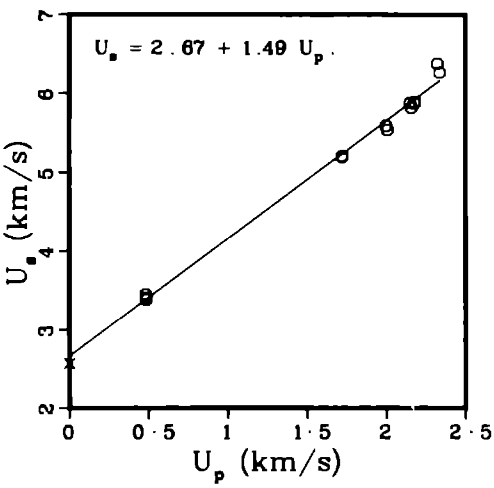
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
18.840	6.036	2.346	266.783	.0324	30.818	.611	iml o
18.830	6.012	2.350	266.034	.0323	30.914	.609	iml o
18.850	5.985	2.353	265.459	.0322	31.062	.607	iml o

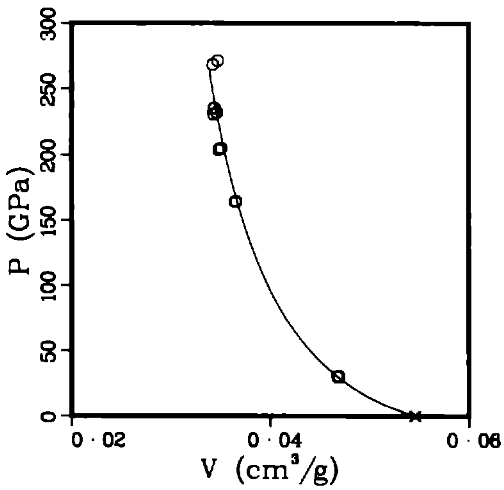
URANIUM-5.4 wt% Rh

Average ρ_0 = 18.326 g/cm^3.

Sound velocities longitudinal 3.41 km/s.
shear 1.94 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
18.330	2.571	0.000	0.000	.0546	18.330	1.000	ssp ×
18.360	3.448	.480	30.387	.0469	21.329	.861	im1 o
18.310	3.406	.483	30.122	.0469	21.336	.858	im1 o
18.320	3.385	.485	30.076	.0468	21.384	.857	im1 o
18.310	5.213	1.722	164.365	.0366	27.342	.670	im1 o
18.320	5.200	1.724	164.235	.0365	27.406	.668	im1 o
18.320	5.596	2.000	205.037	.0351	28.509	.643	im1 o
18.330	5.543	2.007	203.918	.0348	28.734	.638	im1 o
18.320	5.884	2.151	231.867	.0346	28.876	.634	im1 o
18.330	5.821	2.159	230.363	.0343	29.137	.629	im1 o
18.330	5.885	2.179	235.053	.0344	29.107	.630	im1 o
18.330	5.882	2.179	234.933	.0343	29.116	.630	im1 o
18.320	6.382	2.322	271.484	.0347	28.798	.636	im1 o
18.330	6.268	2.337	268.504	.0342	29.227	.627	im1 o





URANIUM-13.4 wt% Rh

Average ρ_0 = 17.204 g/cm^3.

Sound velocities longitudinal 3.38 km/s.
shear 1.74 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
17.200	2.718	0.000	0.000	.0581	17.200	1.000	ssp ×
17.220	3.542	.488	29.765	.0501	19.972	.862	im1 o
17.200	3.483	.492	29.475	.0499	20.029	.859	im1 o
17.180	3.477	.493	29.449	.0500	20.018	.858	im1 o
17.260	3.873	.754	50.403	.0467	21.433	.805	im1 o
17.170	3.867	.756	50.196	.0469	21.342	.804	im1 o
17.100	3.832	.761	49.866	.0469	21.337	.801	im1 o
17.250	4.559	1.216	95.630	.0425	23.525	.733	im1 o
17.170	4.541	1.220	95.122	.0426	23.478	.731	im1 o
17.210	4.460	1.228	94.257	.0421	23.749	.725	im1 o
17.270	5.326	1.754	161.333	.0388	25.750	.671	im1 o
17.150	5.357	1.755	161.236	.0392	25.506	.672	im1 o
17.230	5.289	1.761	160.479	.0387	25.830	.667	im1 o
17.210	5.666	1.944	189.563	.0382	26.199	.657	im1 o
17.180	5.656	1.946	189.093	.0382	26.191	.656	im1 o
17.230	5.629	1.948	188.932	.0380	26.348	.654	im1 o
17.190	6.111	2.172	228.164	.0375	26.669	.645	im1 o
17.240	6.036	2.180	226.852	.0371	26.987	.639	im1 o
17.180	6.042	2.182	226.495	.0372	26.892	.639	im1 o
17.260	6.040	2.207	230.081	.0368	27.198	.635	im1 o

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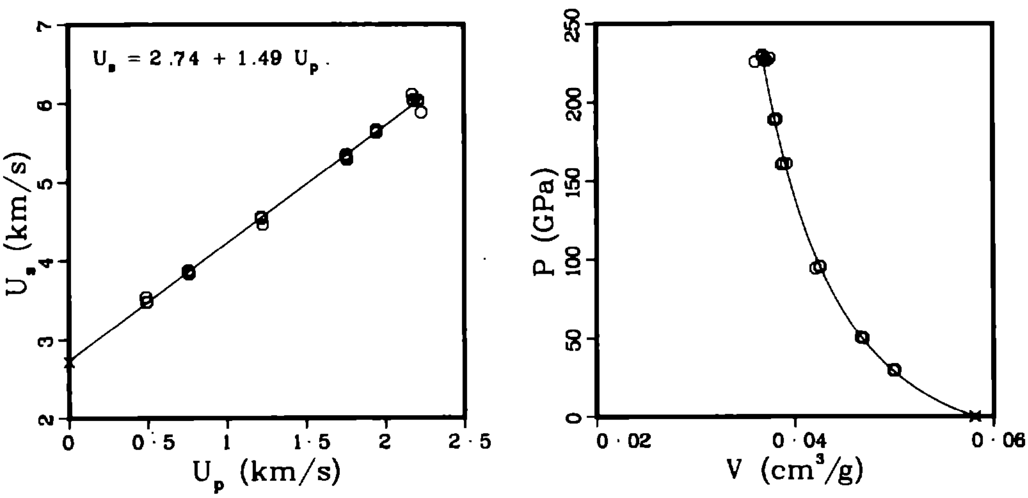


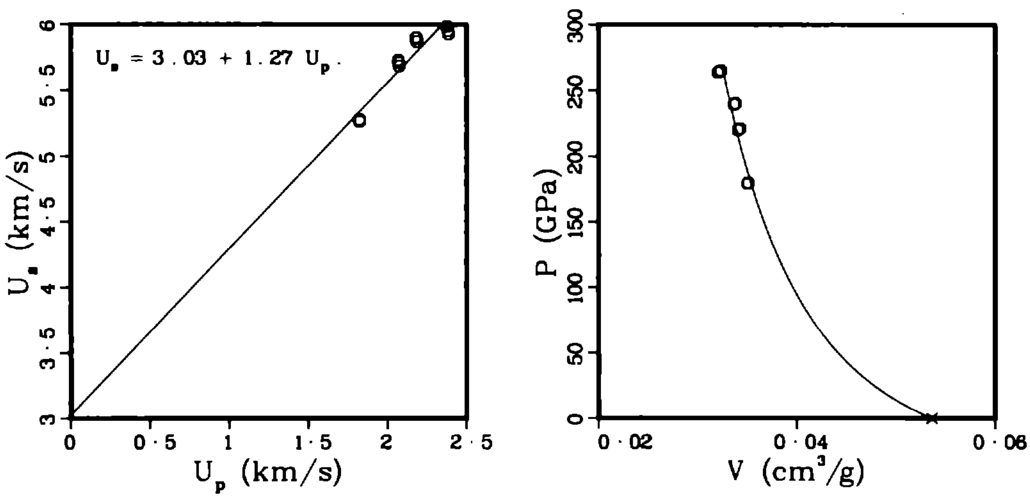
URANIUM–13.4 wt% Rh
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
17.170	6.028	2.213	229.047	.0369	27.130	.633	im1 o
17.210	5.884	2.231	225.919	.0361	27.721	.621	im1 o

URANIUM-0.6 wt% Ti

Average ρ_0 = 18.650 g/cm^3.

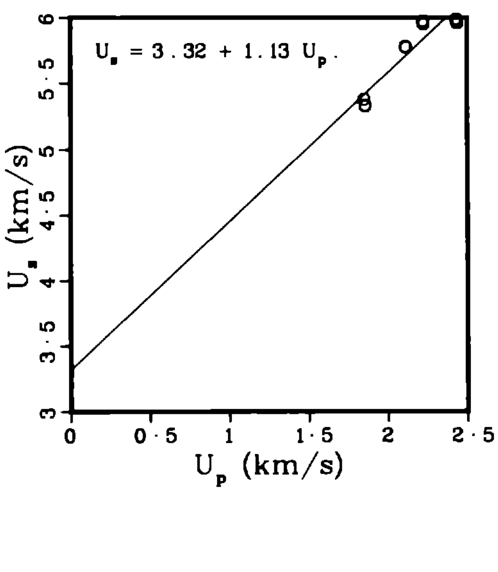
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
18.650	5.279	1.823	179.480	.0351	28.488	.655	im1 o
18.650	5.266	1.825	179.235	.0350	28.541	.653	im1 o
18.650	5.267	1.825	179.269	.0350	28.539	.654	im1 o
18.650	5.731	2.068	221.034	.0343	29.179	.639	im1 o
18.650	5.714	2.071	220.698	.0342	29.252	.638	im1 o
18.650	5.687	2.075	220.080	.0341	29.364	.635	im1 o
18.650	5.900	2.181	239.986	.0338	29.587	.630	im1 o
18.650	5.898	2.182	240.015	.0338	29.601	.630	im1 o
18.650	5.872	2.186	239.395	.0337	29.710	.628	im1 o
18.650	5.985	2.376	265.210	.0323	30.928	.603	im1 o
18.650	5.954	2.382	264.502	.0322	31.087	.600	im1 o
18.650	5.929	2.387	263.945	.0320	31.218	.597	im1 o

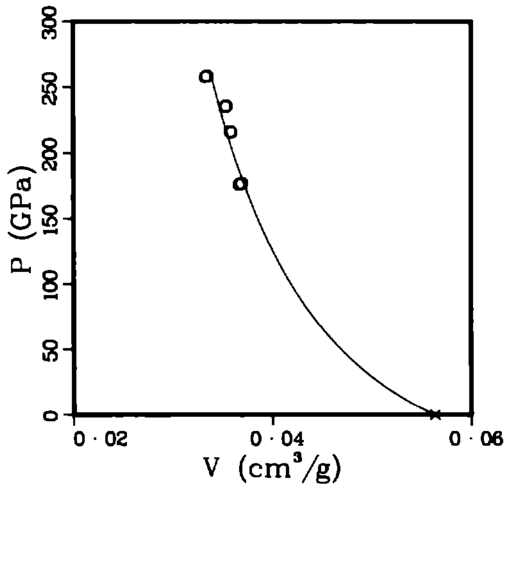


URANIUM-2.5 wt% Nb-1.3 wt% Ti

Average ρ_0 = 17.750 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
17.760	5.380	1.850	176.765	.0369	27.068	.656	im1 o
17.760	5.336	1.857	175.983	.0367	27.240	.652	im1 o
17.760	5.329	1.858	175.847	.0367	27.267	.651	im1 o
17.760	5.782	2.108	216.467	.0358	27.950	.635	im1 o
17.650	5.775	2.116	215.681	.0359	27.857	.634	im1 o
17.760	5.972	2.220	235.459	.0354	28.268	.628	im1 o
17.760	5.972	2.220	235.459	.0354	28.268	.628	im1 o
17.760	5.951	2.224	235.054	.0353	28.358	.626	im1 o
17.760	5.991	2.430	258.552	.0335	29.879	.594	im1 o
17.760	5.970	2.434	258.070	.0333	29.985	.592	im1 o
17.760	5.960	2.436	257.850	.0333	30.037	.591	im1 o





MINERALS AND COMPOUNDS

ANDALUSITE , chiastolite , South Australia

Average ρ_0 = 3.074 g/cm^3 .

Sound velocities longitudinal 7.30 km/s .
shear 4.31 km/s .

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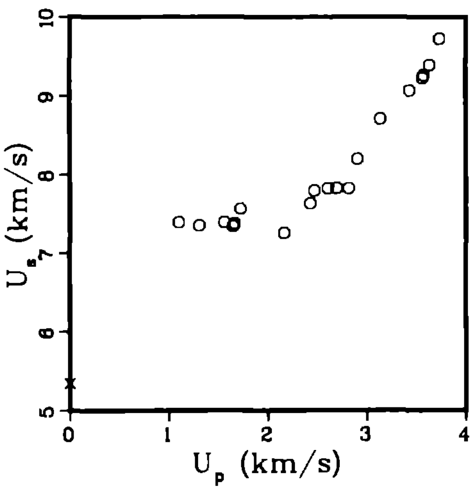
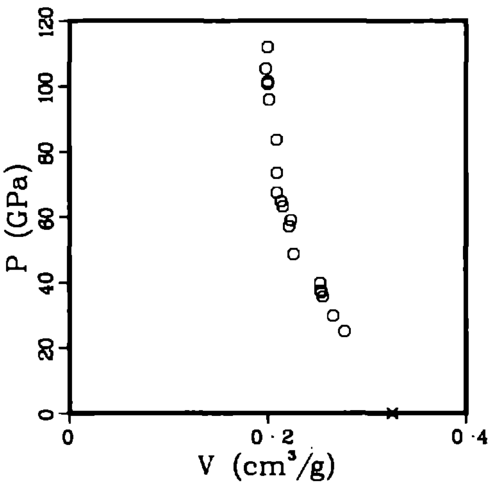
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
3.073	5.341	0.000	0.000	.3254	3.073	1.000	ssp	×
3.066	7.390	1.100	24.924	.2776	3.602	.851	iml	o
3.090	7.349	1.306	29.657	.2661	3.758	.822	iml	o
3.085	7.391	1.559	35.547	.2558	3.910	.789	iml	o
3.050	7.339	1.648	36.889	.2542	3.933	.775	iml	o
3.049	7.370	1.663	37.369	.2540	3.937	.774	iml	o
3.050	7.562	1.724	39.763	.2531	3.951	.772	iml	o
3.100	7.254	2.162	48.618	.2264	4.416	.702	iml	o
3.081	7.632	2.429	57.116	.2213	4.519	.682	iml	o
3.064	7.795	2.469	58.969	.2230	4.484	.683	iml	o
3.103	7.825	2.606	63.276	.2149	4.652	.667	iml	o
3.073	7.827	2.696	64.845	.2133	4.688	.656	iml	o
3.063	7.826	2.817	67.526	.2090	4.786	.640	iml	o
3.088	8.200	2.905	73.559	.2091	4.782	.646	iml	o
3.063	8.710	3.137	83.691	.2089	4.787	.640	iml	o
3.084	9.067	3.431	95.940	.2016	4.961	.622	iml	o
3.066	9.225	3.562	100.747	.2002	4.994	.614	iml	o
3.063	9.260	3.575	101.399	.2004	4.989	.614	iml	o
3.088	9.387	3.633	105.310	.1985	5.038	.613	iml	o
3.088	9.725	3.730	112.015	.1996	5.009	.616	iml	o





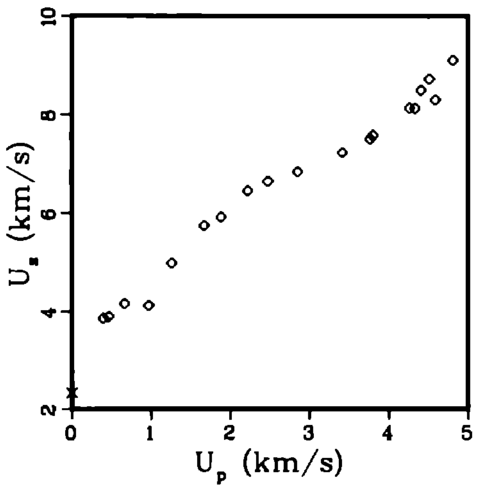
ANTHRACENE , reagent-grade , polycrystalline , pressed

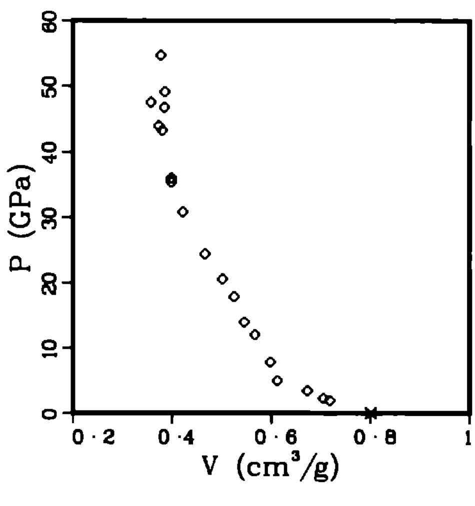
Average ρ_0 = 1.249 g/cm^3 .

Sound velocities longitudinal 2.92 km/s .
shear 1.52 km/s .

Reference 29

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.249	2.334	0.000	0.000	.8006	1.249	1.000	ssp ×
1.249	3.855	.395	1.902	.7186	1.392	.898	im5 ◇
1.249	3.894	.465	2.262	.7050	1.418	.881	im5 ◇
1.249	4.160	.664	3.450	.6728	1.486	.840	im5 ◇
1.249	4.123	.970	4.995	.6123	1.633	.765	im5 ◇
1.248	4.979	1.262	7.842	.5982	1.672	.747	im5 ◇
1.250	5.747	1.672	12.011	.5673	1.763	.709	im5 ◇
1.249	5.923	1.887	13.960	.5456	1.833	.681	im5 ◇
1.248	6.450	2.222	17.886	.5252	1.904	.656	im5 ◇
1.249	6.644	2.478	20.563	.5020	1.992	.627	im5 ◇
1.249	6.836	2.851	24.342	.4667	2.143	.583	im5 ◇
1.249	7.227	3.417	30.844	.4221	2.369	.527	im5 ◇
1.249	7.511	3.766	35.330	.3992	2.505	.499	im5 ◇
1.249	7.580	3.801	35.986	.3992	2.505	.499	im5 ◇
1.249	8.129	4.262	43.273	.3809	2.626	.476	im5 ◇
1.249	8.123	4.334	43.971	.3735	2.678	.466	im5 ◇
1.249	8.491	4.408	46.748	.3850	2.597	.481	im5 ◇
1.249	8.713	4.512	49.102	.3860	2.590	.482	im5 ◇
1.248	8.295	4.589	47.506	.3580	2.793	.447	im5 ◇
1.249	9.105	4.810	54.700	.3777	2.648	.472	im5 ◇

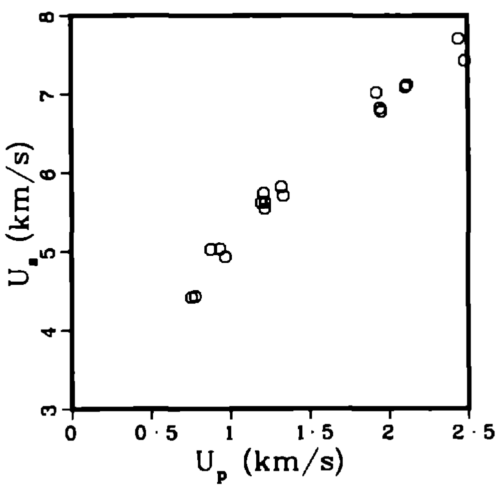


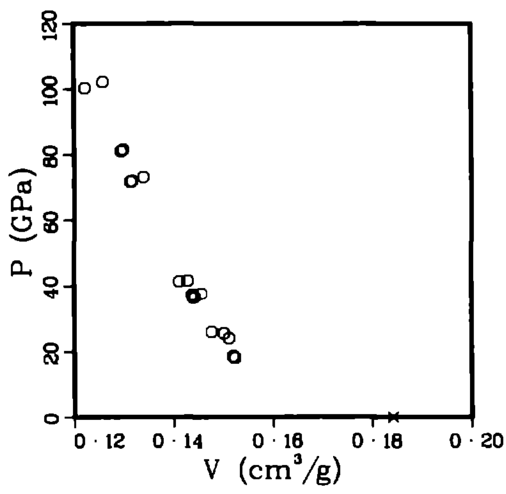


BARIUM TITANATE

Average ρ_0 = 5.431 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
5.440	4.415	.756	18.157	.1523	6.564	.829	im1 o
5.420	4.426	.780	18.711	.1520	6.580	.824	im1 o
5.460	5.028	.878	24.104	.1512	6.615	.825	im1 o
5.420	5.033	.937	25.560	.1502	6.660	.814	im1 o
5.440	4.932	.970	26.025	.1477	6.772	.803	im1 o
5.460	5.626	1.195	36.708	.1442	6.933	.788	im1 o
5.420	5.745	1.210	37.677	.1456	6.866	.789	im1 o
5.420	5.544	1.217	36.569	.1440	6.944	.780	im1 o
5.450	5.625	1.219	37.370	.1437	6.958	.783	im1 o
5.410	5.824	1.321	41.622	.1429	6.997	.773	im1 o
5.430	5.712	1.334	41.376	.1412	7.085	.766	im1 o
5.420	7.022	1.923	73.188	.1340	7.464	.726	im1 o
5.430	6.822	1.944	72.012	.1317	7.594	.715	im1 o
5.420	6.784	1.954	71.847	.1314	7.613	.712	im1 o
5.430	7.091	2.106	81.090	.1295	7.724	.703	im1 o
5.410	7.121	2.116	81.518	.1299	7.697	.703	im1 o
5.430	7.711	2.441	102.206	.1259	7.945	.683	im1 o
5.450	7.427	2.479	100.343	.1222	8.181	.666	im1 o





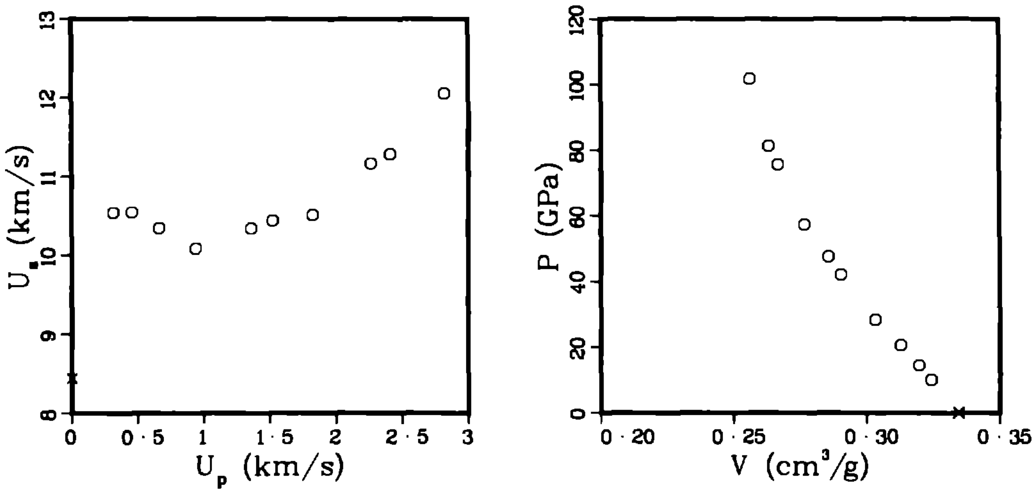
BERYLLIUM OXIDE , ρ_0 = 3.0 g/cm^3 .

Average ρ_0 = 2.989 g/cm^3 .

Sound velocities longitudinal 11.91 km/s .
shear 7.28 km/s .

Reference 33

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.989	8.437	0.000	0.000	.3346	2.989	1.000	ssp	×
2.992	10.540	.317	9.997	.3242	3.085	.970	iml	o
2.991	10.543	.458	14.443	.3198	3.127	.957	iml	o
2.991	10.344	.664	20.543	.3129	3.196	.936	iml	o
2.991	10.086	.939	28.327	.3032	3.298	.907	iml	o
2.990	10.339	1.361	42.073	.2904	3.443	.868	iml	o
2.990	10.439	1.522	47.506	.2857	3.500	.854	iml	o
2.986	10.512	1.825	57.285	.2768	3.613	.826	iml	o
2.986	11.165	2.268	75.612	.2669	3.747	.797	iml	o
2.986	11.284	2.412	81.270	.2633	3.798	.786	iml	o
2.989	12.054	2.822	101.675	.2562	3.903	.766	iml	o



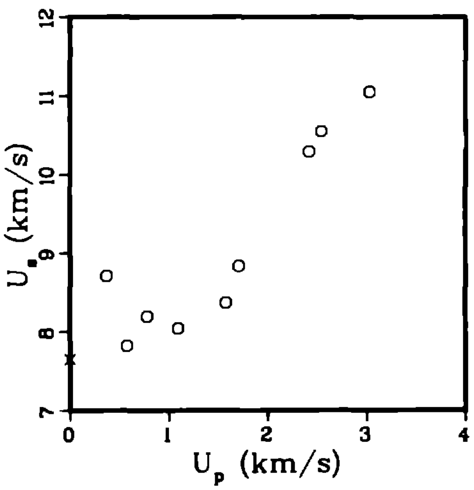
BERYLLIUM OXIDE, ρ_0 = 2.8 g/cm^3.

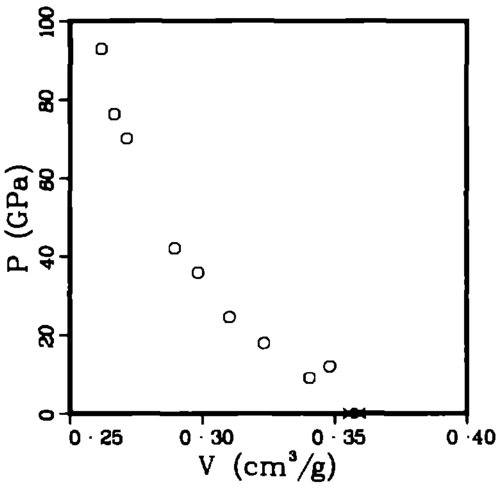
Average ρ_0 = 2.781 g/cm^3.

Sound velocities longitudinal 10.94 km/s.
shear 6.77 km/s.

Reference 33

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.816	7.653	0.000	0.000	.3551	2.816	1.000	ssp ×
2.812	8.713	.368	9.016	.3406	2.936	.958	im1 o
2.660	7.829	.577	12.016	.3482	2.872	.926	im1 o
2.798	8.194	.781	17.906	.3233	3.093	.905	im1 o
2.784	8.043	1.094	24.497	.3103	3.222	.864	im1 o
2.720	8.365	1.578	35.904	.2983	3.352	.811	im1 o
2.787	8.840	1.706	42.031	.2896	3.453	.807	im1 o
2.818	10.294	2.418	70.143	.2715	3.683	.765	im1 o
2.845	10.554	2.543	76.356	.2668	3.748	.759	im1 o
2.771	11.052	3.034	92.917	.2618	3.820	.725	im1 o





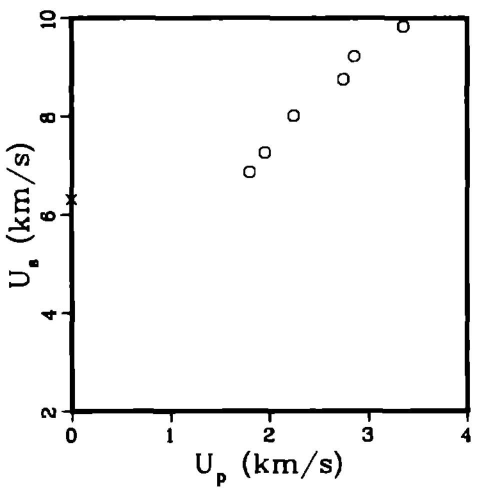
BERYLLIUM OXIDE, ρ_0 = 2.4 g/cm^3.

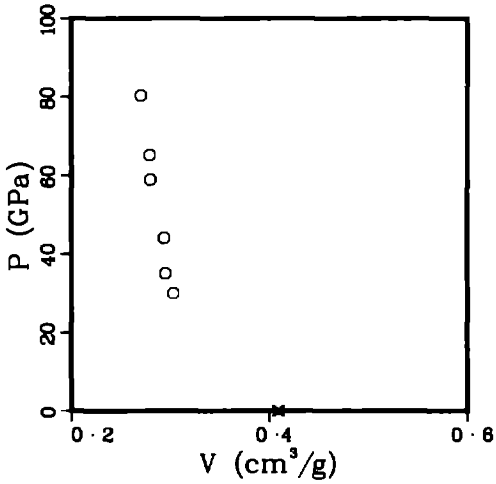
Average ρ_0 = 2.451 g/cm^3.

Sound velocities longitudinal 9.06 km/s.
shear 5.63 km/s.

Reference 33

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.439	6.310	0.000	0.000	.4100	2.439	1.000	ssp ×
2.436	6.861	1.799	30.067	.3029	3.302	.738	im1 o
2.477	7.251	1.954	35.095	.2949	3.391	.731	im1 o
2.448	8.010	2.248	44.080	.2939	3.403	.719	im1 o
2.454	8.748	2.745	58.929	.2796	3.576	.686	im1 o
2.472	9.219	2.857	65.109	.2792	3.582	.690	im1 o
2.434	9.833	3.356	80.321	.2706	3.695	.659	im1 o

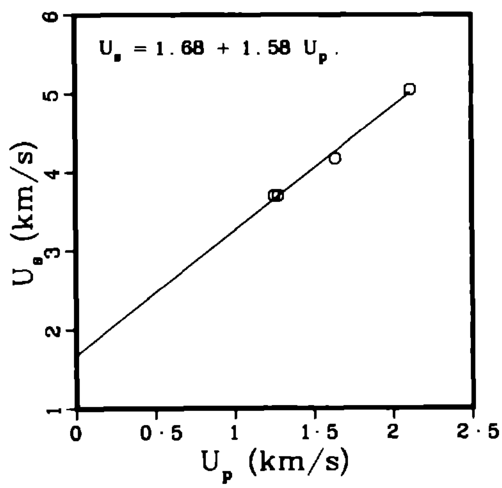


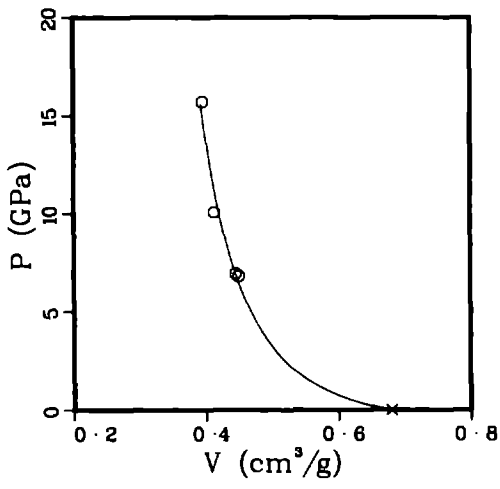


BORIC ACID

Average ρ_0 = 1.471 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.471	3.702	1.254	6.829	.4495	2.225	.661	im1 o
1.471	3.701	1.279	6.963	.4449	2.248	.654	im1 o
1.471	4.176	1.639	10.068	.4130	2.421	.608	im1 o
1.471	5.055	2.114	15.720	.3955	2.528	.582	im1 o

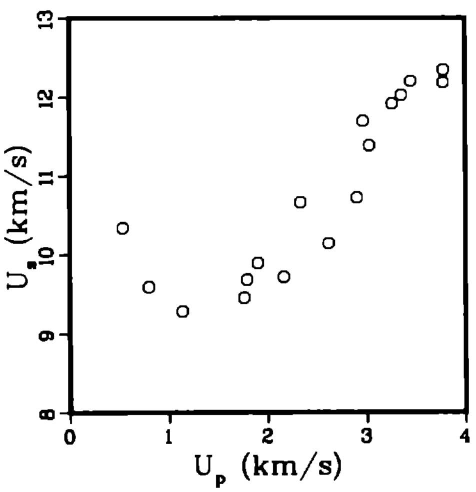


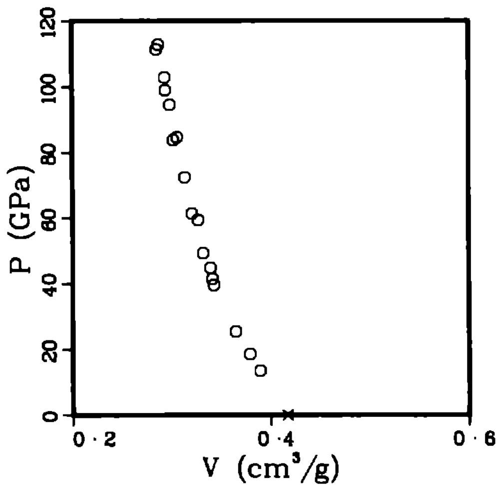


BORON CARBIDE, ρ_0 = 2.4 g/cm^3.

Average ρ_0 = 2.400 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.437	10.344	.537	13.537	.3890	2.570	.948	im1 o
2.420	9.596	.800	18.578	.3788	2.640	.917	im1 o
2.407	9.289	1.138	25.444	.3646	2.743	.877	im1 o
2.375	9.458	1.762	39.579	.3426	2.919	.814	im1 o
2.389	9.685	1.791	41.439	.3412	2.931	.815	im1 o
2.382	9.894	1.901	44.802	.3392	2.949	.808	im1 o
2.343	9.718	2.162	49.227	.3319	3.013	.778	im1 o
2.388	10.665	2.335	59.468	.3271	3.057	.781	im1 o
2.312	10.145	2.618	61.406	.3209	3.116	.742	im1 o
2.324	10.723	2.905	72.393	.3137	3.188	.729	im1 o
2.439	11.699	2.969	84.717	.3060	3.268	.746	im1 o
2.429	11.390	3.031	83.857	.3021	3.310	.734	im1 o
2.431	11.919	3.263	94.546	.2987	3.347	.726	im1 o
2.452	12.028	3.357	99.007	.2940	3.401	.721	im1 o
2.444	12.208	3.452	102.995	.2935	3.408	.717	im1 o
2.419	12.189	3.779	111.425	.2852	3.506	.690	im1 o
2.417	12.352	3.781	112.881	.2871	3.483	.694	im1 o



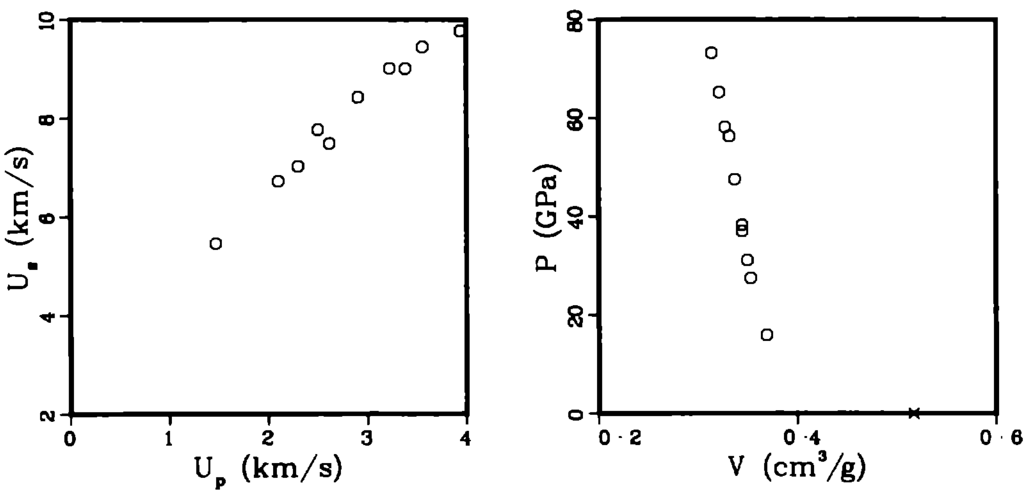


BORON CARBIDE, ρ_0 = 1.9 g/cm^3.

Average ρ_0 = 1.934 g/cm^3.

Reference 13

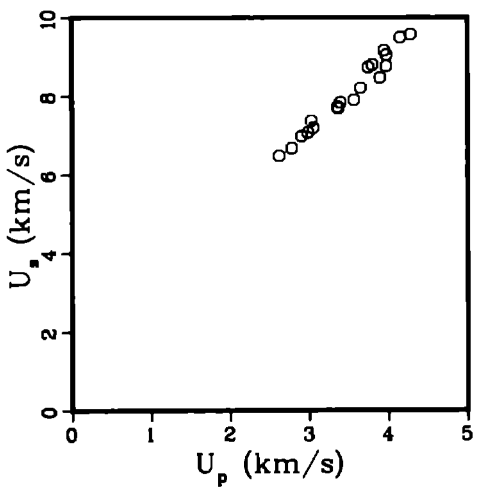
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.980	5.458	1.468	15.864	.3692	2.708	.731	im1 o
1.948	6.723	2.099	27.489	.3531	2.832	.688	im1 o
1.924	7.026	2.299	31.078	.3497	2.860	.673	im1 o
1.970	7.774	2.501	38.302	.3443	2.904	.678	im1 o
1.889	7.497	2.616	37.047	.3447	2.901	.651	im1 o
1.944	8.426	2.904	47.568	.3371	2.966	.655	im1 o
1.937	9.020	3.225	56.346	.3317	3.015	.642	im1 o
1.909	9.014	3.383	58.214	.3272	3.056	.625	im1 o
1.940	9.450	3.557	65.210	.3214	3.111	.624	im1 o
1.903	9.777	3.938	73.269	.3138	3.186	.597	im1 o

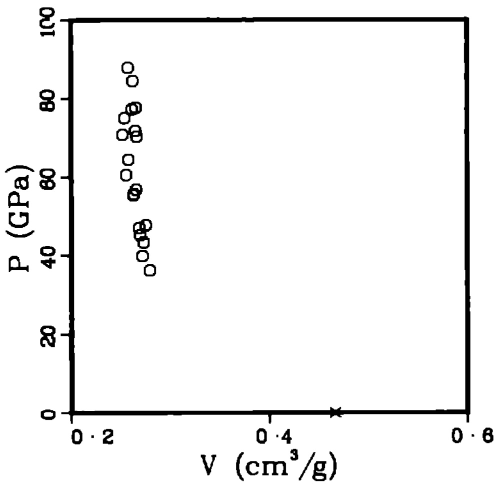


BORON NITRIDE, pressed, ρ_0 = 2.15 g/cm³.

Average ρ_0 = 2.145 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp	
2.132	6.484	2.621	36.232	.2794	3.579	.596	iml	o
2.147	6.680	2.780	39.871	.2719	3.677	.584	iml	o
2.139	6.987	2.905	43.416	.2731	3.661	.584	iml	o
2.144	7.075	2.985	45.279	.2696	3.709	.578	iml	o
2.140	7.375	3.028	47.789	.2754	3.631	.589	iml	o
2.146	7.198	3.050	47.113	.2685	3.724	.576	iml	o
2.146	7.725	3.359	55.685	.2634	3.797	.565	iml	o
2.138	7.691	3.368	55.381	.2629	3.804	.562	iml	o
2.134	7.841	3.394	56.791	.2658	3.763	.567	iml	o
2.147	7.903	3.567	60.524	.2555	3.913	.549	iml	o
2.154	8.210	3.650	64.548	.2579	3.878	.555	iml	o
2.147	8.745	3.747	70.352	.2662	3.757	.572	iml	o
2.148	8.807	3.797	71.830	.2648	3.776	.569	iml	o
2.146	8.478	3.894	70.847	.2520	3.969	.541	iml	o
2.148	9.167	3.946	77.700	.2652	3.771	.570	iml	o
2.154	8.772	3.973	75.069	.2540	3.937	.547	iml	o
2.147	9.058	3.976	77.323	.2613	3.827	.561	iml	o
2.146	9.496	4.151	84.591	.2623	3.813	.563	iml	o
2.147	9.570	4.281	87.961	.2574	3.885	.553	iml	o

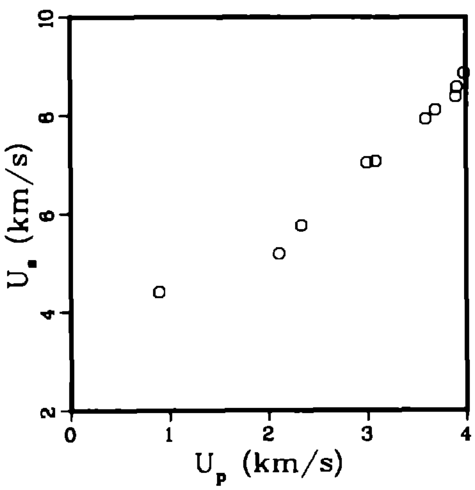


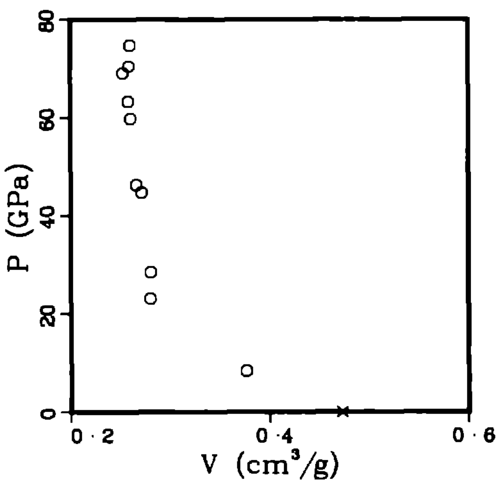


BORON NITRIDE, pressed, ρ_0 = 2.12 g/cm^3.

Average ρ_0 = 2.115 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.117	4.414	.899	8.401	.3762	2.658	.796	im1 o
2.116	5.188	2.109	23.152	.2805	3.565	.593	im1 o
2.120	5.761	2.333	28.494	.2807	3.563	.595	im1 o
2.117	7.038	2.998	44.669	.2712	3.688	.574	im1 o
2.119	7.065	3.085	46.185	.2659	3.761	.563	im1 o
2.102	7.930	3.589	59.825	.2604	3.840	.547	im1 o
2.116	8.117	3.687	63.326	.2579	3.877	.546	im1 o
2.118	8.387	3.891	69.118	.2531	3.951	.536	im1 o
2.106	8.583	3.902	70.532	.2590	3.862	.545	im1 o
2.120	8.867	3.980	74.816	.2600	3.847	.551	im1 o



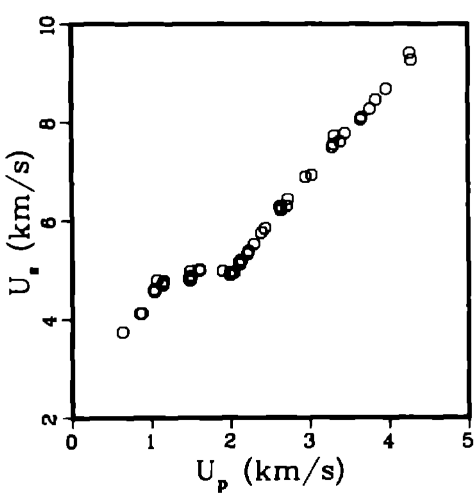


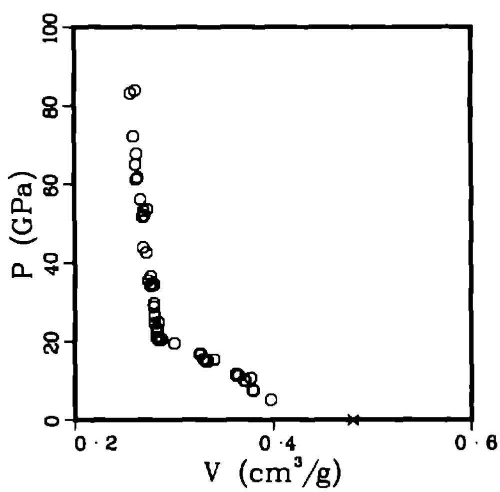
BORON NITRIDE, pressed, ρ_0 = 2.08 g/cm^3.

Average ρ_0 = 2.082 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.086	3.747	.636	4.971	.3980	2.512	.830	im1 o
2.086	4.126	.853	7.342	.3803	2.630	.793	im1 o
2.077	4.125	.876	7.505	.3792	2.637	.788	im1 o
2.089	4.604	1.036	9.964	.3710	2.696	.775	im1 o
2.078	4.566	1.042	9.887	.3714	2.692	.772	im1 o
2.060	4.794	1.067	10.537	.3774	2.650	.777	im1 o
2.078	4.712	1.139	11.153	.3649	2.740	.758	im1 o
2.084	4.699	1.146	11.222	.3628	2.756	.756	im1 o
2.092	4.774	1.155	11.535	.3624	2.760	.758	im1 o
2.084	4.825	1.474	14.822	.3333	3.001	.695	im1 o
2.076	4.846	1.485	14.940	.3341	2.993	.694	im1 o
2.059	4.989	1.488	15.285	.3408	2.934	.702	im1 o
2.075	4.796	1.491	14.838	.3321	3.011	.689	im1 o
2.093	4.878	1.496	15.274	.3313	3.019	.693	im1 o
2.096	4.875	1.500	15.327	.3303	3.028	.692	im1 o
2.080	5.020	1.604	16.748	.3272	3.057	.680	im1 o
2.080	5.014	1.605	16.739	.3269	3.059	.680	im1 o
2.080	4.995	1.607	16.696	.3261	3.067	.678	im1 o
2.063	4.986	1.895	19.492	.3005	3.328	.620	im1 o
2.080	4.949	1.989	20.475	.2875	3.478	.598	im1 o
2.080	4.934	1.992	20.443	.2867	3.488	.596	im1 o
2.080	4.899	1.996	20.339	.2849	3.510	.593	im1 o

(Continued)





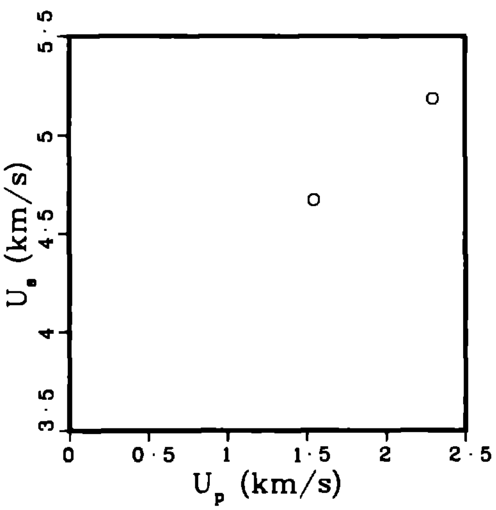
BORON NITRIDE, pressed, ρ_0 = 2.08 g/cm^3.
(Continued)

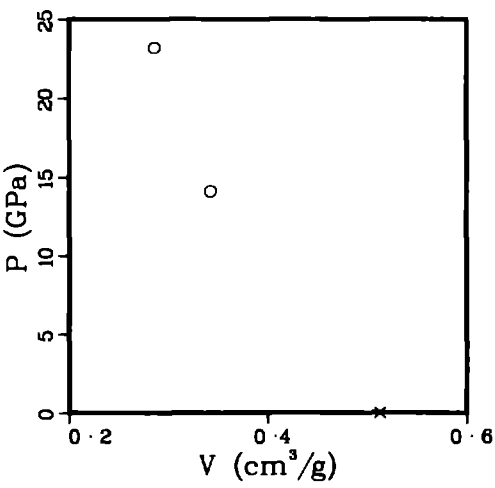
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.086	4.957	2.038	21.074	.2823	3.542	.589	iml o
2.075	4.949	2.042	20.970	.2831	3.533	.587	iml o
2.092	5.157	2.105	22.710	.2829	3.535	.592	iml o
2.074	5.130	2.118	22.535	.2831	3.532	.587	iml o
2.089	5.210	2.135	23.237	.2825	3.539	.590	iml o
2.082	5.331	2.217	24.607	.2806	3.564	.584	iml o
2.064	5.394	2.228	24.805	.2844	3.516	.587	iml o
2.089	5.536	2.295	26.541	.2802	3.568	.585	iml o
2.090	5.766	2.389	28.790	.2802	3.569	.586	iml o
2.085	5.852	2.433	29.686	.2802	3.569	.584	iml o
2.080	6.292	2.627	34.380	.2800	3.571	.582	iml o
2.080	6.265	2.633	34.311	.2787	3.588	.580	iml o
2.080	6.214	2.639	34.109	.2766	3.615	.575	iml o
2.084	6.262	2.642	34.478	.2774	3.605	.578	iml o
2.077	6.297	2.710	35.444	.2743	3.646	.570	iml o
2.086	6.441	2.724	36.599	.2766	3.615	.577	iml o
2.097	6.888	2.950	42.610	.2726	3.668	.572	iml o
2.090	6.927	3.030	43.867	.2692	3.715	.563	iml o
2.093	7.500	3.284	51.551	.2686	3.723	.562	iml o
2.084	7.560	3.299	51.976	.2705	3.697	.564	iml o
2.087	7.726	3.316	53.468	.2735	3.656	.571	iml o
2.060	7.615	3.385	53.100	.2697	3.708	.555	iml o
2.090	7.781	3.449	56.089	.2664	3.754	.557	iml o
2.085	8.055	3.645	61.217	.2626	3.808	.547	iml o
2.078	8.108	3.662	61.699	.2639	3.790	.548	iml o
2.086	8.281	3.761	64.968	.2617	3.822	.546	iml o
2.082	8.468	3.840	67.701	.2625	3.810	.547	iml o
2.089	8.686	3.972	72.072	.2598	3.849	.543	iml o
2.090	9.408	4.264	83.842	.2616	3.822	.547	iml o
2.094	9.266	4.283	83.103	.2568	3.894	.538	iml o

BORON NITRIDE, pressed, ρ_0 = 1.95 g/cm^3.

Average ρ_0 = 1.951 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.954	4.672	1.545	14.104	.3425	2.919	.669	im1 o
1.948	5.184	2.296	23.186	.2860	3.497	.557	im1 o

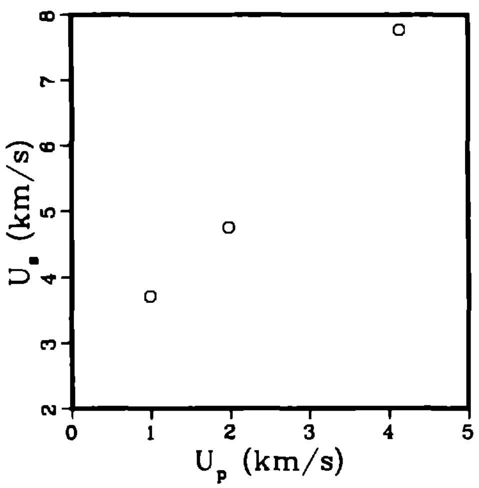


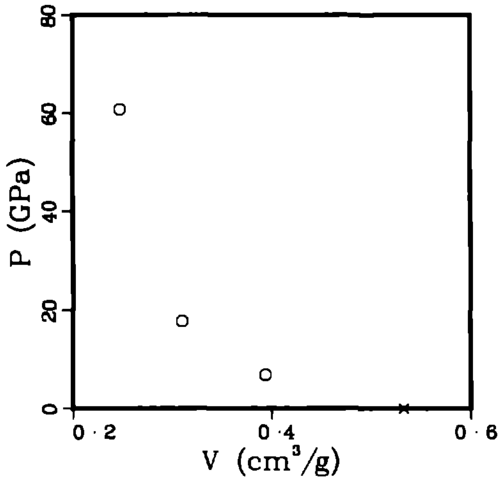


BORON NITRIDE, pressed, ρ_0 = 1.88 g/cm^3.

Average ρ_0 = 1.878 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.864	3.709	.986	6.817	.3939	2.539	.734	im1 ○
1.881	4.752	1.978	17.680	.3103	3.222	.584	im1 ○
1.890	7.770	4.138	60.768	.2473	4.043	.467	im1 ○

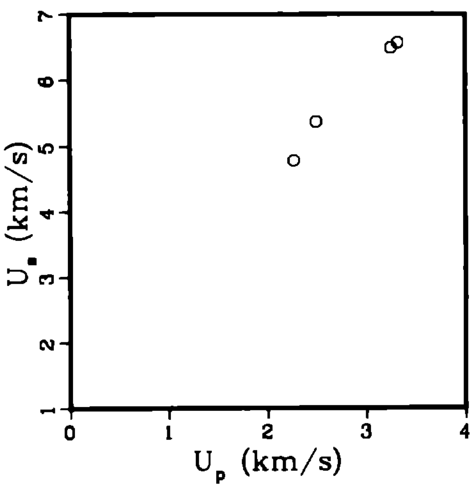


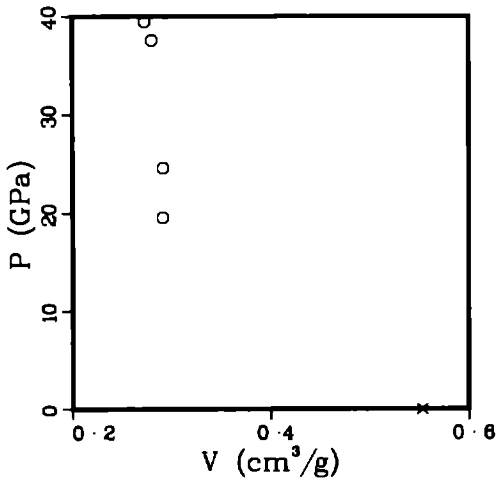


BORON NITRIDE, pressed, ρ_0 = 1.81 g/cm³.

Average ρ_0 = 1.809 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.805	4.780	2.267	19.559	.2913	3.433	.526	iml o
1.838	5.370	2.492	24.596	.2916	3.429	.536	iml o
1.782	6.490	3.249	37.575	.2802	3.568	.499	iml o
1.811	6.566	3.319	39.466	.2731	3.662	.495	iml o

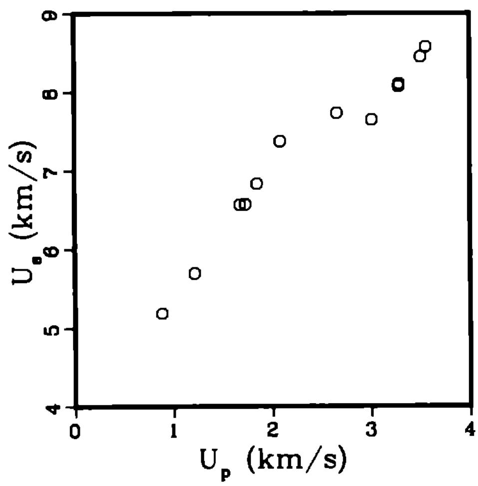


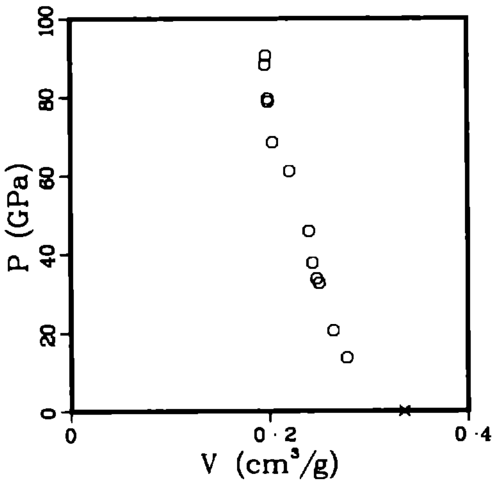


CALCIUM OXIDE, pressed

Average ρ_0 = 2.980 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.986	5.191	.882	13.671	.2780	3.597	.830	iml o
2.977	5.697	1.212	20.555	.2644	3.781	.787	iml o
2.977	6.568	1.672	32.693	.2504	3.994	.745	iml o
2.974	6.571	1.729	33.788	.2478	4.036	.737	iml o
2.995	6.834	1.846	37.784	.2437	4.103	.730	iml o
2.988	7.376	2.083	45.908	.2402	4.164	.718	iml o
2.976	7.733	2.657	61.147	.2206	4.534	.656	iml o
2.977	7.649	3.010	68.541	.2037	4.909	.606	iml o
2.977	8.071	3.282	78.858	.1993	5.017	.593	iml o
2.987	8.106	3.288	79.611	.1990	5.025	.594	iml o
2.980	8.453	3.507	88.341	.1963	5.093	.585	iml o
2.970	8.577	3.558	90.635	.1970	5.075	.585	iml o



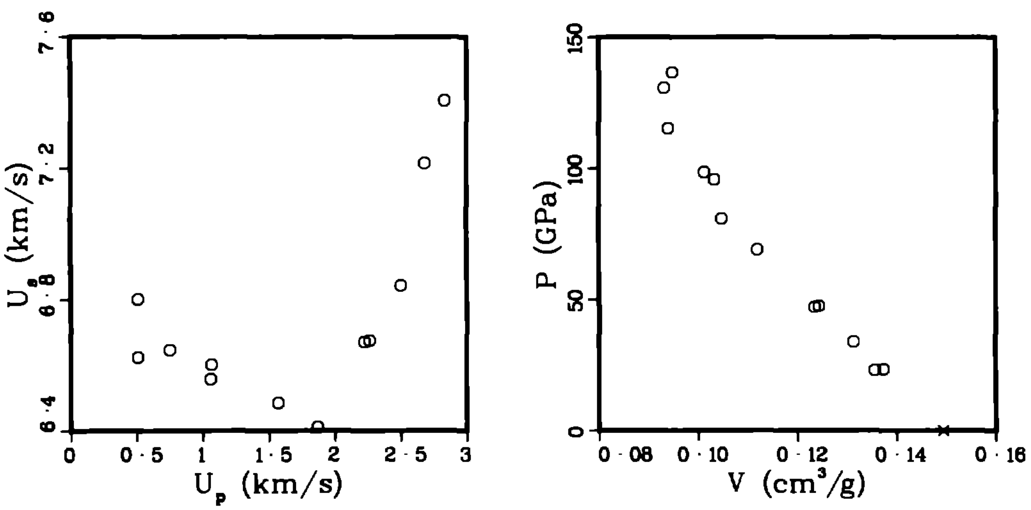


CASSITERITE, San Luis Potosi, Mexico

Average ρ_0 = 6.694 g/cm^3.

References 6, 32

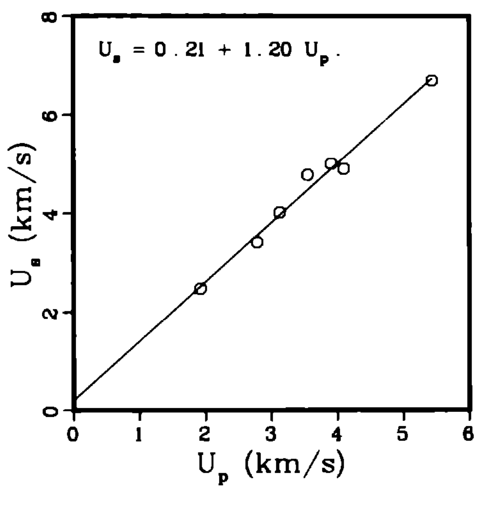
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.735	6.802	.509	23.318	.1374	7.280	.925	im1 o
6.805	6.624	.510	22.989	.1356	7.373	.923	im1 o
6.749	6.646	.753	33.775	.1314	7.611	.887	im1 o
6.793	6.557	1.059	47.170	.1234	8.101	.838	im1 o
6.742	6.601	1.067	47.486	.1243	8.042	.838	im1 o
6.769	6.484	1.570	68.908	.1120	8.932	.758	im1 o
6.763	6.411	1.866	80.905	.1048	9.540	.709	im1 o
6.449	6.670	2.227	95.794	.1033	9.681	.666	im1 o
6.523	6.674	2.266	98.649	.1013	9.876	.660	im1 o
6.747	6.843	2.501	115.470	.0940	10.633	.635	im1 o
6.745	7.216	2.683	130.587	.0931	10.737	.628	im1 o
6.512	7.407	2.833	136.648	.0948	10.545	.618	im1 o

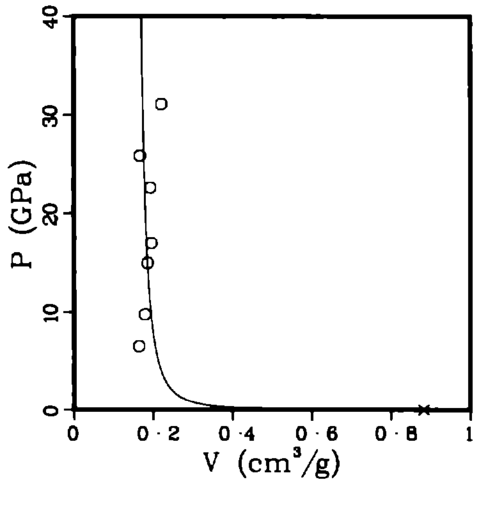


CERIUM OXIDE, powdered, unpressed

Average ρ_0 = 1.133 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.364	2.480	1.925	6.512	.1641	6.095	.224	im1 o
1.030	3.413	2.783	9.783	.1792	5.580	.185	im1 o
1.192	4.016	3.126	14.964	.1859	5.379	.222	im1 o
1.331	4.780	3.552	22.598	.1930	5.181	.257	im1 o
1.320	5.011	3.909	25.856	.1666	6.002	.220	im1 o
.843	4.907	4.099	16.956	.1953	5.120	.165	im1 o
.854	6.701	5.437	31.114	.2209	4.527	.189	im1 o

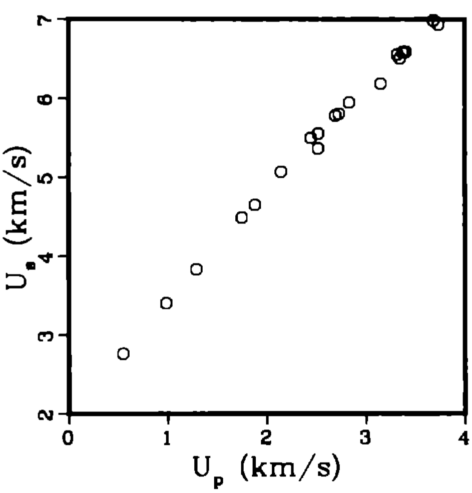


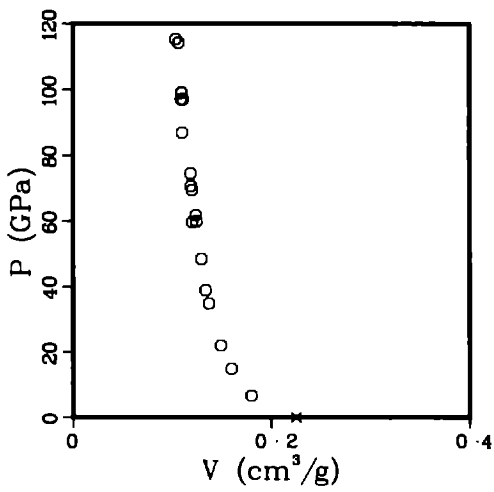


CESIUM BROMIDE, single-crystal, [100]

Average ρ_0 = 4.446 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.455	2.766	.548	6.753	.1800	5.556	.802	im1 o
4.455	3.411	.983	14.938	.1598	6.259	.712	im1 o
4.455	3.835	1.288	22.005	.1491	6.708	.664	im1 o
4.455	4.492	1.747	34.961	.1372	7.290	.611	im1 o
4.455	4.651	1.880	38.954	.1337	7.478	.596	im1 o
4.455	5.070	2.144	48.426	.1295	7.719	.577	im1 o
4.455	5.503	2.444	59.917	.1248	8.014	.556	im1 o
4.417	5.370	2.517	59.701	.1203	8.314	.531	im1 o
4.413	5.557	2.519	61.774	.1239	8.072	.547	im1 o
4.455	5.786	2.692	69.391	.1200	8.331	.535	im1 o
4.455	5.806	2.728	70.562	.1190	8.403	.530	im1 o
4.417	5.948	2.832	74.403	.1186	8.431	.524	im1 o
4.455	6.189	3.151	86.879	.1102	9.076	.491	im1 o
4.455	6.560	3.317	96.939	.1110	9.012	.494	im1 o
4.455	6.512	3.345	97.042	.1092	9.160	.486	im1 o
4.455	6.589	3.372	98.982	.1096	9.125	.488	im1 o
4.417	6.592	3.403	99.085	.1095	9.130	.484	im1 o
4.440	6.988	3.682	114.240	.1066	9.385	.473	im1 o
4.455	6.933	3.733	115.299	.1036	9.652	.462	im1 o

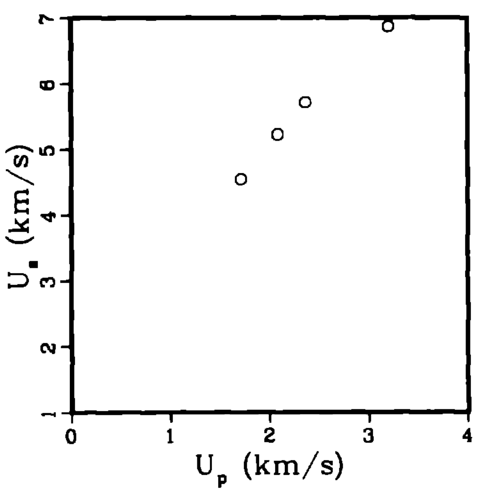


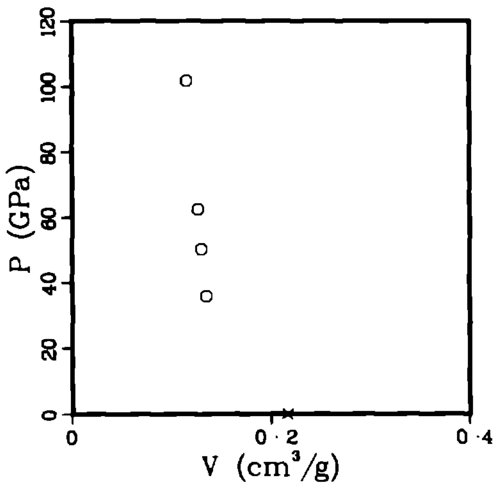


CESIUM FLUORIDE, single-crystal, [100]

Average ρ_0 = 4.620 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.620	4.544	1.711	35.920	.1349	7.410	.623	iml o
4.620	5.226	2.083	50.292	.1302	7.682	.601	iml o
4.620	5.710	2.368	62.468	.1267	7.894	.585	iml o
4.620	6.865	3.205	101.651	.1154	8.666	.533	iml o

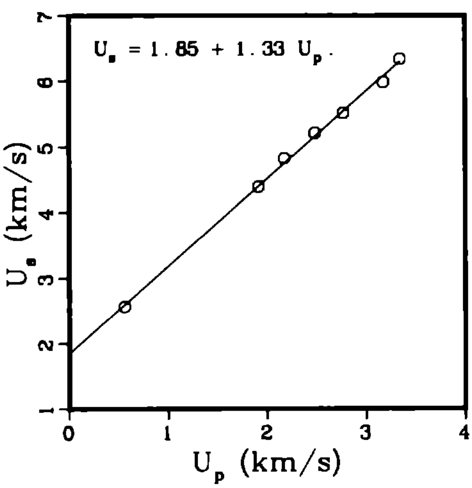


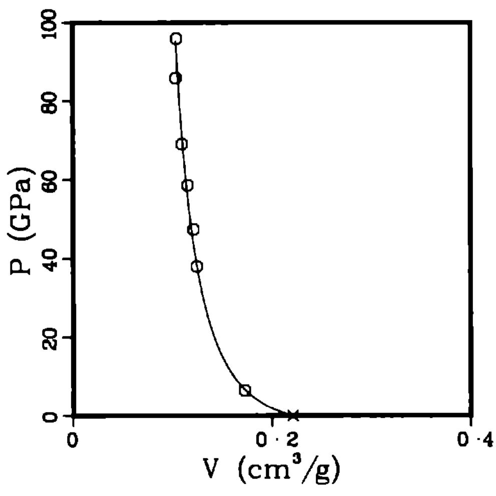


CESIUM IODIDE, single-crystal, [100]

Average ρ_0 = 4.528 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.528	2.568	.561	6.523	.1726	5.794	.782	im1 o
4.528	4.391	1.913	38.035	.1246	8.024	.564	im1 o
4.528	4.825	2.174	47.497	.1213	8.241	.549	im1 o
4.528	5.210	2.484	58.600	.1156	8.654	.523	im1 o
4.528	5.511	2.770	69.122	.1098	9.104	.497	im1 o
4.528	5.980	3.174	85.944	.1036	9.650	.469	im1 o
4.528	6.340	3.342	95.941	.1044	9.576	.473	im1 o





CORUNDUM

Average ρ_0 = 3.977 g/cm^3.

Sound velocities longitudinal 10.85 km/s.
shear 6.41 km/s.

References 6, 30, 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.974	7.933	0.000	0.000	.2516	3.974	1.000	ssp ×
3.978	9.644	.555	21.292	.2369	4.221	.942	im1 o
3.977	9.634	.556	21.303	.2369	4.221	.942	im1 o
3.977	9.651	.605	23.221	.2357	4.243	.937	im1 o
3.970	9.467	.613	23.039	.2356	4.245	.935	im1 o
3.978	9.097	.621	22.473	.2342	4.269	.932	im1 o
3.978	9.409	.816	30.542	.2296	4.356	.913	im1 o
3.979	9.708	.824	31.830	.2300	4.348	.915	im1 o
3.978	9.615	.829	31.708	.2297	4.353	.914	im1 o
3.977	9.751	.916	35.522	.2278	4.389	.906	im1 o
3.972	9.744	.917	35.491	.2281	4.385	.906	im1 o
3.979	9.948	1.201	47.539	.2210	4.525	.879	im1 o
3.973	9.978	1.231	48.800	.2206	4.532	.877	im1 o
3.985	9.846	1.257	49.320	.2189	4.568	.872	im1 o
3.979	9.942	1.281	50.675	.2189	4.568	.871	im1 o
3.979	9.910	1.284	50.631	.2188	4.571	.870	im1 o
3.967	9.965	1.371	54.197	.2174	4.600	.862	im1 o
3.977	10.130	1.383	55.717	.2171	4.606	.863	im1 o
3.970	10.023	1.479	58.851	.2147	4.657	.852	im1 o

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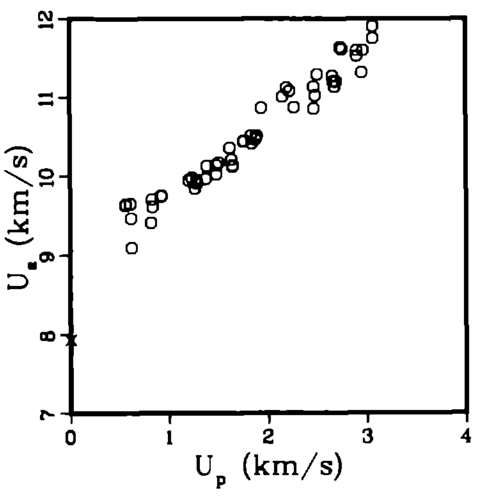
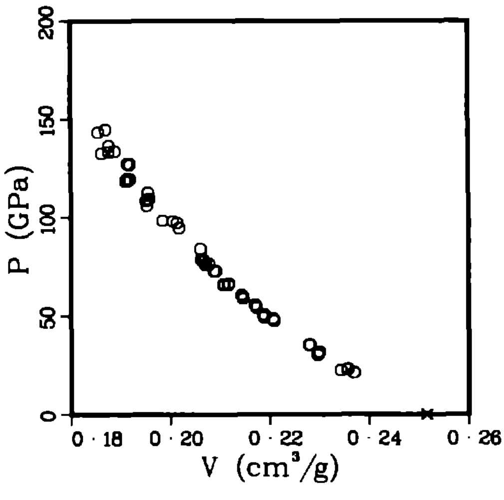




CORUNDUM
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.979	10.140	1.479	59.673	.2147	4.658	.854	im1 o
3.975	10.171	1.503	60.766	.2144	4.664	.852	im1 o
3.985	10.359	1.614	66.627	.2118	4.720	.844	im1 o
3.969	10.211	1.632	66.141	.2117	4.724	.840	im1 o
3.972	10.136	1.643	66.147	.2110	4.740	.838	im1 o
3.976	10.124	1.643	66.136	.2107	4.746	.838	im1 o
3.983	10.433	1.755	72.928	.2088	4.789	.832	im1 o
3.977	10.441	1.756	72.916	.2092	4.781	.832	im1 o
3.974	10.513	1.830	76.455	.2078	4.812	.826	im1 o
3.975	10.412	1.839	76.112	.2071	4.828	.823	im1 o
3.969	10.466	1.874	77.845	.2068	4.835	.821	im1 o
3.977	10.502	1.886	78.772	.2063	4.848	.820	im1 o
3.973	10.514	1.886	78.782	.2065	4.841	.821	im1 o
3.987	10.867	1.939	84.011	.2061	4.853	.822	im1 o
3.987	11.010	2.153	94.510	.2018	4.956	.804	im1 o
3.987	11.122	2.192	97.201	.2014	4.966	.803	im1 o
3.987	11.081	2.222	98.168	.2005	4.987	.799	im1 o
3.987	10.875	2.270	98.424	.1985	5.039	.791	im1 o
3.978	11.136	2.467	109.286	.1957	5.110	.778	im1 o
3.956	10.857	2.470	106.087	.1953	5.121	.772	im1 o
3.971	11.023	2.482	108.643	.1951	5.125	.775	im1 o
3.979	11.291	2.504	112.497	.1956	5.113	.778	im1 o
3.982	11.271	2.656	119.204	.1920	5.210	.764	im1 o
3.979	11.202	2.665	118.786	.1915	5.221	.762	im1 o
3.974	11.135	2.680	118.591	.1911	5.234	.759	im1 o
3.967	11.201	2.693	119.662	.1915	5.223	.760	im1 o
3.987	11.639	2.733	126.824	.1919	5.210	.765	im1 o
3.987	11.616	2.751	127.407	.1914	5.224	.763	im1 o
3.970	11.599	2.901	133.585	.1889	5.294	.750	im1 o
3.987	11.524	2.901	133.290	.1877	5.328	.748	im1 o
3.968	11.315	2.953	132.584	.1862	5.369	.739	im1 o
3.967	11.599	2.964	136.383	.1877	5.329	.744	im1 o
3.972	11.903	3.062	144.767	.1870	5.348	.743	im1 o
3.985	11.751	3.064	143.480	.1855	5.391	.739	im1 o

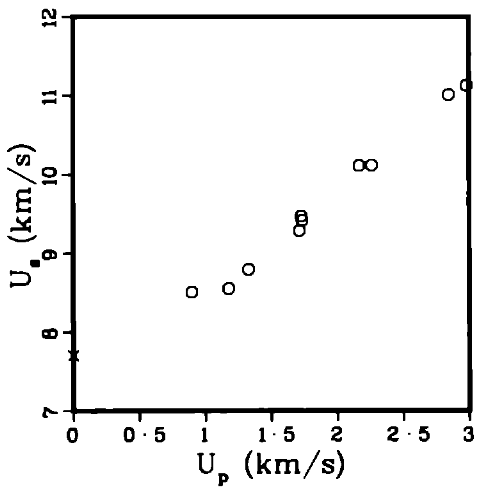
CORUNDUM, ceramic, ρ_0 = 3.83 g/cm^3.

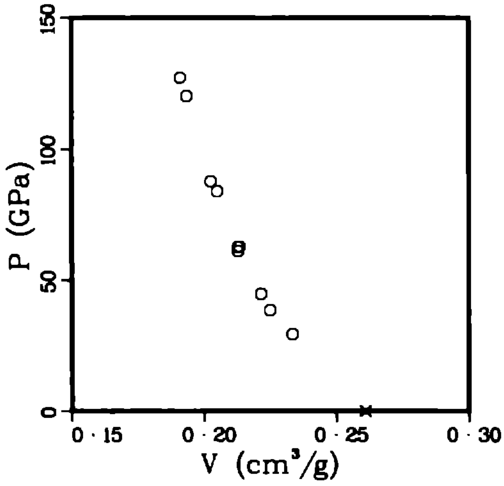
Average ρ_0 = 3.833 g/cm^3.

Sound velocities longitudinal 10.51 km/s.
shear 6.19 km/s.

References 6, 30, 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.833	7.705	0.000	0.000	.2609	3.833	1.000	ssp ×
3.833	8.510	.898	29.292	.2334	4.285	.894	im1 o
3.833	8.556	1.178	38.633	.2250	4.445	.862	im1 o
3.833	8.797	1.328	44.779	.2215	4.515	.849	im1 o
3.833	9.294	1.713	61.024	.2128	4.699	.816	im1 o
3.833	9.478	1.727	62.740	.2134	4.687	.818	im1 o
3.833	9.424	1.735	62.672	.2129	4.698	.816	im1 o
3.833	10.113	2.166	83.961	.2050	4.878	.786	im1 o
3.833	10.119	2.262	87.734	.2026	4.937	.776	im1 o
3.833	11.012	2.845	120.085	.1935	5.168	.742	im1 o
3.833	11.128	2.979	127.065	.1911	5.234	.732	im1 o



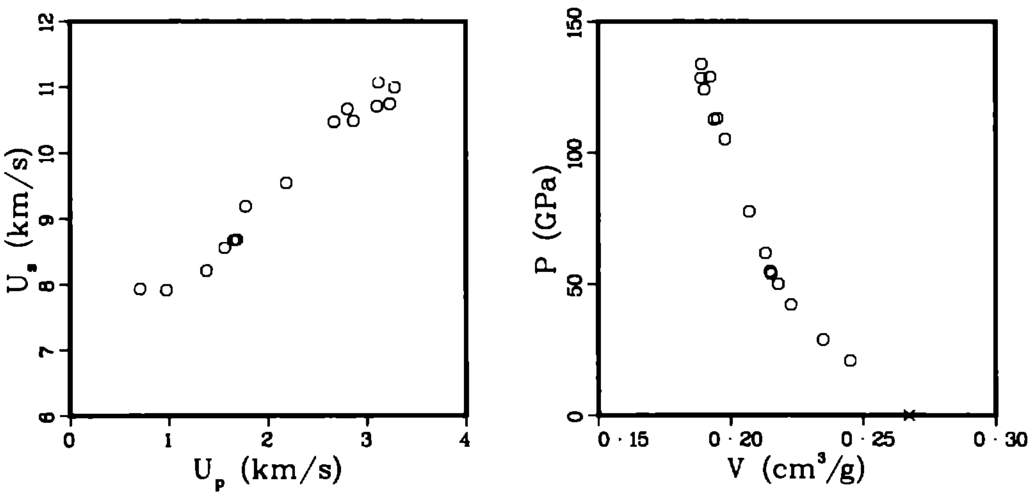


CORUNDUM , ceramic , ρ_0 = 3.74 g/cm^3 .

Average ρ_0 = 3.741 g/cm^3 .

Reference 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
3.716	7.932	.706	20.810	.2452	4.079	.911	im1	o
3.732	7.916	.974	28.774	.2350	4.256	.877	im1	o
3.734	8.206	1.378	42.224	.2228	4.488	.832	im1	o
3.749	8.552	1.561	50.048	.2181	4.586	.817	im1	o
3.757	8.671	1.654	53.882	.2154	4.643	.809	im1	o
3.749	8.679	1.684	54.793	.2150	4.652	.806	im1	o
3.784	9.186	1.774	61.664	.2132	4.690	.807	im1	o
3.723	9.538	2.185	77.589	.2071	4.829	.771	im1	o
3.763	10.470	2.669	105.155	.1980	5.050	.745	im1	o
3.779	10.664	2.804	112.999	.1950	5.127	.737	im1	o
3.749	10.484	2.865	112.607	.1938	5.159	.727	im1	o
3.736	10.704	3.101	124.009	.1901	5.260	.710	im1	o
3.734	11.067	3.118	128.849	.1924	5.199	.718	im1	o
3.702	10.743	3.231	128.499	.1889	5.294	.699	im1	o
3.710	10.991	3.282	133.829	.1891	5.289	.701	im1	o



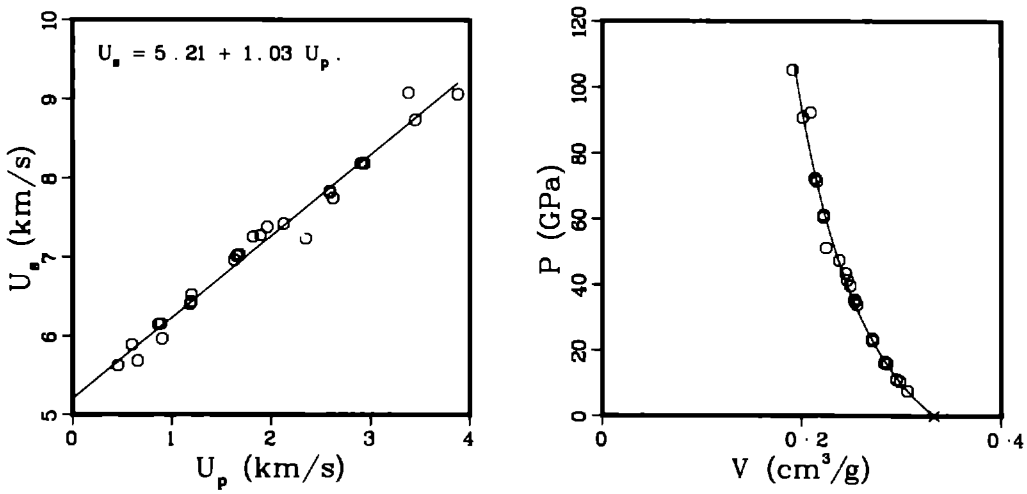
ENSTATITE , ceramic , ρ_0 = 3.01 g/cm^3 .

Average ρ_0 = 3.007 g/cm^3 .

Reference 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.003	5.627	.456	7.705	.3060	3.268	.919	iml o
3.010	5.891	.596	10.568	.2986	3.349	.899	iml o
2.997	5.686	.655	11.162	.2952	3.387	.885	iml o
3.007	6.152	.861	15.928	.2860	3.496	.860	iml o
3.014	6.158	.891	16.537	.2838	3.524	.855	iml o
3.000	5.967	.901	16.129	.2830	3.534	.849	iml o
3.009	6.413	1.184	22.847	.2710	3.690	.815	iml o
3.007	6.440	1.193	23.103	.2710	3.691	.815	iml o
3.015	6.526	1.197	23.552	.2708	3.692	.817	iml o
3.000	6.965	1.628	34.017	.2554	3.915	.766	iml o
3.018	7.017	1.650	34.943	.2534	3.946	.765	iml o
3.007	7.030	1.679	35.493	.2531	3.951	.761	iml o
3.012	7.260	1.817	39.733	.2489	4.017	.750	iml o
3.012	7.278	1.892	41.475	.2457	4.070	.740	iml o
3.010	7.383	1.959	43.535	.2441	4.097	.735	iml o
3.004	7.425	2.126	47.420	.2376	4.209	.714	iml o
3.010	7.234	2.349	51.148	.2243	4.457	.675	iml o
3.015	7.836	2.589	61.167	.2221	4.503	.670	iml o
3.014	7.820	2.592	61.092	.2218	4.508	.669	iml o
2.982	7.750	2.622	60.596	.2219	4.507	.662	iml o
3.000	8.195	2.904	71.395	.2152	4.647	.646	iml o

(Continued)



ENSTATITE, ceramic, ρ_0 = 3.01 g/cm^3.
(Continued)

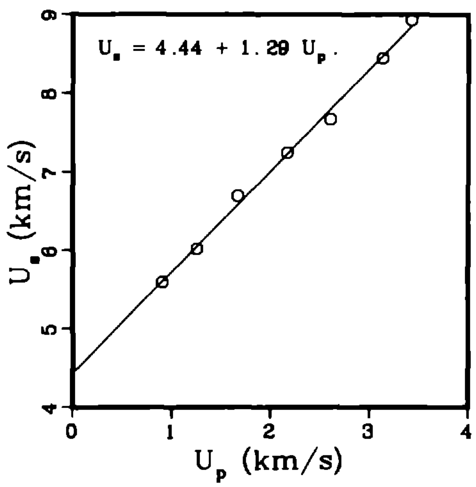
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.011	8.192	2.932	72.321	.2132	4.689	.642	im1 o
3.005	8.183	2.936	72.196	.2134	4.686	.641	im1 o
3.006	9.083	3.383	92.368	.2088	4.790	.628	im1 o
3.012	8.744	3.450	90.862	.2010	4.975	.605	im1 o
2.998	9.067	3.878	105.415	.1909	5.239	.572	im1 o

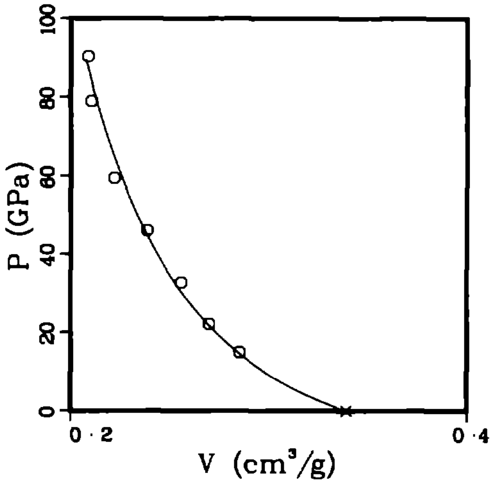
ENSTATITE , ceramic , ρ_0 = 2.95 g/cm^3 .

Average ρ_0 = 2.950 g/cm^3 .

Reference 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.937	5.597	.909	14.942	.2852	3.506	.838	iml o
2.933	6.022	1.255	22.166	.2699	3.705	.792	iml o
2.933	6.702	1.671	32.847	.2559	3.907	.751	iml o
2.936	7.246	2.168	46.123	.2387	4.189	.701	iml o
2.973	7.672	2.610	59.531	.2219	4.506	.660	iml o
2.985	8.446	3.136	79.063	.2106	4.748	.629	iml o
2.951	8.933	3.431	90.446	.2087	4.791	.616	iml o



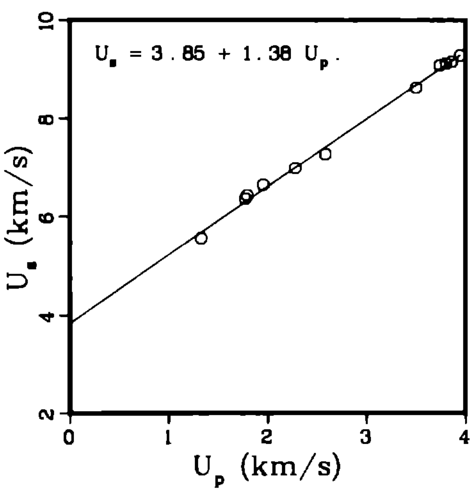


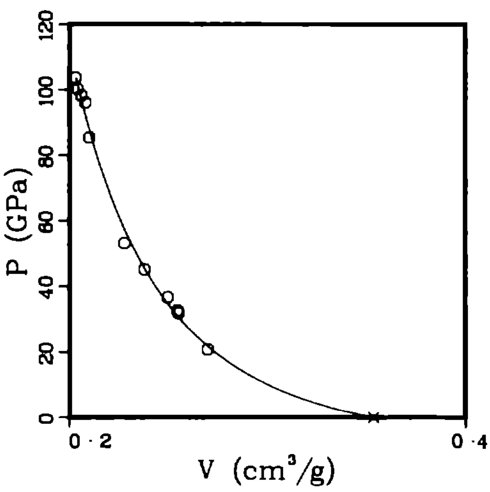
ENSTATITE , ceramic , ρ_0 = 2.83 g/cm^3 .

Average ρ_0 = 2.829 g/cm^3 .

Reference 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.820	5.556	1.329	20.823	.2698	3.707	.761	im1 o
2.826	6.363	1.776	31.936	.2551	3.920	.721	im1 o
2.831	6.429	1.795	32.670	.2546	3.928	.721	im1 o
2.826	6.641	1.956	36.709	.2496	4.006	.705	im1 o
2.831	6.984	2.281	45.099	.2379	4.204	.673	im1 o
2.829	7.269	2.586	53.179	.2277	4.391	.644	im1 o
2.828	8.626	3.502	85.429	.2100	4.761	.594	im1 o
2.827	9.086	3.741	96.092	.2081	4.806	.588	im1 o
2.831	9.124	3.803	98.232	.2060	4.854	.583	im1 o
2.833	9.162	3.865	100.320	.2041	4.900	.578	im1 o
2.833	9.286	3.946	103.808	.2030	4.926	.575	im1 o



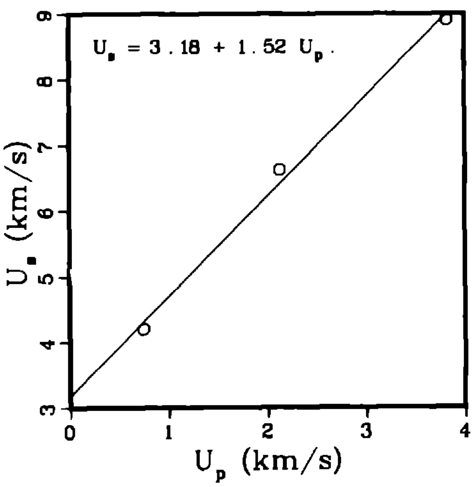


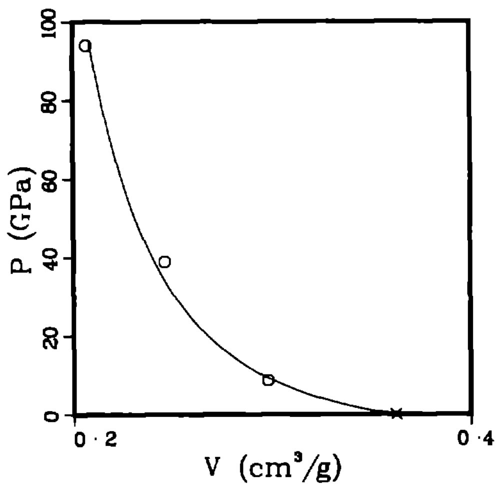
ENSTATITE , ceramic , ρ_0 = 2.76 g/cm^3 .

Average ρ_0 = 2.760 g/cm^3 .

Reference 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.761	4.199	.746	8.649	.2978	3.357	.822	im1 o
2.760	6.628	2.128	38.928	.2460	4.065	.679	im1 o
2.759	8.905	3.825	93.976	.2068	4.836	.570	im1 o



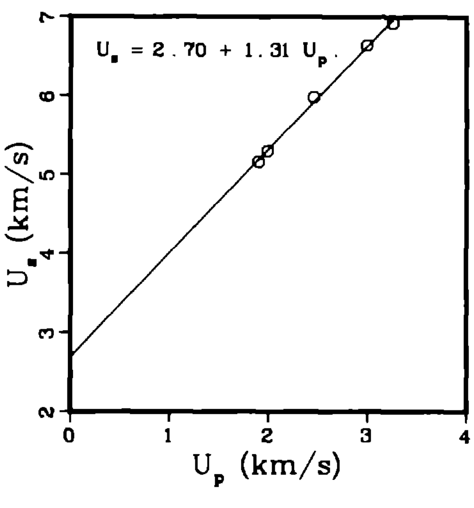


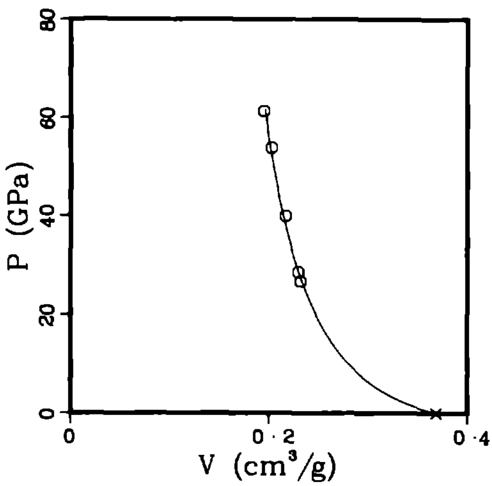
ENSTATITE , ceramic , ρ_0 = 2.71 g/cm^3 .

Average ρ_0 = 2.714 g/cm^3 .

References 6 , 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.720	5.159	1.901	26.676	.2322	4.307	.632	im1 o
2.714	5.297	1.992	28.637	.2299	4.350	.624	im1 o
2.715	5.982	2.458	39.921	.2170	4.609	.589	im1 o
2.706	6.641	2.993	53.786	.2030	4.926	.549	im1 o
2.717	6.926	3.258	61.309	.1949	5.130	.530	im1 o



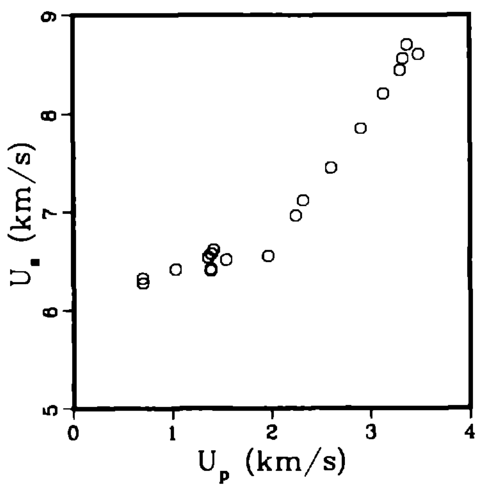


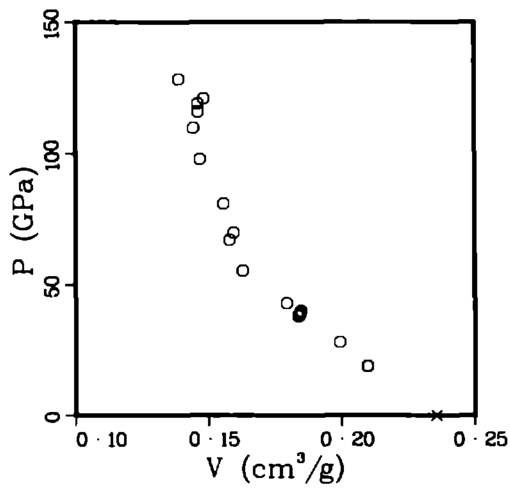
FAYALITE , Rockport , Mass .

Average ρ_0 = 4.245 g/cm^3 .

References 6 , 30 , 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.241	6.329	.702	18.843	.2096	4.770	.889	im1 o
4.230	6.279	.706	18.751	.2098	4.766	.888	im1 o
4.209	6.416	1.035	27.950	.1993	5.019	.839	im1 o
4.305	6.541	1.360	38.296	.1840	5.435	.792	im1 o
4.263	6.424	1.389	38.038	.1839	5.439	.784	im1 o
4.262	6.408	1.391	37.989	.1837	5.444	.783	im1 o
4.274	6.577	1.393	39.157	.1844	5.422	.788	im1 o
4.256	6.618	1.416	39.883	.1847	5.414	.786	im1 o
4.256	6.516	1.545	42.846	.1793	5.579	.763	im1 o
4.296	6.555	1.967	55.391	.1629	6.138	.700	im1 o
4.293	6.964	2.243	67.058	.1579	6.333	.678	im1 o
4.233	7.122	2.317	69.852	.1594	6.274	.675	im1 o
4.185	7.448	2.598	80.979	.1556	6.427	.651	im1 o
4.293	7.849	2.905	97.886	.1467	6.815	.630	im1 o
4.282	8.203	3.130	109.942	.1444	6.924	.618	im1 o
4.169	8.441	3.298	116.058	.1461	6.842	.609	im1 o
4.186	8.559	3.326	119.164	.1461	6.847	.611	im1 o
4.133	8.698	3.368	121.076	.1483	6.745	.613	im1 o
4.286	8.602	3.483	128.412	.1388	7.202	.595	im1 o





FORSTERITE , ceramic , ρ_0 = 3.20 g/cm^3 .

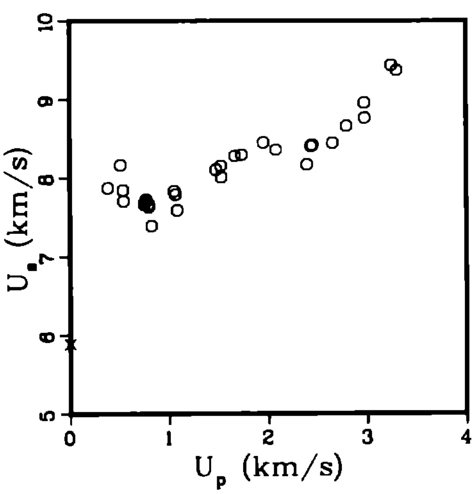
Average ρ_0 = 3.201 g/cm^3 .

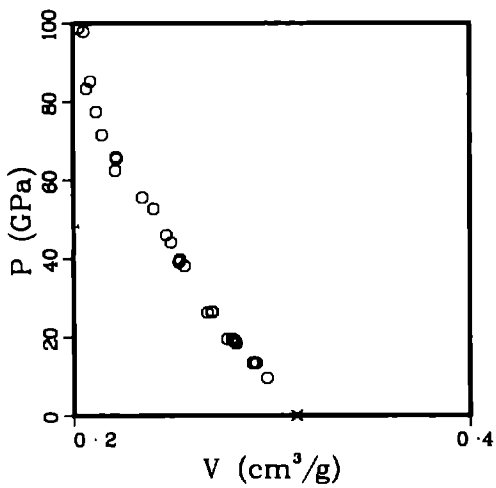
Sound velocities longitudinal 8.15 km/s .
shear 4.88 km/s .

Reference 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
3.201	5.887	0.000	0.000	.3124	3.201	1.000	ssp	×
3.197	7.875	.384	9.668	.2975	3.361	.951	iml	o
3.210	8.164	.512	13.418	.2920	3.425	.937	iml	o
3.203	7.847	.537	13.497	.2908	3.438	.932	iml	o
3.203	7.709	.543	13.408	.2902	3.446	.930	iml	o
3.200	7.671	.749	18.386	.2820	3.546	.902	iml	o
3.201	7.725	.769	19.016	.2813	3.555	.900	iml	o
3.201	7.708	.770	18.998	.2812	3.556	.900	iml	o
3.201	7.668	.795	19.513	.2800	3.571	.896	iml	o
3.201	7.637	.797	19.483	.2798	3.574	.896	iml	o
3.202	7.397	.825	19.540	.2775	3.604	.888	iml	o
3.208	7.834	1.053	26.463	.2698	3.706	.866	iml	o
3.197	7.791	1.069	26.626	.2699	3.705	.863	iml	o
3.205	7.593	1.084	26.380	.2675	3.739	.857	iml	o
3.195	8.102	1.475	38.182	.2560	3.906	.818	iml	o
3.205	8.151	1.524	39.813	.2537	3.942	.813	iml	o
3.196	8.008	1.529	39.133	.2531	3.950	.809	iml	o
3.207	8.280	1.663	44.159	.2492	4.013	.799	iml	o
3.204	8.292	1.735	46.095	.2468	4.052	.791	iml	o

(Continued)





FORSTERITE, ceramic, ρ_0 = 3.20 g/cm^3.
(Continued)

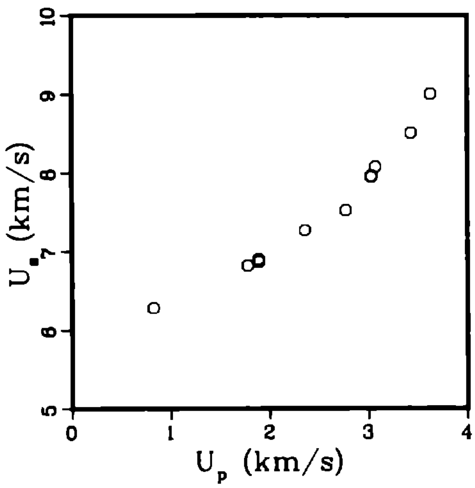
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
3.197	8.452	1.953	52.772	.2405	4.158	.769	im1	o
3.199	8.357	2.080	55.607	.2348	4.259	.751	im1	o
3.197	8.167	2.392	62.455	.2212	4.521	.707	im1	o
3.203	8.409	2.433	65.530	.2219	4.507	.711	im1	o
3.201	8.418	2.449	65.991	.2215	4.514	.709	im1	o
3.198	8.447	2.651	71.613	.2146	4.661	.686	im1	o
3.203	8.663	2.792	77.471	.2116	4.726	.678	im1	o
3.201	8.956	2.973	85.230	.2087	4.792	.668	im1	o
3.196	8.765	2.976	83.367	.2067	4.839	.660	im1	o
3.197	9.440	3.245	97.933	.2053	4.872	.656	im1	o
3.197	9.372	3.299	98.846	.2027	4.934	.648	im1	o

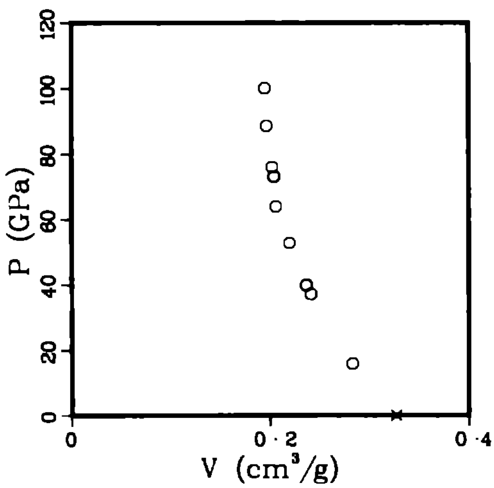
FORSTERITE , ceramic , ρ_0 = 3.06 g/cm^3 .

Average ρ_0 = 3.059 g/cm^3

References 6 , 30 , 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.070	6.287	.825	15.923	.2830	3.534	.869	im1 o
3.066	6.820	1.779	37.199	.2411	4.148	.739	im1 o
3.069	6.900	1.887	39.959	.2367	4.224	.727	im1 o
3.063	6.869	1.892	39.807	.2366	4.227	.725	im1 o
3.078	7.269	2.357	52.735	.2195	4.555	.676	im1 o
3.068	7.525	2.771	63.973	.2059	4.856	.632	im1 o
3.034	7.959	3.028	73.119	.2042	4.897	.620	im1 o
3.034	7.953	3.029	73.088	.2041	4.900	.619	im1 o
3.066	8.078	3.070	76.035	.2022	4.946	.620	im1 o
3.038	8.514	3.429	88.693	.1966	5.087	.597	im1 o
3.065	9.005	3.626	100.079	.1949	5.131	.597	im1 o

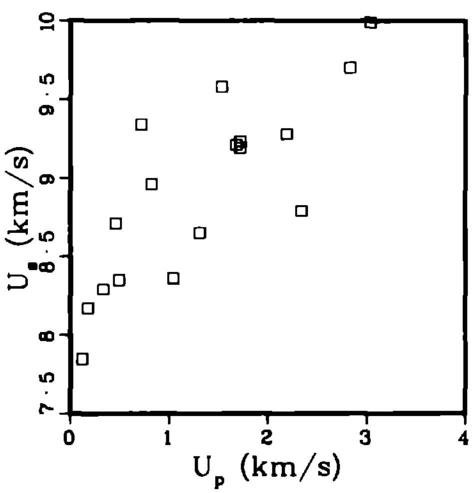


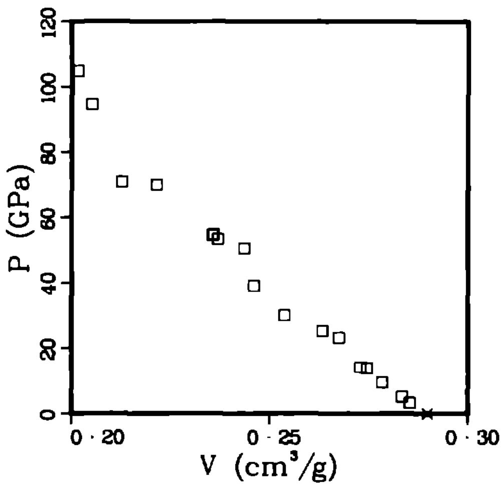


GARNET , grossularite

Average ρ_0 = 3.450 g/cm³ .

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
3.450	7.850	.120	3.250	.2854	3.504	.985	im2 □
3.450	8.170	.180	5.074	.2835	3.528	.978	im2 □
3.450	8.290	.330	9.438	.2783	3.593	.960	im2 □
3.450	8.710	.460	13.823	.2745	3.642	.947	im2 □
3.450	8.350	.490	14.116	.2728	3.665	.941	im2 □
3.450	9.340	.720	23.201	.2675	3.738	.923	im2 □
3.450	8.960	.820	25.348	.2633	3.798	.908	im2 □
3.450	8.360	1.040	29.996	.2538	3.940	.876	im2 □
3.450	8.650	1.310	39.094	.2460	4.066	.849	im2 □
3.450	9.580	1.530	50.568	.2436	4.106	.840	im2 □
3.450	9.210	1.680	53.381	.2370	4.220	.818	im2 □
3.450	9.230	1.720	54.771	.2358	4.240	.814	im2 □
3.450	9.190	1.720	54.533	.2356	4.244	.813	im2 □
3.450	9.280	2.190	70.115	.2215	4.516	.764	im2 □
3.450	8.790	2.340	70.962	.2127	4.702	.734	im2 □
3.450	9.700	2.830	94.706	.2053	4.871	.708	im2 □
3.450	9.990	3.040	104.775	.2017	4.959	.696	im2 □



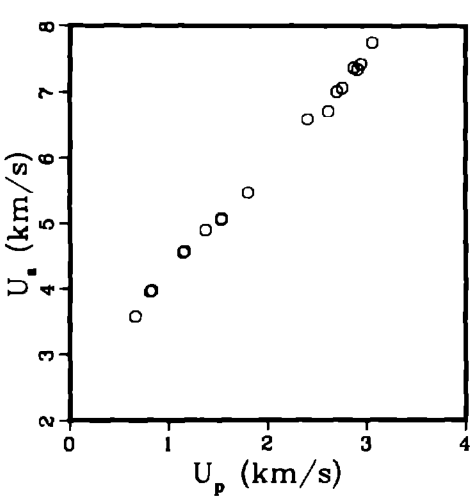


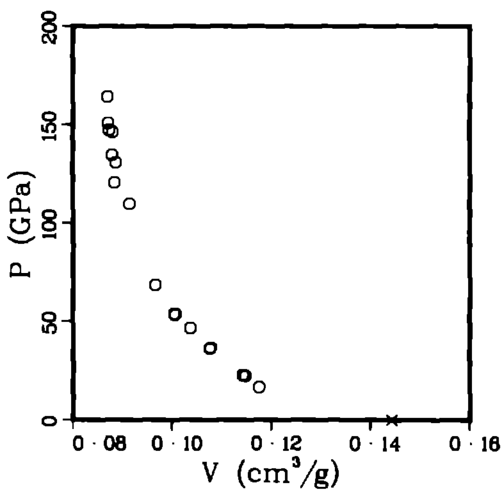
HAFNIUM TITANATE, ρ_0 = 6.93 g/cm^3.

Average ρ_0 = 6.932 g/cm^3.

Reference 34

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.927	3.578	.664	16.457	.1176	8.505	.814	im1 o
6.926	3.955	.812	22.243	.1147	8.715	.795	im1 o
6.929	3.969	.827	22.743	.1142	8.753	.792	im1 o
6.955	4.551	1.143	36.178	.1077	9.288	.749	im1 o
6.924	4.572	1.159	36.690	.1078	9.275	.747	im1 o
6.942	4.898	1.373	46.685	.1037	9.646	.720	im1 o
6.917	5.048	1.531	53.458	.1007	9.928	.697	im1 o
6.943	5.070	1.533	53.963	.1005	9.952	.698	im1 o
6.942	5.471	1.802	68.439	.0966	10.352	.671	im1 o
6.941	6.584	2.403	109.816	.0915	10.930	.635	im1 o
6.906	6.700	2.611	120.811	.0884	11.316	.610	im1 o
6.925	7.002	2.702	131.017	.0887	11.276	.614	im1 o
6.936	7.056	2.754	134.782	.0879	11.376	.610	im1 o
6.933	7.362	2.867	146.334	.0881	11.355	.611	im1 o
6.916	7.337	2.904	147.357	.0874	11.447	.604	im1 o
6.930	7.415	2.938	150.972	.0871	11.478	.604	im1 o
6.950	7.738	3.057	164.403	.0870	11.489	.605	im1 o



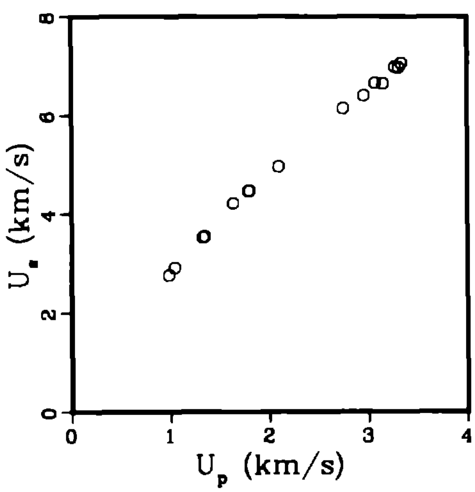


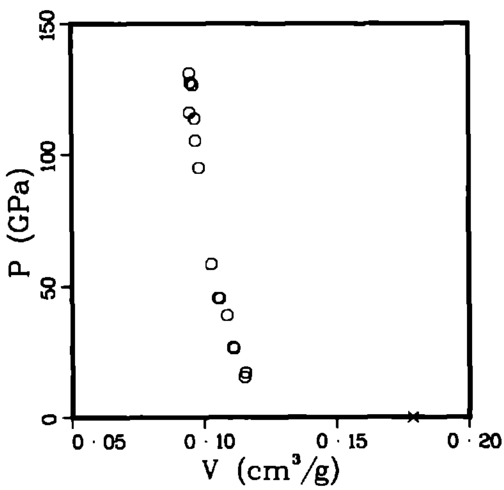
HAFNIUM TITANATE, ρ_0 = 5.60 g/cm^3.

Average ρ_0 = 5.597 g/cm^3.

Reference 34

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
5.599	2.773	.985	15.293	.1152	8.683	.645	im1	o
5.576	2.925	1.043	17.011	.1154	8.666	.643	im1	o
5.607	3.532	1.328	26.300	.1113	8.985	.624	im1	o
5.605	3.549	1.344	26.735	.1108	9.021	.621	im1	o
5.637	4.217	1.637	38.914	.1085	9.214	.612	im1	o
5.663	4.472	1.791	45.357	.1059	9.446	.600	im1	o
5.668	4.475	1.800	45.656	.1055	9.482	.598	im1	o
5.627	4.961	2.093	58.427	.1027	9.733	.578	im1	o
5.630	6.140	2.749	95.028	.0981	10.194	.552	im1	o
5.562	6.402	2.957	105.293	.0967	10.336	.538	im1	o
5.572	6.654	3.071	113.861	.0966	10.348	.538	im1	o
5.550	6.640	3.151	116.121	.0947	10.562	.525	im1	o
5.547	6.979	3.269	126.551	.0958	10.435	.532	im1	o
5.536	6.965	3.306	127.474	.0949	10.538	.525	im1	o
5.577	7.050	3.334	131.086	.0945	10.581	.527	im1	o



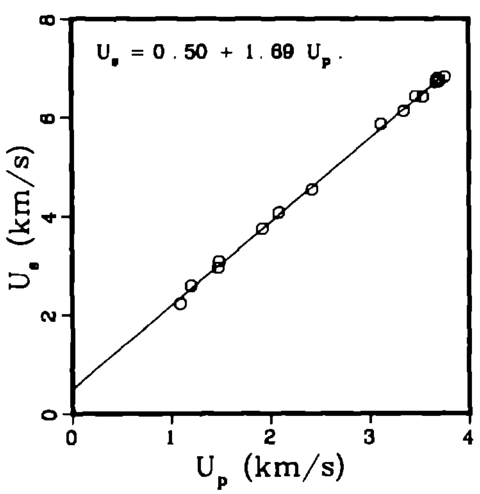


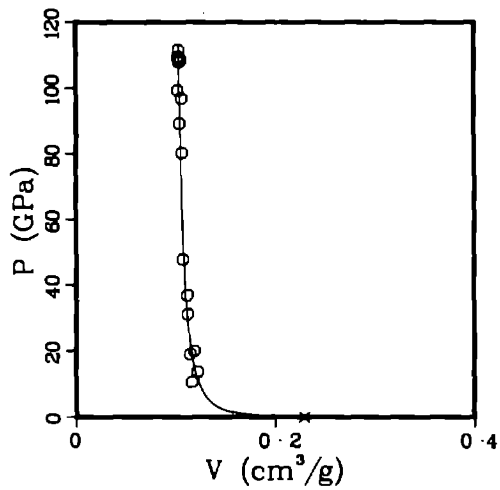
HAFNIUM TITANATE, ρ_0 = 4.37 g/cm^3.

Average ρ_0 = 4.367 g/cm^3.

Reference 34

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.386	2.226	1.091	10.652	.1163	8.602	.510	im1 o
4.374	2.589	1.203	13.623	.1224	8.170	.535	im1 o
4.382	2.959	1.474	19.112	.1145	8.732	.502	im1 o
4.380	3.089	1.480	20.024	.1189	8.409	.521	im1 o
4.349	3.748	1.919	31.280	.1122	8.912	.488	im1 o
4.360	4.074	2.082	36.982	.1121	8.917	.489	im1 o
4.359	4.549	2.421	48.006	.1073	9.318	.468	im1 o
4.394	5.867	3.119	80.407	.1066	9.381	.468	im1 o
4.352	6.130	3.346	89.264	.1044	9.583	.454	im1 o
4.351	6.435	3.464	96.987	.1061	9.424	.462	im1 o
4.375	6.425	3.536	99.395	.1028	9.730	.450	im1 o
4.372	6.715	3.679	108.008	.1034	9.670	.452	im1 o
4.343	6.787	3.681	108.501	.1054	9.490	.458	im1 o
4.384	6.737	3.704	109.398	.1027	9.738	.450	im1 o
4.348	6.825	3.760	111.578	.1033	9.682	.449	im1 o



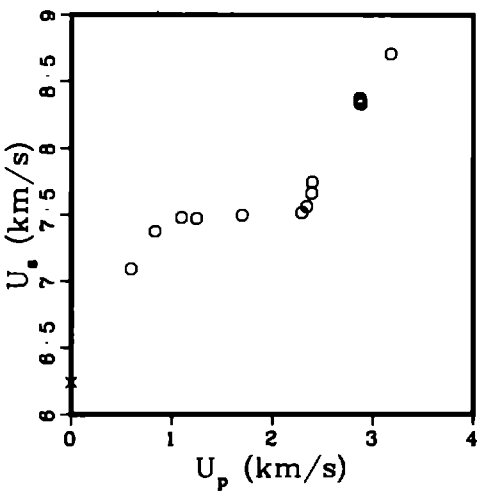


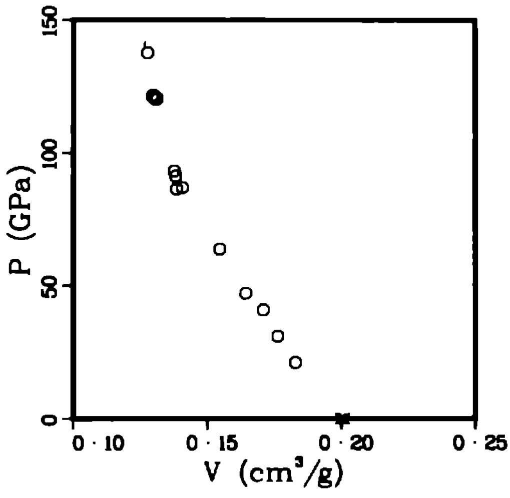
HEMATITE

Average ρ_0 = 5.007 g/cm^3.

Sound velocities longitudinal 7.78 km/s.
shear 4.02 km/s.
References 6, 30, 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
4.976	6.243	0.000	0.000	.2010	4.976	1.000	ssp	×
5.010	7.092	.595	21.141	.1829	5.469	.916	iml	o
5.033	7.375	.834	30.957	.1762	5.675	.887	iml	o
4.994	7.479	1.097	40.973	.1709	5.852	.853	iml	o
5.069	7.472	1.247	47.231	.1644	6.084	.833	iml	o
5.000	7.496	1.700	63.716	.1546	6.467	.773	iml	o
5.015	7.516	2.294	86.467	.1385	7.218	.695	iml	o
4.903	7.562	2.343	86.870	.1408	7.104	.690	iml	o
4.976	7.661	2.392	91.186	.1382	7.235	.688	iml	o
5.015	7.744	2.398	93.129	.1377	7.265	.690	iml	o
5.008	8.372	2.870	120.330	.1312	7.620	.657	iml	o
5.022	8.344	2.871	120.305	.1306	7.656	.656	iml	o
5.011	8.344	2.873	120.125	.1308	7.642	.656	iml	o
5.052	8.363	2.877	121.553	.1298	7.701	.656	iml	o
5.052	8.330	2.882	121.284	.1295	7.725	.654	iml	o
4.972	8.709	3.180	137.698	.1277	7.832	.635	iml	o





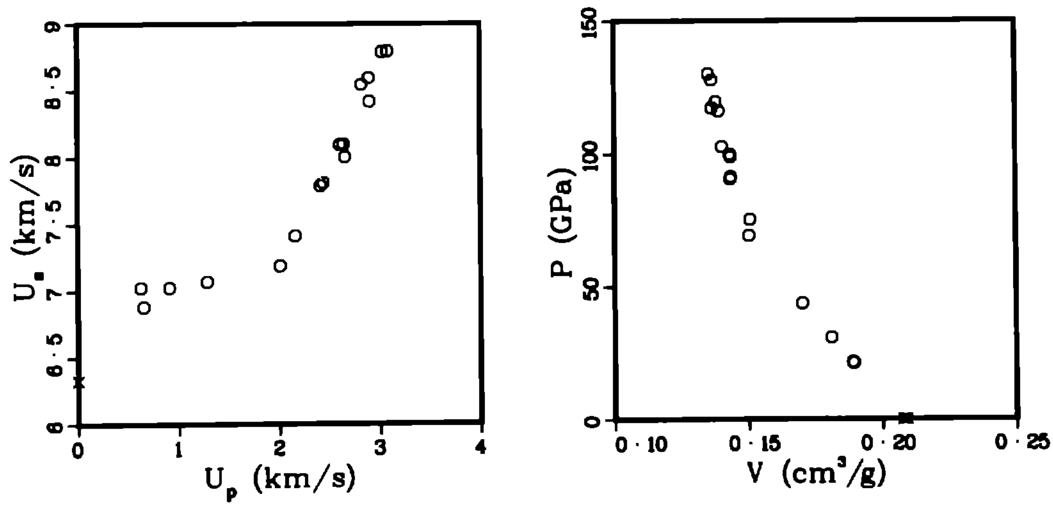
ILMENITE, Kragerø, Norway

Average ρ_0 = 4.787 g/cm^3.

Sound velocities longitudinal 7.16 km/s.
shear 2.90 km/s.

Reference 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.817	6.329	0.000	0.000	.2076	4.817	1.000	ssp ×
4.814	7.026	.626	21.173	.1892	5.285	.911	im1 o
4.793	6.883	.652	21.510	.1889	5.295	.905	im1 o
4.811	7.026	.909	30.726	.1810	5.526	.871	im1 o
4.812	7.070	1.284	43.683	.1701	5.880	.818	im1 o
4.797	7.187	2.009	69.262	.1502	6.658	.720	im1 o
4.705	7.414	2.160	75.347	.1506	6.639	.709	im1 o
4.815	7.788	2.413	90.486	.1433	6.977	.690	im1 o
4.790	7.811	2.441	91.329	.1435	6.967	.687	im1 o
4.735	8.098	2.608	100.001	.1432	6.984	.678	im1 o
4.803	8.102	2.643	102.849	.1403	7.128	.674	im1 o
4.656	8.006	2.657	99.042	.1435	6.969	.668	im1 o
4.815	8.548	2.824	116.232	.1391	7.191	.670	im1 o
4.805	8.598	2.896	119.644	.1380	7.245	.663	im1 o
4.800	8.420	2.903	117.328	.1365	7.326	.655	im1 o
4.805	8.791	3.027	127.863	.1365	7.328	.656	im1 o
4.805	8.796	3.082	130.260	.1352	7.397	.650	im1 o

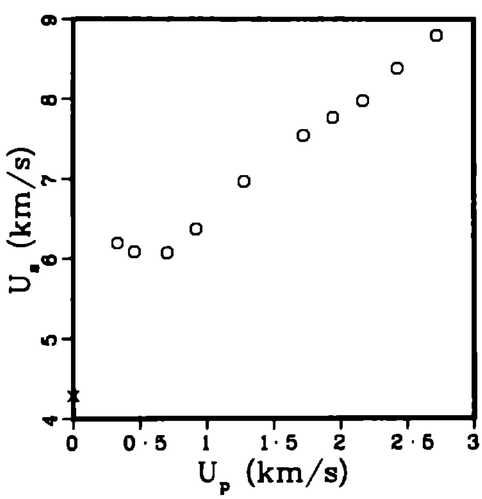


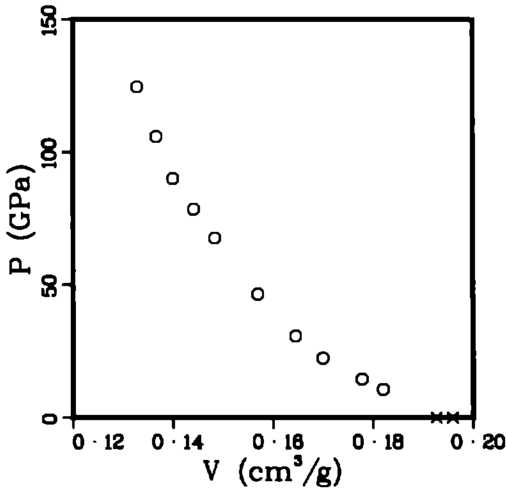
IRON MAGNESIUM OXIDE, Fe_{90}, $Mg_{10}O$

Average ρ_0 = 5.191 g/cm³.

Sound velocities longitudinal 5.40 km/s.
shear 2.84 km/s.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
5.106	4.290	0.000	0.000	.1958	5.106	1.000	ssp ×
5.200	6.198	.332	10.700	.1820	5.494	.946	im1 o
5.200	6.086	.459	14.526	.1778	5.624	.925	im1 o
5.200	6.074	.705	22.267	.1700	5.883	.884	im1 o
5.200	6.376	.921	30.536	.1645	6.078	.856	im1 o
5.200	6.968	1.280	46.379	.1570	6.370	.816	im1 o
5.200	7.545	1.724	67.639	.1484	6.740	.772	im1 o
5.200	7.767	1.944	78.515	.1442	6.936	.750	im1 o
5.200	7.975	2.169	89.948	.1400	7.143	.728	im1 o
5.200	8.388	2.427	105.860	.1367	7.317	.711	im1 o
5.200	8.798	2.721	124.485	.1328	7.528	.691	im1 o

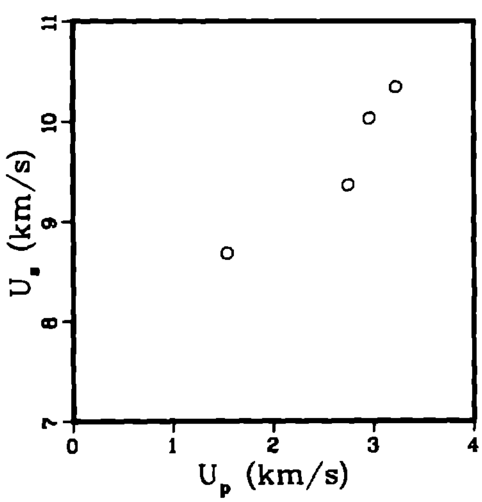


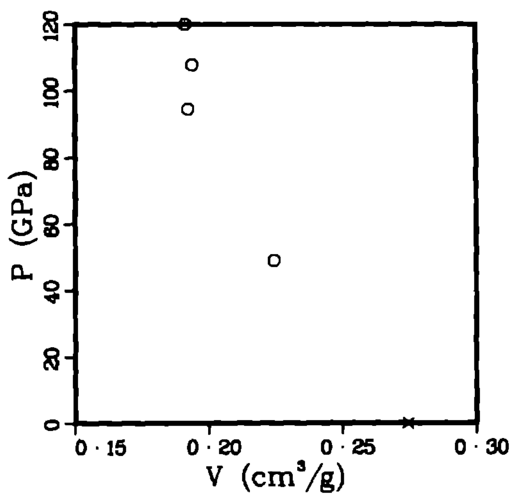


KYANITE, ceramic, ρ_0 = 3.6 g/cm^3.

Average ρ_0 = 3.645 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.668	8.682	1.537	48.947	.2244	4.457	.823	im1 o
3.675	9.364	2.745	94.463	.1923	5.199	.707	im1 o
3.636	10.030	2.957	107.839	.1939	5.156	.705	im1 o
3.602	10.342	3.220	119.951	.1912	5.231	.689	im1 o

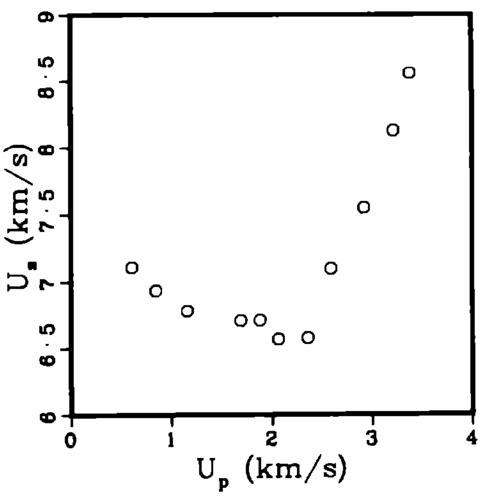


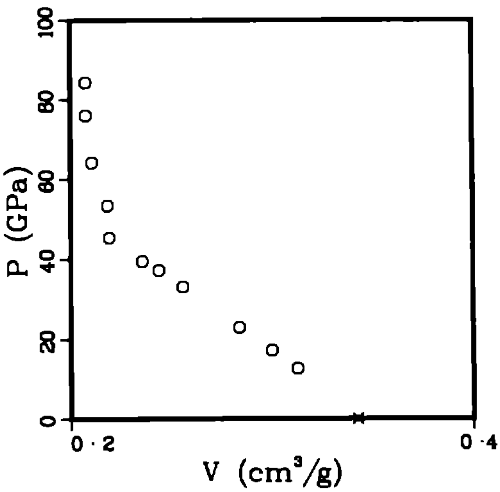


KYANITE , ceramic , ρ_0 = 2.9 g/cm^3 .

Average ρ_0 = 2.921 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.925	7.107	.608	12.639	.3126	3.199	.914	im1 o
2.927	6.935	.847	17.193	.2999	3.334	.878	im1 o
2.924	6.785	1.157	22.954	.2837	3.525	.829	im1 o
2.925	6.708	1.691	33.179	.2557	3.911	.748	im1 o
2.952	6.710	1.882	37.279	.2437	4.103	.720	im1 o
2.910	6.568	2.066	39.487	.2355	4.245	.685	im1 o
2.926	6.576	2.359	45.390	.2192	4.563	.641	im1 o
2.907	7.095	2.591	53.440	.2184	4.579	.635	im1 o
2.910	7.549	2.923	64.211	.2106	4.749	.613	im1 o
2.910	8.128	3.217	76.090	.2076	4.816	.604	im1 o
2.912	8.558	3.383	84.307	.2077	4.816	.605	im1 o

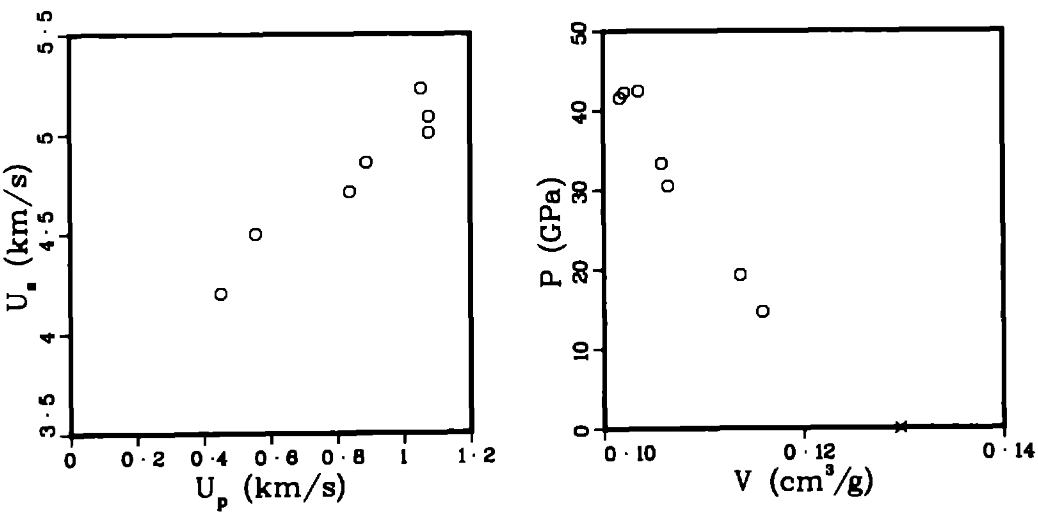




LEAD ZIRCONIUM TITANATE, PZT

Average ρ_0 = 7.714 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.700	4.203	.452	14.628	.1159	8.628	.892	im1 o
7.710	4.499	.556	19.286	.1137	8.797	.876	im1 o
7.720	4.710	.839	30.507	.1065	9.393	.822	im1 o
7.720	4.855	.889	33.320	.1058	9.450	.817	im1 o
7.710	5.226	1.054	42.468	.1035	9.658	.798	im1 o
7.720	5.086	1.077	42.287	.1021	9.794	.788	im1 o
7.720	5.006	1.077	41.622	.1017	9.836	.785	im1 o

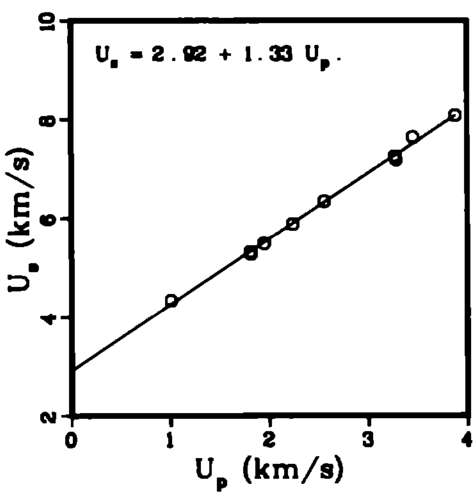


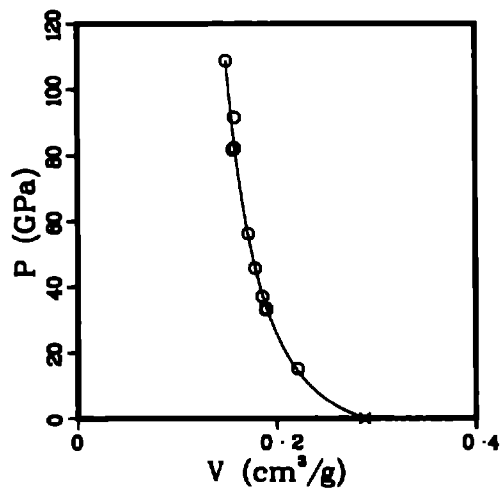
LITHIUM BROMIDE, single-crystal, [100]

Average ρ_0 = 3.470 g/cm^3.

Reference 35

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.470	4.332	1.007	15.137	.2212	4.521	.768	iml o
3.470	5.310	1.808	33.314	.1901	5.261	.660	iml o
3.470	5.268	1.814	33.160	.1890	5.292	.656	iml o
3.470	5.481	1.948	37.049	.1858	5.383	.645	iml o
3.470	5.877	2.237	45.620	.1785	5.603	.619	iml o
3.470	6.337	2.557	56.227	.1719	5.817	.596	iml o
3.470	7.253	3.270	82.299	.1583	6.319	.549	iml o
3.470	7.181	3.283	81.806	.1564	6.393	.543	iml o
3.470	7.640	3.452	91.515	.1580	6.330	.548	iml o
3.470	8.079	3.881	108.800	.1497	6.678	.520	iml o

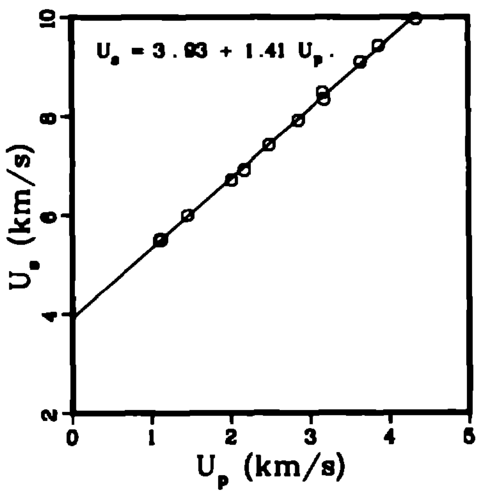


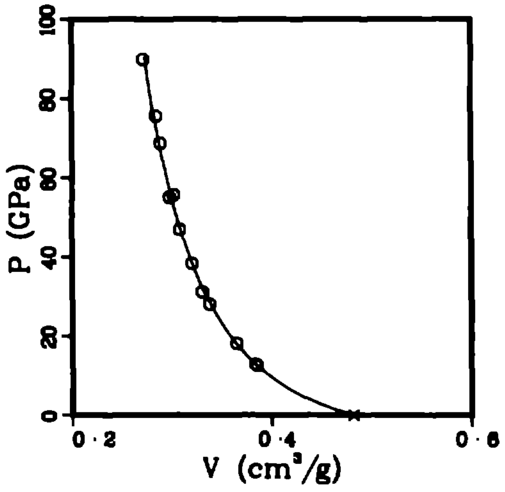


LITHIUM CHLORIDE, single-crystal, [100]

Average ρ_0 = 2.075 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.075	5.494	1.100	12.540	.3854	2.594	.800	iml	o
2.075	5.509	1.120	12.803	.3840	2.605	.797	iml	o
2.075	6.000	1.458	18.152	.3648	2.741	.757	iml	o
2.075	6.718	2.011	28.033	.3377	2.962	.701	iml	o
2.075	6.915	2.169	31.122	.3308	3.023	.686	iml	o
2.075	7.420	2.490	38.337	.3202	3.123	.664	iml	o
2.075	7.920	2.855	46.919	.3082	3.245	.640	iml	o
2.075	8.479	3.167	55.720	.3019	3.312	.626	iml	o
2.075	8.340	3.186	55.135	.2978	3.358	.618	iml	o
2.075	9.093	3.642	68.717	.2889	3.461	.599	iml	o
2.075	9.429	3.868	75.678	.2842	3.518	.590	iml	o
2.075	9.968	4.344	89.850	.2719	3.678	.564	iml	o



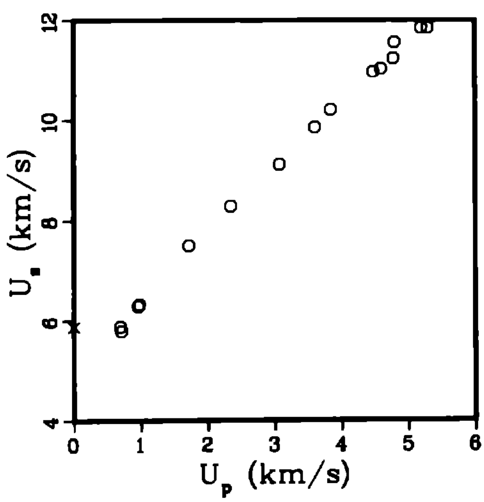


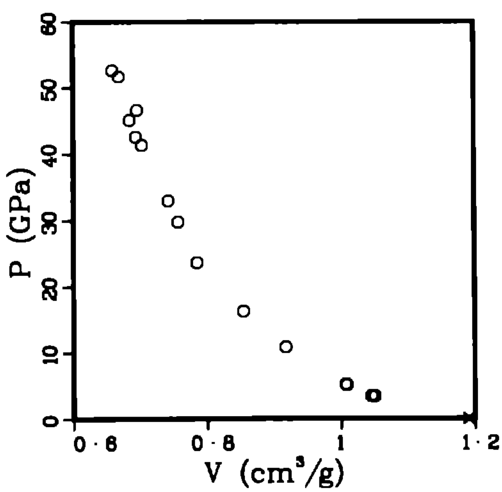
LITHIUM DEUTERIDE, pressed

Average ρ_0 = 0.840 g/cm^3.

Sound velocities longitudinal 9.36 km/s.
shear 6.31 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.840	5.875	0.000	0.000	1.1905	.840	1.000	ssp ×
.840	5.880	.695	3.433	1.0498	.953	.882	im1 o
.839	5.790	.712	3.459	1.0453	.957	.877	im1 o
.840	6.300	.964	5.101	1.0083	.992	.847	im1 o
.839	6.330	.983	5.221	1.0068	.993	.845	im1 o
.840	7.500	1.721	10.842	.9173	1.090	.771	im1 o
.839	8.290	2.348	16.331	.8543	1.171	.717	im1 o
.844	9.110	3.074	23.635	.7850	1.274	.663	im1 o
.838	9.860	3.606	29.795	.7569	1.321	.634	im1 o
.840	10.210	3.844	32.968	.7423	1.347	.624	im1 o
.842	10.970	4.477	41.353	.7030	1.423	.592	im1 o
.841	11.030	4.593	42.606	.6939	1.441	.584	im1 o
.840	11.240	4.778	45.112	.6844	1.461	.575	im1 o
.841	11.560	4.796	46.627	.6957	1.437	.585	im1 o
.840	11.850	5.195	51.711	.6686	1.496	.562	im1 o
.840	11.850	5.292	52.677	.6588	1.518	.553	im1 o





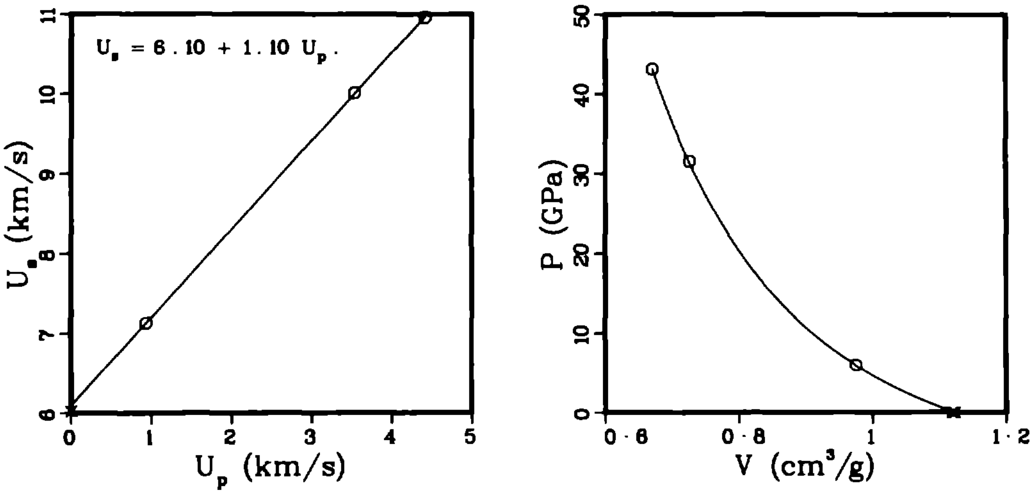
LITHIUM DEUTERIDE, single-crystal

Average ρ_0 = 0.891 g/cm^3.

Sound velocities longitudinal 9.56 km/s.
shear 6.43 km/s.

Reference 36

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.894	6.022	0.000	0.000	1.1188	.894	1.000	ssp	×
.890	7.130	.940	5.965	.9755	1.025	.868	iml	o
.890	10.010	3.539	31.529	.7264	1.377	.646	iml	o
.890	10.960	4.417	43.085	.6708	1.491	.597	iml	o



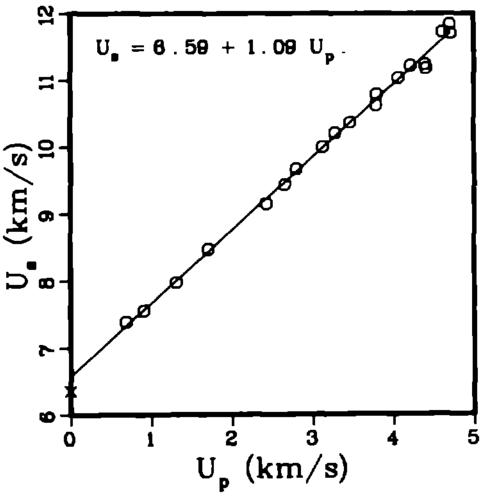
LITHIUM-6 DEUTERIDE, pressed, ρ_0 = 0.80 g/cm^3.

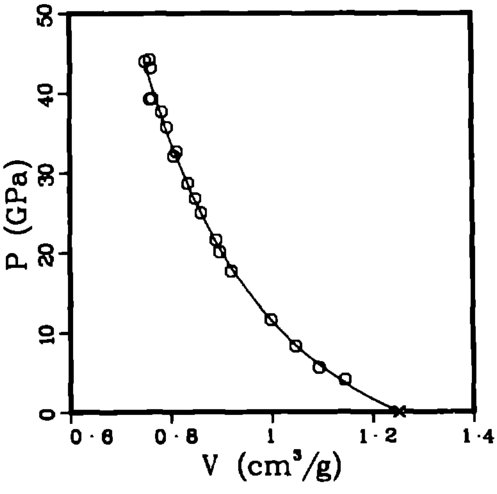
Average ρ_0 = 0.798 g/cm^3.

Sound velocities longitudinal 10.10 km/s.
shear 6.80 km/s.

Reference 36

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.799	6.353	0.000	0.000	1.2509	.799	1.000	ssp	x
.792	7.390	.688	4.029	1.1445	.874	.907	im1	o
.805	7.560	.911	5.541	1.0932	.915	.879	im1	o
.798	7.980	1.308	8.334	1.0472	.955	.836	im1	o
.799	8.480	1.707	11.573	.9990	1.001	.799	im1	o
.798	9.150	2.427	17.728	.9204	1.086	.735	im1	o
.800	9.440	2.656	20.063	.8981	1.113	.719	im1	o
.798	9.670	2.795	21.560	.8913	1.122	.711	im1	o
.799	10.000	3.123	24.953	.8607	1.162	.688	im1	o
.799	10.210	3.281	26.756	.8497	1.177	.679	im1	o
.798	10.370	3.468	28.702	.8339	1.199	.666	im1	o
.798	10.630	3.786	32.116	.8068	1.239	.644	im1	o
.798	10.790	3.793	32.668	.8124	1.231	.648	im1	o
.797	11.040	4.064	35.736	.7933	1.261	.632	im1	o
.798	11.220	4.211	37.703	.7828	1.277	.625	im1	o
.798	11.240	4.390	39.366	.7639	1.309	.609	im1	o
.798	11.180	4.403	39.277	.7597	1.316	.606	im1	o
.797	11.730	4.614	43.152	.7609	1.314	.607	im1	o
.794	11.840	4.703	44.224	.7590	1.318	.603	im1	o
.797	11.710	4.712	43.982	.7497	1.334	.598	im1	o





LITHIUM-6 DEUTERIDE, pressed, ρ_0 = 0.76 g/cm^3.

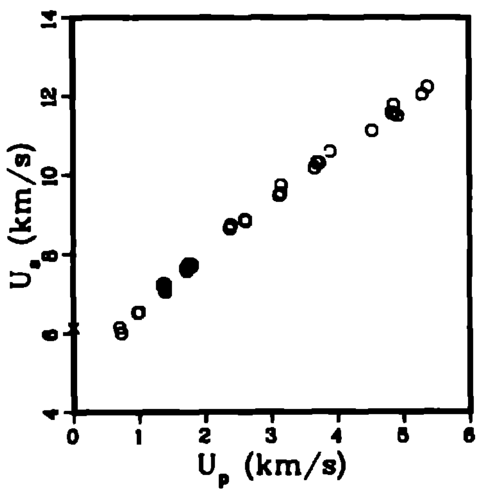
Average ρ_0 = 0.764 g/cm^3.

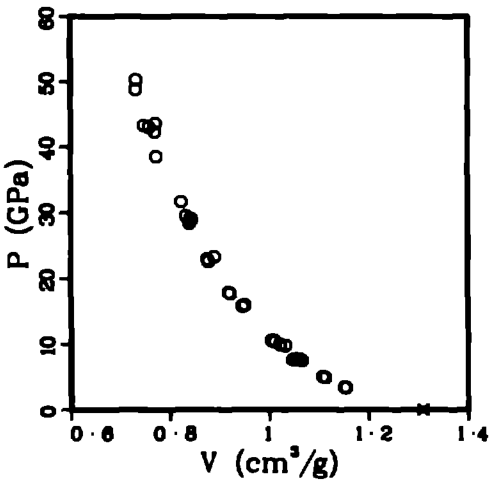
Sound velocities longitudinal 9.72 km/s.
shear 6.53 km/s.

Reference 36

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.764	6.134	0.000	0.000	1.3089	.764	1.000	ssp	×
.767	6.140	.702	3.306	1.1547	.866	.886	iml	o
.764	6.000	.721	3.305	1.1516	.868	.880	iml	o
.764	6.520	.977	4.867	1.1128	.899	.850	iml	o
.765	6.530	.997	4.980	1.1076	.903	.847	iml	o
.761	7.190	1.360	7.439	1.0658	.938	.811	iml	o
.765	7.250	1.368	7.583	1.0611	.942	.811	iml	o
.768	7.230	1.387	7.702	1.0523	.950	.808	iml	o
.762	7.240	1.388	7.659	1.0605	.943	.808	iml	o
.764	7.100	1.394	7.563	1.0518	.951	.804	iml	o
.766	7.040	1.396	7.527	1.0467	.955	.802	iml	o
.760	7.650	1.712	9.956	1.0211	.979	.776	iml	o
.749	7.580	1.721	9.770	1.0321	.969	.773	iml	o
.767	7.750	1.745	10.373	1.0102	.990	.775	iml	o
.762	7.750	1.769	10.570	1.0089	.991	.769	iml	o
.764	7.700	1.796	10.564	1.0037	.996	.767	iml	o
.767	8.640	2.376	15.745	.9452	1.058	.725	iml	o
.764	8.730	2.393	15.950	.9507	1.052	.726	iml	o
.768	8.860	2.607	17.744	.9187	1.088	.706	iml	o

(Continued)





LITHIUM-6 DEUTERIDE, pressed, ρ_0 = 0.76 g/cm^3.
(Continued)

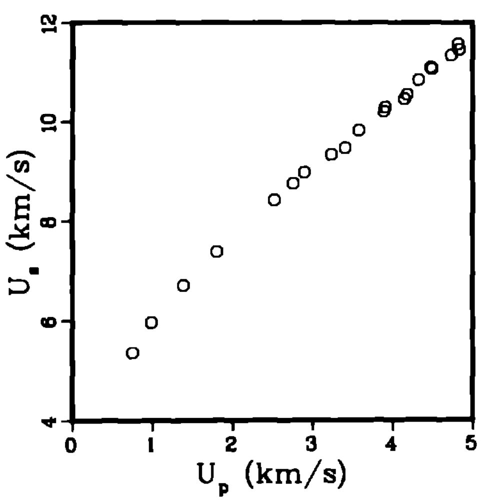
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.764	8.830	2.613	17.628	.9216	1.085	.704	iml o
.765	9.480	3.118	22.612	.8773	1.140	.671	iml o
.766	9.540	3.146	22.984	.8752	1.143	.670	iml o
.761	9.740	3.148	23.330	.8895	1.124	.677	iml o
.762	10.170	3.664	28.394	.8395	1.191	.640	iml o
.761	10.300	3.705	29.026	.8418	1.188	.640	iml o
.759	10.310	3.707	28.989	.8444	1.184	.640	iml o
.765	10.310	3.736	29.482	.8331	1.200	.638	iml o
.768	10.590	3.896	31.687	.8231	1.215	.632	iml o
.766	11.110	4.529	38.543	.7733	1.293	.592	iml o
.757	11.570	4.826	42.285	.7697	1.299	.583	iml o
.766	11.570	4.853	43.010	.7579	1.319	.581	iml o
.761	11.780	4.863	43.618	.7712	1.297	.587	iml o
.766	11.500	4.914	43.287	.7476	1.338	.573	iml o
.766	12.040	5.293	48.815	.7316	1.367	.560	iml o
.766	12.230	5.372	50.326	.7321	1.366	.561	iml o

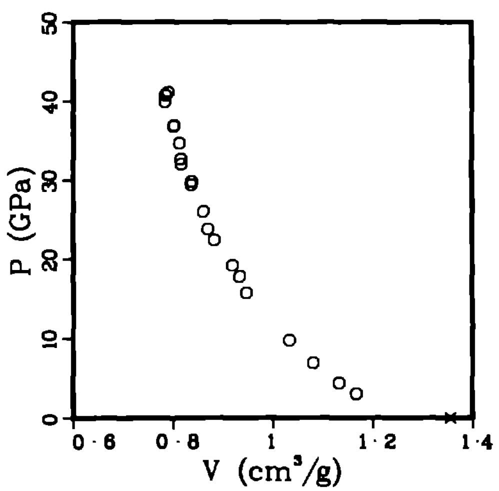
LITHIUM-6 DEUTERIDE, pressed, ρ_0 = 0.74 g/cm^3.

Average ρ_0 = 0.738 g/cm^3.

Reference 36

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.736	5.350	.753	2.965	1.1673	.857	.859	iml o
.737	5.960	.984	4.320	1.1333	.882	.835	iml o
.733	6.700	1.390	6.828	1.0809	.925	.793	iml o
.731	7.380	1.803	9.725	1.0339	.967	.756	iml o
.739	8.410	2.522	15.672	.9475	1.055	.700	iml o
.733	8.760	2.760	17.734	.9338	1.071	.685	iml o
.737	8.980	2.901	19.194	.9188	1.088	.677	iml o
.741	9.340	3.233	22.360	.8830	1.133	.654	iml o
.735	9.470	3.407	23.730	.8705	1.149	.640	iml o
.738	9.820	3.580	25.948	.8609	1.162	.635	iml o
.739	10.210	3.894	29.385	.8370	1.195	.619	iml o
.741	10.300	3.906	29.812	.8378	1.194	.621	iml o
.738	10.460	4.147	32.017	.8177	1.223	.604	iml o
.740	10.550	4.182	32.644	.8158	1.226	.604	iml o
.739	10.840	4.326	34.655	.8132	1.230	.601	iml o
.742	11.090	4.483	36.875	.8032	1.245	.596	iml o
.740	11.060	4.495	36.794	.8020	1.247	.594	iml o
.744	11.340	4.732	39.897	.7837	1.276	.583	iml o
.738	11.560	4.816	41.081	.7906	1.265	.583	iml o
.736	11.450	4.829	40.723	.7851	1.274	.578	iml o



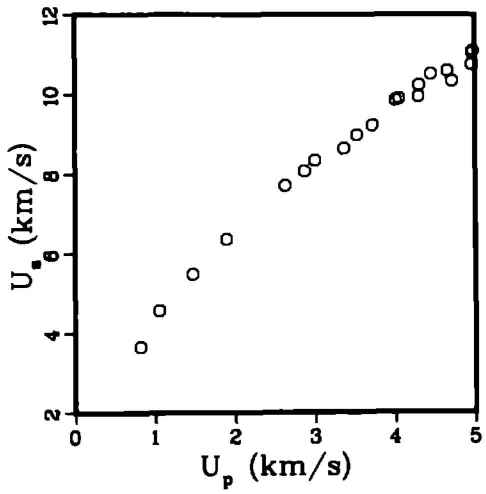


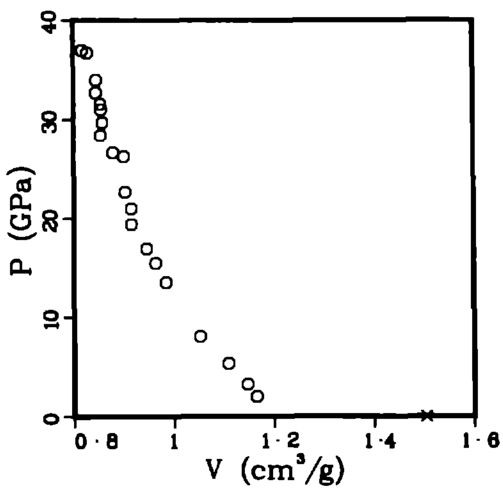
LITHIUM-6 DEUTERIDE, pressed, ρ_0 = 0.66 g/cm^3.

Average ρ_0 = 0.665 g/cm^3.

Reference 36

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.668	3.660	.815	1.991	1.1645	.859	.777	iml o
.672	4.570	1.049	3.222	1.1463	.872	.770	iml o
.660	5.490	1.474	5.342	1.1082	.902	.732	iml o
.668	6.360	1.894	8.044	1.0515	.951	.702	iml o
.670	7.710	2.625	13.558	.9845	1.016	.660	iml o
.669	8.070	2.867	15.481	.9636	1.038	.645	iml o
.677	8.340	3.004	16.951	.9456	1.058	.640	iml o
.667	8.640	3.365	19.392	.9153	1.092	.611	iml o
.664	8.980	3.526	21.021	.9148	1.093	.607	iml o
.662	9.230	3.718	22.708	.9025	1.108	.597	iml o
.675	9.860	4.005	26.671	.8792	1.137	.594	iml o
.656	9.900	4.050	26.294	.9011	1.110	.591	iml o
.666	9.950	4.292	28.420	.8545	1.170	.569	iml o
.676	10.230	4.299	29.721	.8579	1.166	.580	iml o
.676	10.510	4.447	31.576	.8539	1.171	.577	iml o
.664	10.590	4.653	32.709	.8446	1.184	.561	iml o
.637	10.340	4.711	31.010	.8552	1.169	.544	iml o
.638	10.750	4.957	33.982	.8450	1.183	.539	iml o
.673	11.060	4.968	37.001	.8180	1.223	.551	iml o
.665	11.090	4.978	36.729	.8284	1.207	.551	iml o



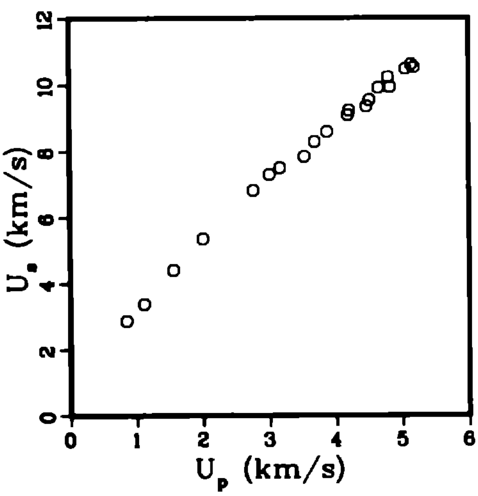


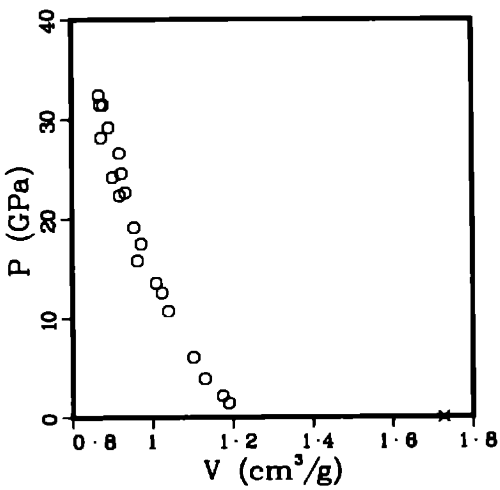
LITHIUM-6 DEUTERIDE, pressed, ρ_0 = 0.58 g/cm^3.

Average ρ_0 = 0.579 g/cm^3.

Reference 36

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.592	2.870	.849	1.442	1.1897	.841	.704	iml o
.571	3.390	1.115	2.160	1.1745	.851	.671	iml o
.572	4.400	1.558	3.918	1.1300	.885	.646	iml o
.567	5.340	2.004	6.069	1.1016	.908	.625	iml o
.571	6.810	2.767	10.761	1.0395	.962	.594	iml o
.574	7.290	3.010	12.586	1.0235	.977	.587	iml o
.572	7.490	3.168	13.565	1.0093	.991	.577	iml o
.570	7.830	3.535	15.769	.9628	1.039	.549	iml o
.571	8.290	3.690	17.461	.9721	1.029	.555	iml o
.575	8.590	3.878	19.144	.9545	1.048	.549	iml o
.587	9.090	4.191	22.359	.9183	1.089	.539	iml o
.583	9.230	4.207	22.654	.9328	1.072	.544	iml o
.579	9.350	4.471	24.200	.9014	1.109	.522	iml o
.570	9.540	4.515	24.573	.9233	1.083	.527	iml o
.578	9.910	4.650	26.626	.9186	1.089	.531	iml o
.596	10.230	4.794	29.224	.8917	1.121	.531	iml o
.588	9.930	4.826	28.202	.8734	1.145	.514	iml o
.594	10.480	5.056	31.490	.8709	1.148	.518	iml o
.594	10.620	5.144	32.461	.8678	1.152	.516	iml o
.578	10.520	5.183	31.488	.8785	1.138	.507	iml o



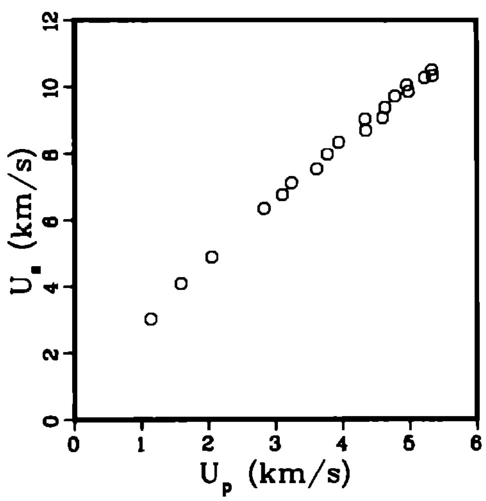


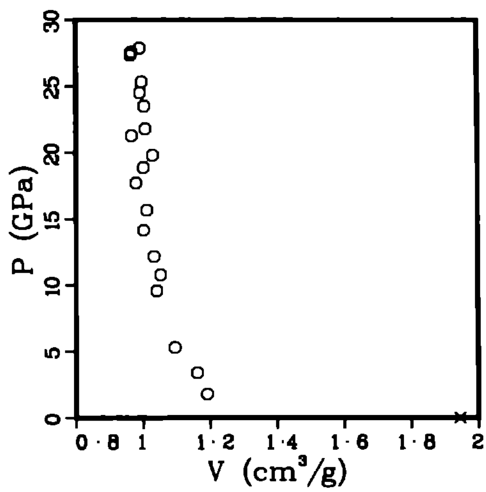
LITHIUM-6 DEUTERIDE , pressed , ρ_0 = 0.51 g/cm^3 .

Average ρ_0 = 0.514 g/cm^3 .

Reference 36

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.522	3.010	1.138	1.788	1.1912	.839	.622	im1 o
.526	4.080	1.589	3.408	1.1616	.861	.611	im1 o
.530	4.880	2.049	5.298	1.0950	.913	.580	im1 o
.532	6.350	2.830	9.569	1.0410	.961	.554	im1 o
.514	6.760	3.103	10.782	1.0525	.950	.541	im1 o
.527	7.120	3.239	12.165	1.0333	.968	.545	im1 o
.519	7.540	3.615	14.157	1.0022	.998	.521	im1 o
.521	7.980	3.775	15.692	1.0116	.989	.527	im1 o
.539	8.350	3.944	17.741	.9795	1.021	.528	im1 o
.506	9.040	4.335	19.825	1.0288	.972	.520	im1 o
.499	8.700	4.349	18.895	1.0014	.999	.500	im1 o
.511	9.080	4.599	21.326	.9663	1.035	.494	im1 o
.502	9.380	4.635	21.838	1.0071	.993	.506	im1 o
.506	9.720	4.784	23.520	1.0040	.996	.508	im1 o
.508	10.050	4.958	25.333	.9966	1.003	.507	im1 o
.499	9.860	4.984	24.517	.9912	1.009	.495	im1 o
.510	10.270	5.226	27.356	.9636	1.038	.491	im1 o
.497	10.510	5.333	27.874	.9905	1.010	.493	im1 o
.500	10.330	5.345	27.585	.9659	1.035	.483	im1 o



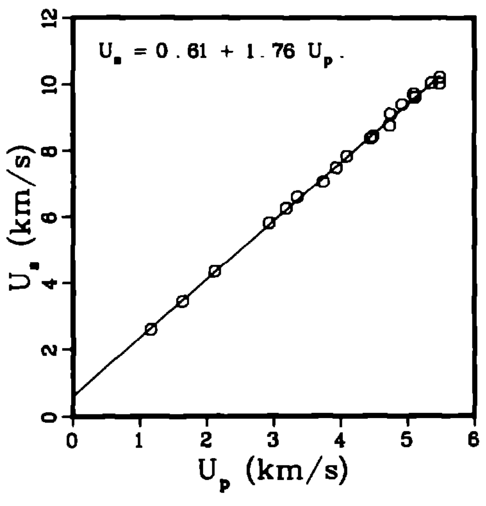


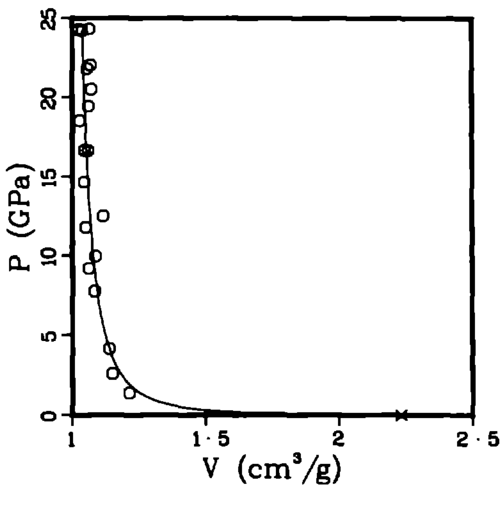
LITHIUM-6 DEUTERIDE, pressed, ρ_0 = 0.45 g/cm^3.

Average ρ_0 = 0.448 g/cm^3.

Reference 36

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.456	2.600	1.164	1.379	1.2125	.825	.552	iml o
.456	3.450	1.641	2.581	1.1501	.869	.524	iml o
.450	4.340	2.117	4.137	1.1375	.879	.512	iml o
.457	5.800	2.928	7.766	1.0828	.924	.495	iml o
.462	6.250	3.187	9.194	1.0617	.942	.490	iml o
.452	6.590	3.354	9.984	1.0871	.920	.491	iml o
.448	7.050	3.734	11.799	1.0494	.953	.470	iml o
.425	7.480	3.933	12.512	1.1150	.897	.474	iml o
.458	7.830	4.093	14.665	1.0430	.959	.477	iml o
.447	8.370	4.455	16.675	1.0459	.956	.468	iml o
.441	8.420	4.484	16.658	1.0595	.944	.467	iml o
.448	8.750	4.728	18.521	1.0267	.974	.460	iml o
.451	9.090	4.745	19.448	1.0601	.943	.478	iml o
.444	9.390	4.919	20.527	1.0714	.933	.476	iml o
.446	9.710	5.094	22.041	1.0668	.937	.475	iml o
.444	9.610	5.114	21.806	1.0544	.948	.468	iml o
.450	10.040	5.363	24.203	1.0363	.965	.466	iml o
.434	10.200	5.487	24.312	1.0637	.940	.462	iml o
.442	10.020	5.488	24.289	1.0240	.977	.452	iml o





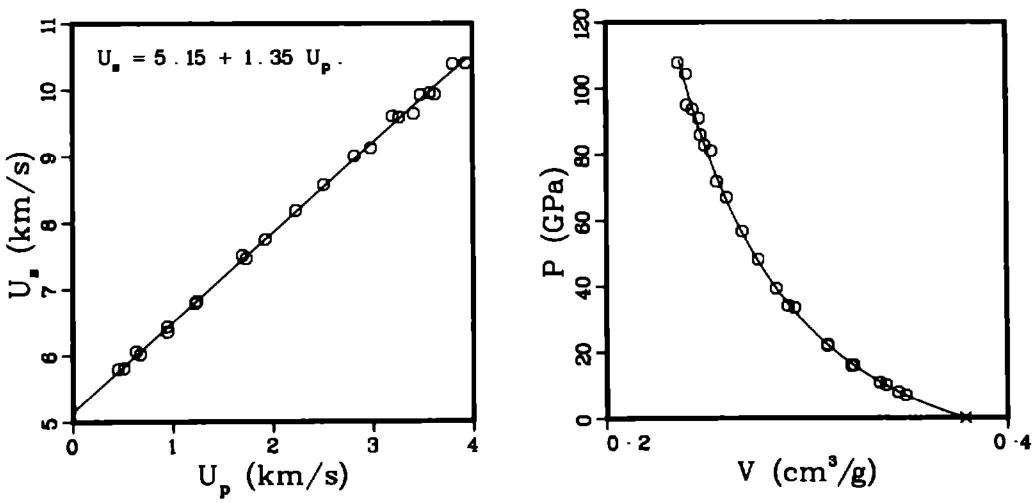
LITHIUM FLUORIDE, single-crystal, [100]

Average ρ_0 = 2.638 g/cm^3.

Reference 37

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.640	5.797	.451	6.902	.3493	2.863	.922	iml o
2.640	5.808	.509	7.805	.3456	2.894	.912	iml o
2.639	6.061	.631	10.093	.3395	2.946	.896	iml o
2.640	6.016	.672	10.673	.3365	2.972	.888	iml o
2.639	6.432	.943	16.007	.3234	3.092	.853	iml o
2.642	6.354	.945	15.864	.3222	3.104	.851	iml o
2.641	6.789	1.224	21.946	.3104	3.222	.820	iml o
2.636	6.821	1.238	22.259	.3105	3.221	.819	iml o
2.633	7.509	1.696	33.532	.2940	3.401	.774	iml o
2.641	7.459	1.734	34.158	.2906	3.441	.768	iml o
2.639	7.749	1.924	39.345	.2848	3.511	.752	iml o
2.637	8.184	2.229	48.105	.2759	3.624	.728	iml o
2.640	8.570	2.508	56.743	.2679	3.732	.707	iml o
2.641	9.002	2.815	66.925	.2602	3.843	.687	iml o
2.637	9.123	2.981	71.715	.2553	3.917	.673	iml o
2.641	9.604	3.197	81.089	.2526	3.959	.667	iml o
2.646	9.586	3.263	82.765	.2493	4.011	.660	iml o
2.614	9.639	3.410	85.920	.2472	4.045	.646	iml o
2.635	9.923	3.477	90.913	.2465	4.056	.650	iml o
2.635	9.952	3.572	93.670	.2433	4.110	.641	iml o
2.642	9.929	3.621	94.988	.2405	4.159	.635	iml o

(Continued)



LITHIUM FLUORIDE, single-crystal, [100]
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.641	10.397	3.801	104.370	.2402	4.163	.634	iml o
2.636	10.407	3.931	107.839	.2361	4.236	.622	iml o

LITHIUM HYDRIDE, single-crystal and pressed

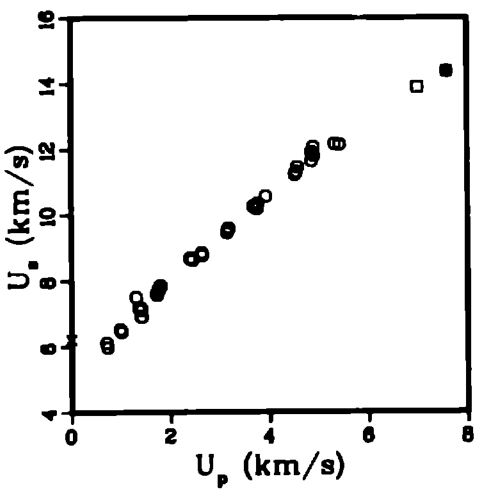
Average ρ_0 = 0.742 g/cm^3.

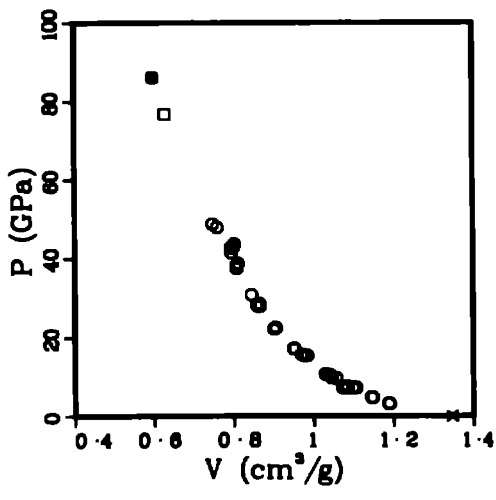
Sound velocities longitudinal 9.84 km/s.
shear 6.61 km/s.

Reference 36

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.743	6.210	0.000	0.000	1.3459	.743	1.000	ssp	×
.743	6.110	.708	3.214	1.1899	.840	.884	iml	o
.740	5.970	.728	3.207	1.1870	.842	.878	iml	o
.742	6.520	.984	4.760	1.1443	.874	.849	iml	o
.735	6.440	1.009	4.776	1.1474	.872	.843	iml	o
.763	7.500	1.304	7.466	1.0822	.924	.826	iml	o
.736	7.150	1.371	7.217	1.0979	.911	.808	iml	o
.729	7.170	1.387	7.249	1.1065	.904	.807	iml	o
.741	7.120	1.402	7.400	1.0834	.923	.803	iml	o
.741	7.150	1.403	7.433	1.0847	.922	.804	iml	o
.742	6.900	1.412	7.229	1.0719	.933	.795	iml	o
.736	6.920	1.414	7.202	1.0811	.925	.796	iml	o
.739	7.570	1.727	9.657	1.0449	.957	.772	iml	o
.732	7.630	1.728	9.652	1.0566	.946	.774	iml	o
.741	7.730	1.759	10.075	1.0424	.959	.772	iml	o
.741	7.830	1.796	10.426	1.0394	.962	.771	iml	o
.749	7.840	1.797	10.555	1.0288	.972	.771	iml	o
.742	8.660	2.392	15.370	.9755	1.025	.724	iml	o
.733	8.670	2.420	15.375	.9837	1.017	.721	iml	o

(Continued)





LITHIUM HYDRIDE, single-crystal and pressed (Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.739	8.620	2.446	15.577	.9695	1.031	.716	iml ○
.737	8.830	2.635	17.143	.9522	1.050	.702	iml ○
.735	8.760	2.643	17.015	.9502	1.052	.698	iml ○
.742	9.460	3.143	22.062	.8999	1.111	.668	iml ○
.740	9.580	3.169	22.457	.9047	1.105	.669	iml ○
.737	9.580	3.184	22.477	.9060	1.104	.668	iml ○
.741	10.250	3.680	27.951	.8650	1.156	.641	iml ○
.740	10.270	3.723	28.279	.8619	1.160	.637	iml ○
.737	10.240	3.729	28.158	.8623	1.160	.636	iml ○
.740	10.220	3.736	28.262	.8571	1.167	.634	iml ○
.735	10.190	3.747	28.056	.8605	1.162	.632	iml ○
.735	10.340	3.770	28.659	.8642	1.157	.635	iml ○
.743	10.560	3.930	30.835	.8450	1.183	.628	iml ○
.740	11.220	4.516	37.495	.8074	1.238	.598	iml ○
.741	11.300	4.547	38.073	.8065	1.240	.598	iml ○
.741	11.450	4.571	38.782	.8108	1.233	.601	iml ○
.734	11.630	4.856	41.453	.7935	1.260	.582	iml ○
.741	11.910	4.858	42.873	.7991	1.251	.592	iml ○
.741	12.070	4.896	43.789	.8021	1.247	.594	iml ○
.738	11.800	4.898	42.660	.7925	1.262	.585	iml ○
.741	12.160	5.323	47.963	.7588	1.318	.562	iml ○
.741	12.150	5.423	48.824	.7472	1.338	.554	iml ○
.790	13.890	7.000	76.812	.6279	1.593	.496	im2 □
.790	14.380	7.590	86.224	.5977	1.673	.472	sf2 ●

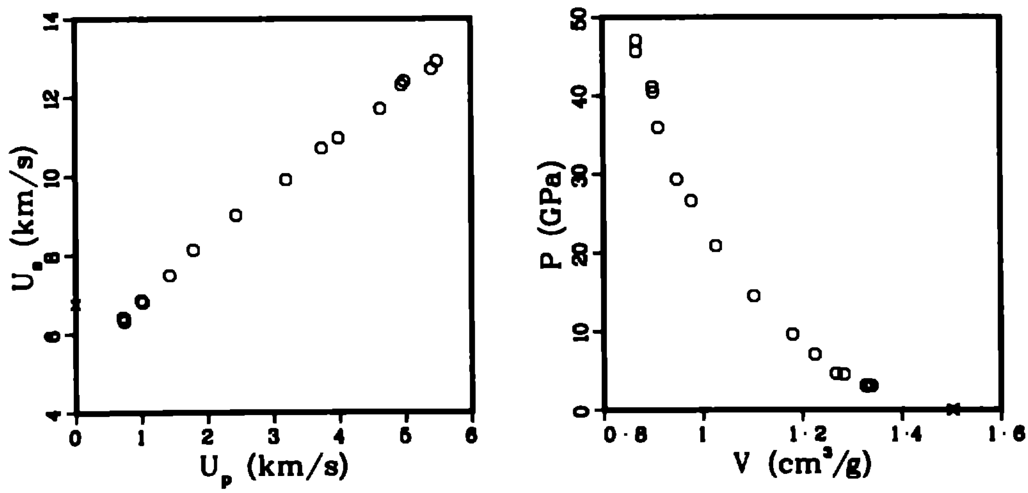
LITHIUM-6 HYDRIDE, pressed

Average ρ_0 = 0.665 g/cm^3.

Sound velocities longitudinal 10.42 km/s.
shear 6.86 km/s.

Reference 36

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.666	6.770	0.000	0.000	1.5015	.666	1.000	ssp	×
.669	6.420	.717	3.080	1.3278	.753	.888	iml	o
.661	6.380	.733	3.091	1.3390	.747	.885	iml	o
.664	6.310	.734	3.075	1.3308	.751	.884	iml	o
.666	6.860	.995	4.546	1.2837	.779	.855	iml	o
.671	6.810	1.016	4.643	1.2680	.789	.851	iml	o
.661	7.490	1.425	7.055	1.2250	.816	.810	iml	o
.661	8.130	1.786	9.598	1.1805	.847	.780	iml	o
.662	9.020	2.433	14.528	1.1031	.907	.730	iml	o
.660	9.910	3.194	20.891	1.0268	.974	.678	iml	o
.666	10.710	3.736	26.648	.9777	1.023	.651	iml	o
.671	10.970	3.989	29.363	.9484	1.054	.636	iml	o
.664	11.710	4.626	35.969	.9111	1.098	.605	iml	o
.664	12.310	4.947	40.436	.9008	1.110	.598	iml	o
.664	12.410	4.992	41.135	.9002	1.111	.598	iml	o
.664	12.730	5.403	45.670	.8668	1.154	.576	iml	o
.664	12.930	5.484	47.083	.8673	1.153	.576	iml	o



MAGNETITE

Average ρ_0 = 5.117 g/cm^3.

Sound velocities longitudinal 7.00 km/s.
shear 3.32 km/s.

References 6, 30, 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
5.118	5.857	0.000	0.000	.1954	5.118	1.000	ssp ×
5.125	6.655	.610	20.805	.1772	5.642	.908	im1 o
5.139	6.564	.882	29.752	.1684	5.937	.866	im1 o
5.120	6.585	1.161	39.143	.1609	6.216	.824	im1 o
5.093	6.499	1.306	43.228	.1569	6.374	.799	im1 o
5.119	6.732	1.313	45.247	.1572	6.359	.805	im1 o
5.120	6.654	1.357	46.231	.1555	6.432	.796	im1 o
5.115	6.620	1.757	59.494	.1436	6.963	.735	im1 o
5.136	6.724	1.772	61.195	.1434	6.974	.736	im1 o
5.125	6.672	1.781	60.900	.1430	6.991	.733	im1 o
5.138	6.640	1.786	60.932	.1423	7.028	.731	im1 o
5.127	7.126	2.032	74.239	.1394	7.172	.715	im1 o
5.109	7.294	2.209	82.318	.1365	7.328	.697	im1 o
5.128	7.091	2.240	81.452	.1334	7.496	.684	im1 o
5.127	7.323	2.298	86.278	.1338	7.472	.686	im1 o
5.108	7.423	2.398	90.924	.1325	7.546	.677	im1 o
5.126	7.809	2.617	104.756	.1297	7.710	.665	im1 o
5.138	8.141	2.873	120.173	.1259	7.940	.647	im1 o
5.008	8.253	2.873	118.744	.1302	7.682	.652	im1 o

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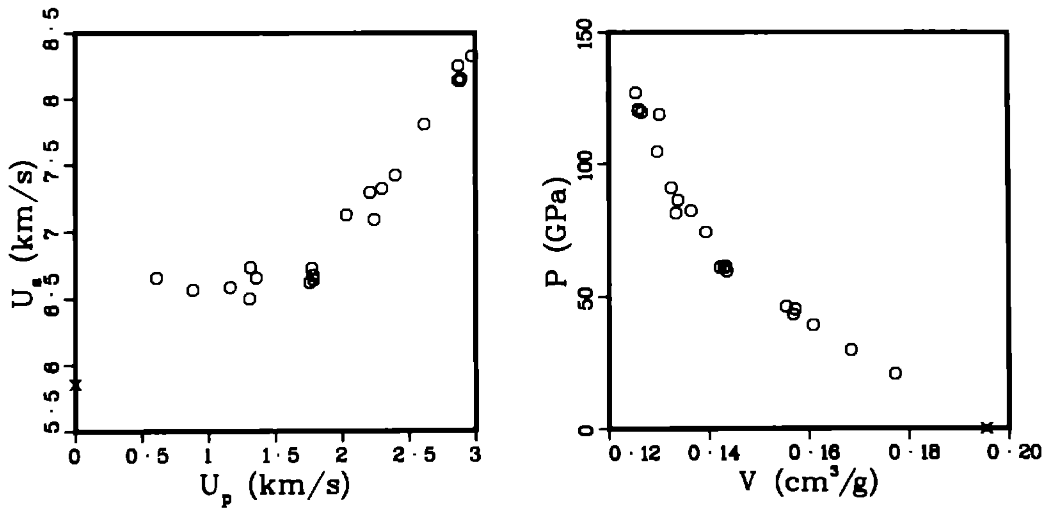


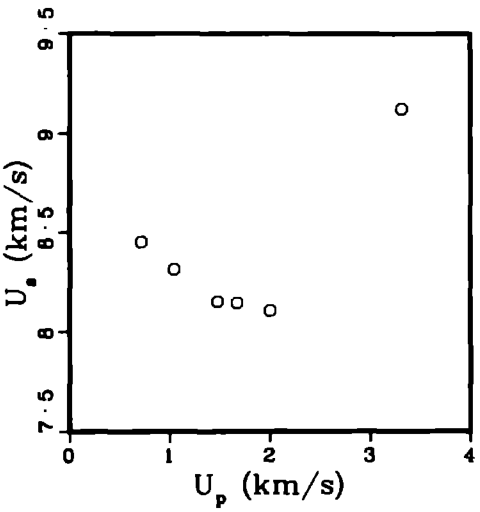
MAGNETITE
(Continued)

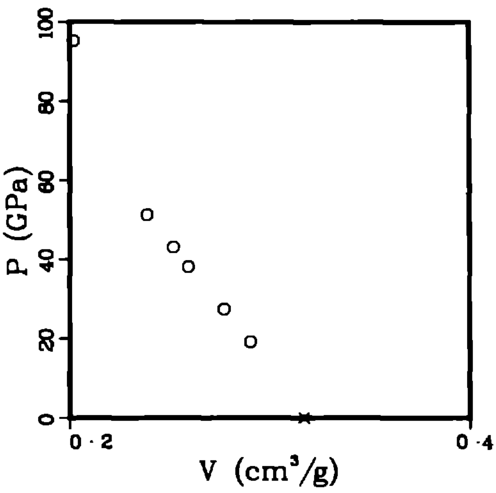
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
5.096	8.135	2.885	119.600	.1266	7.896	.645	im1 o
5.125	8.156	2.891	120.842	.1260	7.939	.646	im1 o
5.125	8.327	2.975	126.961	.1254	7.974	.643	im1 o

MULLITE , ceramic , ρ_0 = 3.15 g/cm^3 .

Average ρ_0 = 3.154 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.152	8.453	.717	19.104	.2903	3.444	.915	iml o
3.154	8.315	1.042	27.327	.2773	3.606	.875	iml o
3.157	8.152	1.479	38.063	.2593	3.857	.819	iml o
3.155	8.145	1.674	43.018	.2518	3.971	.794	iml o
3.153	8.105	2.003	51.187	.2388	4.188	.753	iml o
3.154	9.123	3.311	95.271	.2020	4.951	.637	iml o



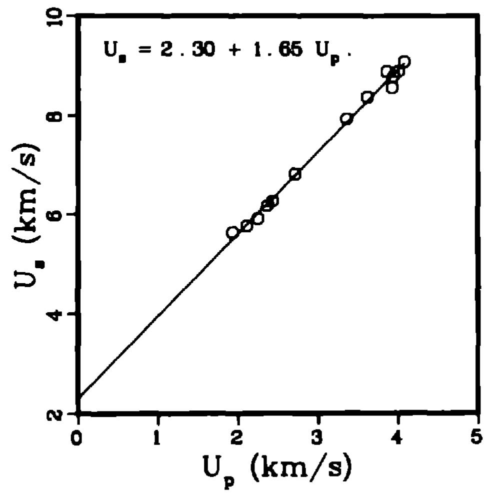


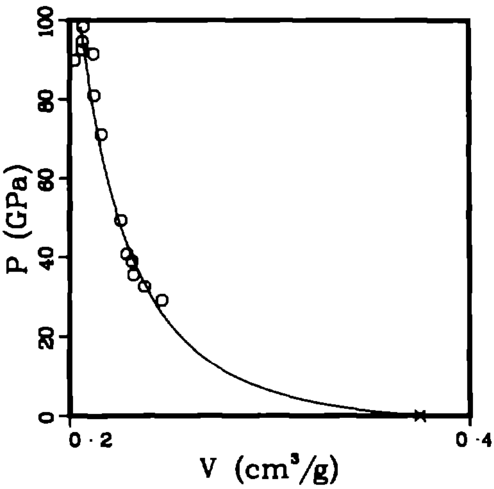
MULLITE , ceramic , ρ_0 = 2.67 g/cm^3 .

Average ρ_0 = 2.668 g/cm^3 .

Reference 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.665	5.632	1.935	29.043	.2463	4.060	.656	iml	o
2.669	5.761	2.113	32.490	.2373	4.215	.633	iml	o
2.668	5.909	2.253	35.519	.2319	4.312	.619	iml	o
2.666	6.171	2.368	38.958	.2312	4.326	.616	iml	o
2.676	6.263	2.431	40.743	.2286	4.374	.612	iml	o
2.663	6.809	2.714	49.211	.2258	4.428	.601	iml	o
2.671	7.924	3.358	71.072	.2157	4.635	.576	iml	o
2.673	8.366	3.620	80.952	.2122	4.712	.567	iml	o
2.669	8.879	3.858	91.427	.2119	4.720	.565	iml	o
2.670	8.553	3.931	89.770	.2024	4.941	.540	iml	o
2.670	8.780	3.944	92.458	.2063	4.848	.551	iml	o
2.659	8.879	4.006	94.579	.2064	4.845	.549	iml	o
2.661	9.068	4.077	98.378	.2068	4.835	.550	iml	o

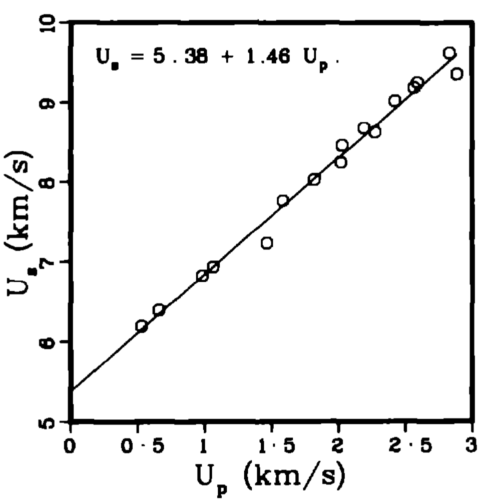


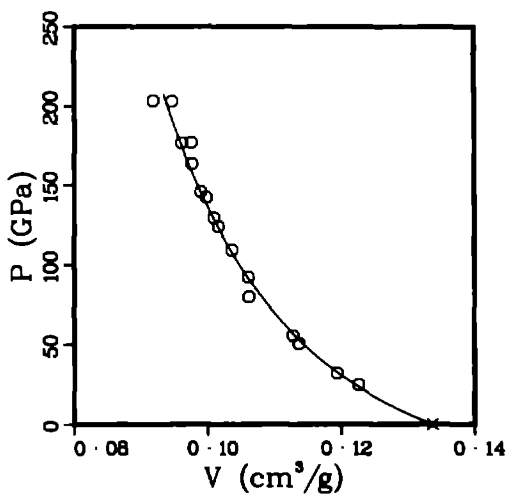


NIOBIUM CARBIDE, ρ_0 = 7.5 g/cm^3.

Average ρ_0 = 7.483 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.459	6.191	.531	24.521	.1226	8.159	.914	im1 o
7.510	6.391	.662	31.774	.1194	8.378	.896	im1 o
7.529	6.822	.983	50.490	.1137	8.797	.856	im1 o
7.505	6.932	1.064	55.354	.1128	8.866	.847	im1 o
7.509	7.231	1.467	79.655	.1062	9.420	.797	im1 o
7.502	7.761	1.584	92.225	.1061	9.426	.796	im1 o
7.458	8.026	1.821	109.001	.1037	9.647	.773	im1 o
7.433	8.246	2.020	123.811	.1016	9.845	.755	im1 o
7.538	8.465	2.026	129.277	.1009	9.910	.761	im1 o
7.492	8.680	2.190	142.417	.0998	10.020	.748	im1 o
7.443	8.627	2.272	145.887	.0990	10.104	.737	im1 o
7.486	9.020	2.423	163.610	.0977	10.236	.731	im1 o
7.501	9.185	2.566	176.789	.0961	10.409	.721	im1 o
7.377	9.248	2.594	176.969	.0975	10.253	.720	im1 o
7.451	9.620	2.834	203.137	.0947	10.563	.705	im1 o
7.528	9.358	2.888	203.451	.0918	10.888	.691	im1 o

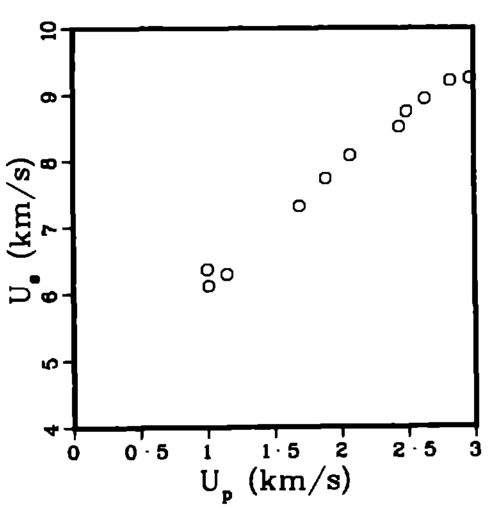


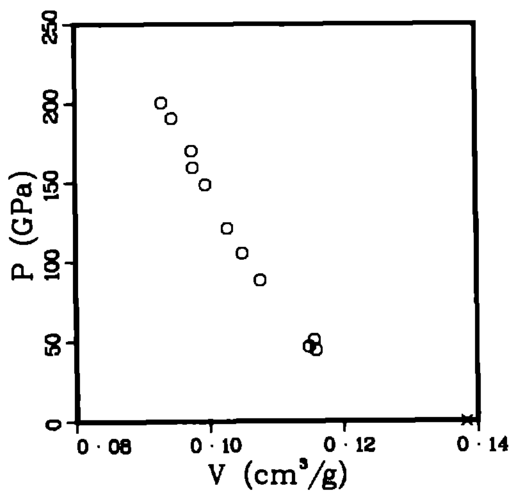


NIOBIUM CARBIDE, $\rho_0 = 7.2$ g/cm^3.

Average $\rho_0 = 7.232$ g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
7.337	6.374	1.003	46.906	.1148	8.707	.843	im1 o
7.200	6.124	1.013	44.666	.1159	8.627	.835	im1 o
7.070	6.293	1.149	51.121	.1156	8.649	.817	im1 o
7.140	7.318	1.694	88.512	.1076	9.291	.769	im1 o
7.200	7.733	1.890	105.231	.1049	9.529	.756	im1 o
7.240	8.080	2.071	121.152	.1027	9.735	.744	im1 o
7.170	8.513	2.438	148.811	.0995	10.047	.714	im1 o
7.320	8.743	2.493	159.549	.0977	10.240	.715	im1 o
7.240	8.933	2.630	170.095	.0975	10.261	.706	im1 o
7.335	9.205	2.825	190.740	.0945	10.583	.693	im1 o
7.300	9.244	2.971	200.487	.0930	10.757	.679	im1 o

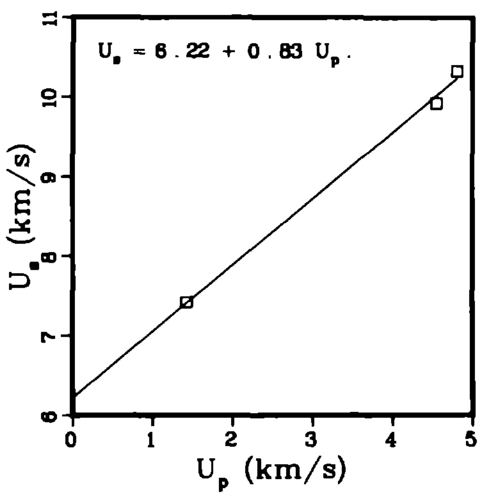


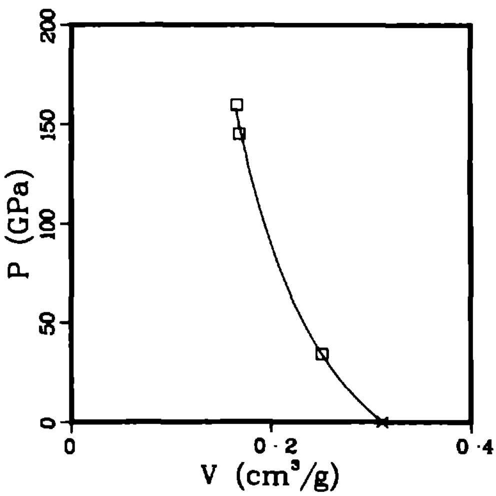


OLIVINE

Average ρ_0 = 3.214 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.212	7.420	1.430	34.081	.2513	3.979	.807	im2 □
3.215	9.920	4.550	145.112	.1684	5.939	.541	im2 □
3.215	10.320	4.810	159.590	.1661	6.022	.534	im2 □





PERICLASE, ceramic, ρ_0 = 3.34 g/cm^3.

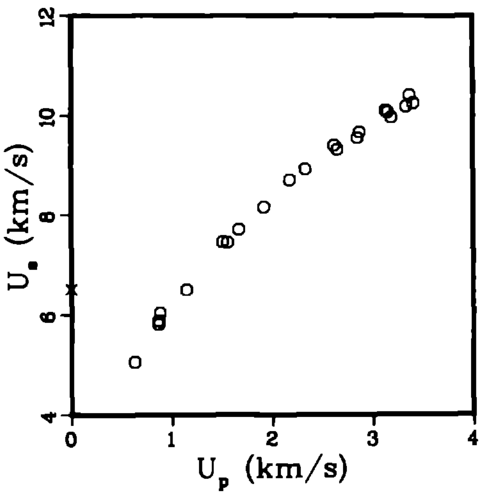
Average ρ_0 = 3.350 g/cm^3.

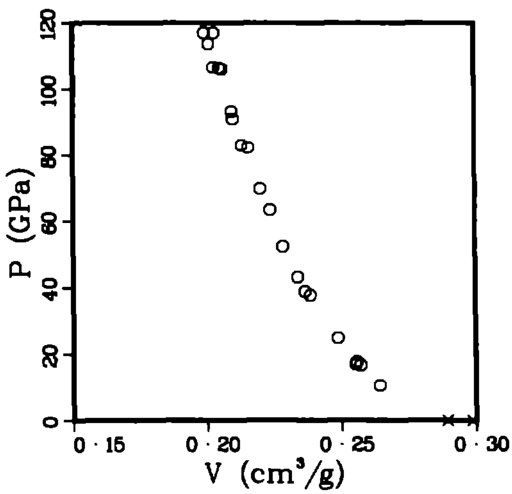
Sound velocities longitudinal 9.37 km/s.
shear 5.83 km/s.

References 18, 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.457	6.518	0.000	0.000	.2893	3.457	1.000	ssp ×
3.314	5.060	.629	10.548	.2642	3.784	.876	im1 o
3.343	5.881	.863	16.967	.2552	3.918	.853	im1 o
3.310	5.815	.867	16.688	.2571	3.890	.851	im1 o
3.343	6.039	.877	17.705	.2557	3.911	.855	im1 o
3.313	6.511	1.147	24.742	.2487	4.021	.824	im1 o
3.345	7.464	1.509	37.675	.2385	4.193	.798	im1 o
3.345	7.454	1.557	38.822	.2365	4.228	.791	im1 o
3.352	7.713	1.669	43.150	.2338	4.278	.784	im1 o
3.349	8.158	1.918	52.402	.2284	4.378	.765	im1 o
3.356	8.705	2.173	63.482	.2236	4.472	.750	im1 o
3.359	8.920	2.331	69.842	.2199	4.547	.739	im1 o
3.346	9.398	2.619	82.356	.2156	4.639	.721	im1 o
3.357	9.317	2.652	82.947	.2131	4.693	.715	im1 o
3.344	9.555	2.851	91.095	.2098	4.766	.702	im1 o
3.359	9.675	2.871	93.303	.2094	4.776	.703	im1 o
3.353	10.110	3.129	106.069	.2059	4.856	.691	im1 o
3.354	10.071	3.150	106.401	.2049	4.881	.687	im1 o
3.355	9.967	3.188	106.604	.2027	4.933	.680	im1 o

(Continued)





PERICLASE , ceramic , ρ_0 = 3.34 g/cm^3 .
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.348	10.186	3.334	113.698	.2009	4.977	.673	iml o
3.336	10.414	3.367	116.973	.2028	4.930	.677	iml o
3.352	10.252	3.405	117.012	.1992	5.019	.668	iml o

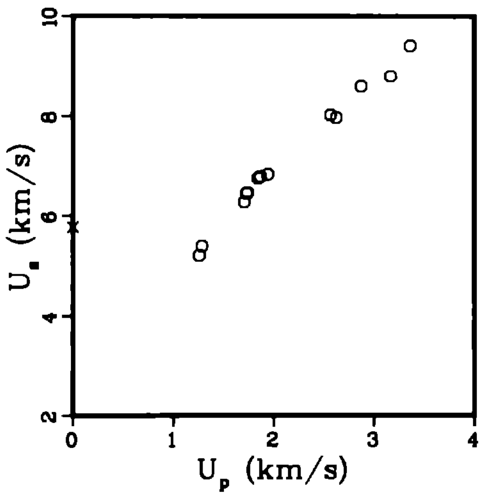
PERICLASE , ceramic , ρ_0 = 3.0 g/cm^3 .

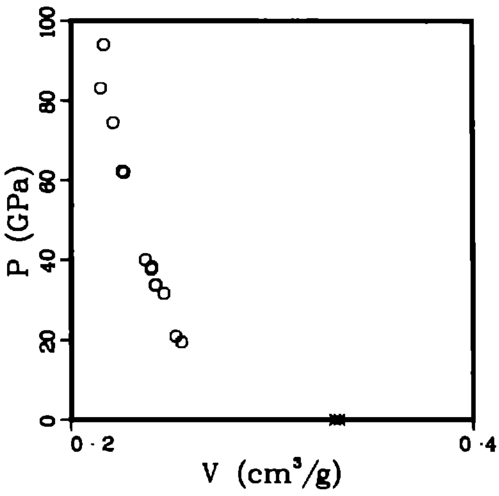
Average ρ_0 = 3.001 g/cm^3 .

Sound velocities longitudinal 8.23 km/s .
shear 5.08 km/s .

References 18 , 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.020	5.773	0.000	0.000	.3311	3.020	1.000	ssp ×
2.973	5.200	1.259	19.464	.2549	3.923	.758	im1 o
3.020	5.385	1.286	20.914	.2520	3.967	.761	im1 o
2.956	6.274	1.709	31.695	.2461	4.063	.728	im1 o
3.022	6.444	1.732	33.729	.2420	4.133	.731	im1 o
3.018	6.455	1.739	33.878	.2421	4.131	.731	im1 o
3.027	6.748	1.847	37.727	.2399	4.168	.726	im1 o
3.017	6.781	1.869	38.237	.2401	4.165	.724	im1 o
3.018	6.825	1.943	40.022	.2370	4.219	.715	im1 o
3.004	8.025	2.568	61.907	.2264	4.418	.680	im1 o
2.975	7.970	2.625	62.241	.2254	4.436	.671	im1 o
3.014	8.603	2.873	74.495	.2210	4.525	.666	im1 o
2.983	8.808	3.167	83.211	.2147	4.658	.640	im1 o
2.973	9.413	3.362	94.085	.2162	4.625	.643	im1 o



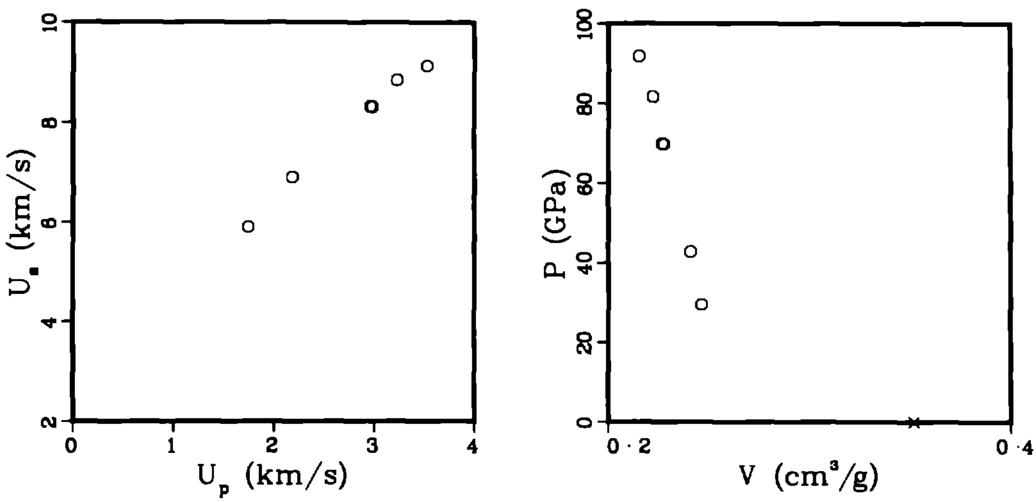


PERICLASE , ceramic , ρ_0 = 2.8 g/cm^3 .

Average ρ_0 = 2.842 g/cm^3 .

References 18 , 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.859	5.909	1.749	29.547	.2462	4.061	.704	iml o
2.835	6.905	2.187	42.812	.2410	4.149	.683	iml o
2.836	8.321	2.967	70.016	.2269	4.408	.643	iml o
2.816	8.311	2.984	69.837	.2276	4.393	.641	iml o
2.856	8.844	3.233	81.661	.2221	4.502	.634	iml o
2.852	9.131	3.528	91.875	.2152	4.648	.614	iml o



PERICLASE , single-crystal

Average ρ_0 = 3.584 g/cm^3.

Sound velocities longitudinal 9.71 km/s.
shear 6.02 km/s.
References 6, 18, 30, 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
3.575	6.780	0.000	0.000	.2797	3.575	1.000	ssp	x
3.584	7.574	.695	18.866	.2534	3.946	.908	im1	o
3.585	7.450	.740	19.764	.2512	3.980	.901	im1	o
3.585	7.563	.740	20.064	.2516	3.974	.902	im1	o
3.585	7.522	.743	20.036	.2514	3.978	.901	im1	o
3.585	7.830	.959	26.920	.2448	4.085	.878	im1	o
3.585	8.034	1.001	28.831	.2442	4.095	.875	im1	o
3.567	8.045	1.082	31.050	.2426	4.121	.866	im1	o
3.585	8.807	1.465	46.255	.2325	4.300	.834	im1	o
3.585	8.450	1.476	44.713	.2302	4.344	.825	im1	o
3.585	8.953	1.554	49.878	.2305	4.338	.826	im1	o
3.585	8.878	1.591	50.638	.2290	4.368	.821	im1	o
3.585	9.100	1.813	59.146	.2234	4.477	.801	im1	o
3.585	9.317	1.967	65.701	.2201	4.544	.789	im1	o
3.585	9.648	2.172	75.125	.2161	4.627	.775	im1	o
3.585	9.785	2.353	82.541	.2119	4.720	.760	im1	o
3.585	9.985	2.383	85.302	.2124	4.709	.761	im1	o
3.585	9.993	2.436	87.269	.2109	4.741	.756	im1	o
3.585	9.968	2.467	88.159	.2099	4.764	.753	im1	o

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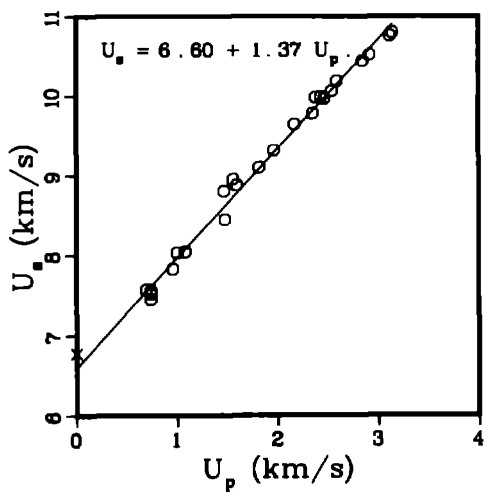
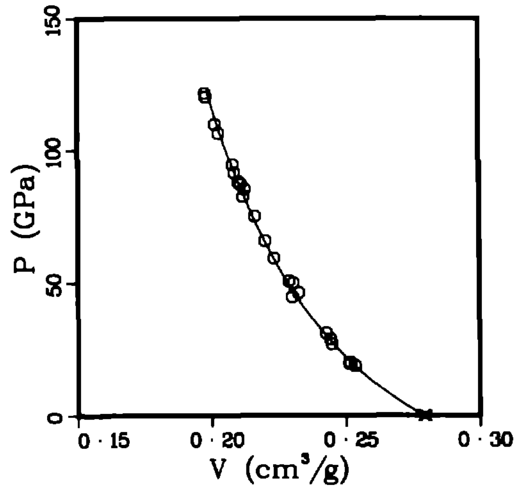




PERICLASE, single-crystal
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.585	10.063	2.542	91.705	.2085	4.797	.747	iml o
3.585	10.187	2.592	94.661	.2080	4.808	.746	iml o
3.585	10.442	2.848	106.614	.2029	4.929	.727	iml o
3.585	10.520	2.918	110.050	.2016	4.961	.723	iml o
3.585	10.760	3.121	120.391	.1980	5.050	.710	iml o
3.585	10.802	3.144	121.752	.1978	5.057	.709	iml o

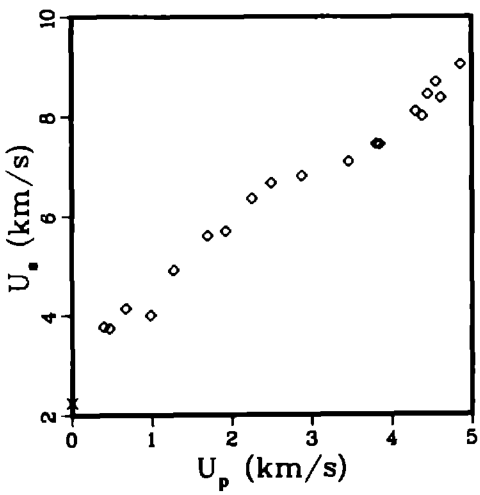
PHENANTHRENE, reagent-grade, polycrystalline, pressed

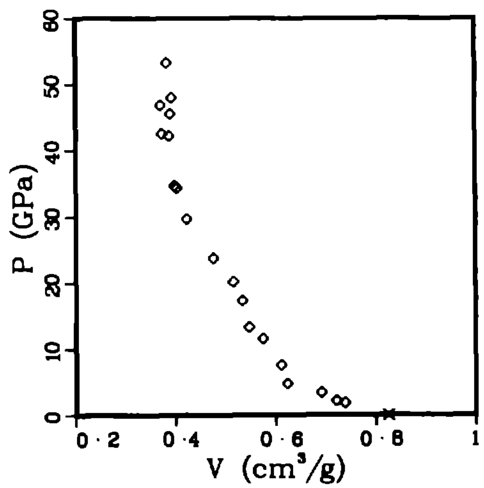
Average ρ_0 = 1.212 g/cm^3.

Sound velocities longitudinal 2.78 km/s.
shear 1.42 km/s.

Reference 29

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.212	2.245	0.000	0.000	.8251	1.212	1.000	ssp ×
1.212	3.774	.399	1.825	.7379	1.355	.894	im5 ◇
1.212	3.741	.473	2.145	.7208	1.387	.874	im5 ◇
1.212	4.138	.674	3.380	.6907	1.448	.837	im5 ◇
1.212	4.005	.983	4.772	.6226	1.606	.755	im5 ◇
1.212	4.907	1.276	7.589	.6105	1.638	.740	im5 ◇
1.213	5.597	1.697	11.521	.5744	1.741	.697	im5 ◇
1.212	5.692	1.922	13.259	.5465	1.830	.662	im5 ◇
1.212	6.348	2.249	17.303	.5328	1.877	.646	im5 ◇
1.213	6.662	2.496	20.170	.5155	1.940	.625	im5 ◇
1.213	6.804	2.877	23.745	.4758	2.102	.577	im5 ◇
1.212	7.086	3.462	29.732	.4220	2.370	.511	im5 ◇
1.213	7.443	3.805	34.353	.4030	2.482	.489	im5 ◇
1.212	7.437	3.850	34.703	.3980	2.513	.482	im5 ◇
1.212	8.099	4.301	42.219	.3869	2.585	.469	im5 ◇
1.213	8.000	4.385	42.552	.3725	2.684	.452	im5 ◇
1.212	8.441	4.451	45.536	.3900	2.564	.473	im5 ◇
1.213	8.689	4.552	47.977	.3925	2.548	.476	im5 ◇
1.212	8.372	4.614	46.818	.3704	2.700	.449	im5 ◇
1.212	9.048	4.858	53.274	.3821	2.617	.463	im5 ◇

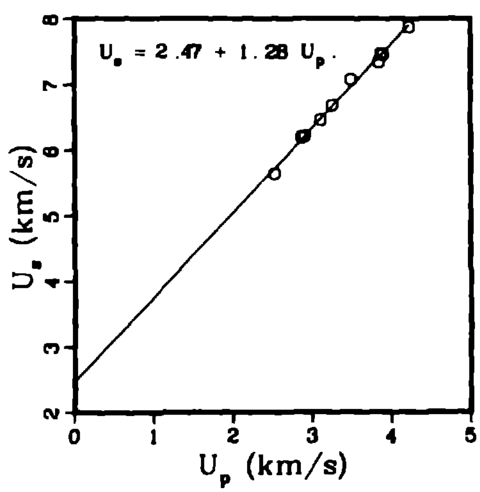


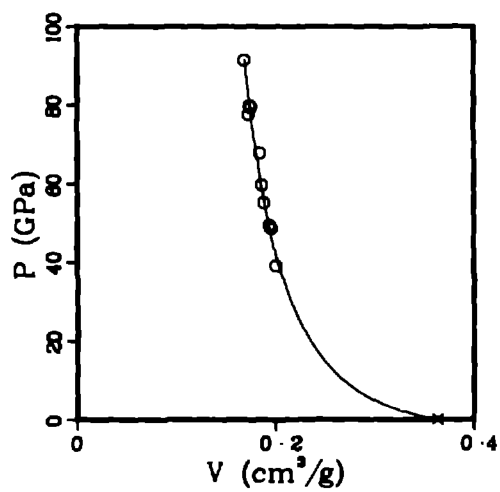


POTASSIUM BROMIDE, single-crystal, [100]

Average ρ_0 = 2.750 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.750	5.639	2.526	39.171	.2007	4.981	.552	iml o
2.750	6.196	2.862	48.766	.1957	5.111	.538	iml o
2.750	6.211	2.900	49.533	.1938	5.159	.533	iml o
2.750	6.458	3.112	55.268	.1884	5.308	.518	iml o
2.750	6.676	3.255	59.759	.1863	5.367	.512	iml o
2.750	7.077	3.492	67.960	.1842	5.429	.507	iml o
2.750	7.342	3.845	77.632	.1732	5.774	.476	iml o
2.750	7.469	3.869	79.468	.1753	5.705	.482	iml o
2.750	7.456	3.894	79.843	.1737	5.756	.478	iml o
2.750	7.876	4.225	91.509	.1686	5.932	.464	iml o





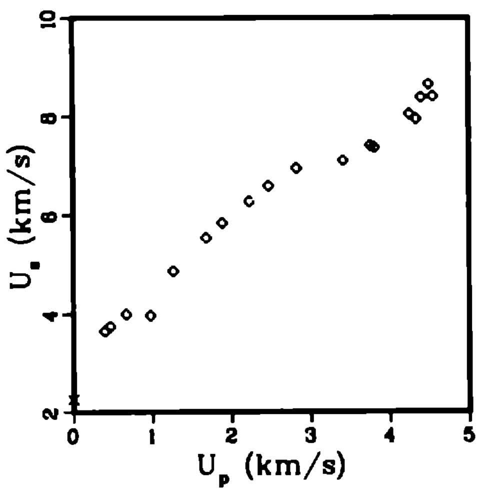
PYRENE, reagent-grade, polycrystalline, pressed

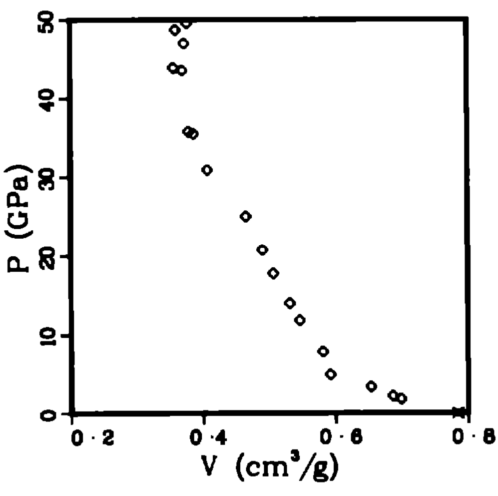
Average ρ_0 = 1.275 g/cm^3.

Sound velocities longitudinal 2.64 km/s.
shear 1.18 km/s.

Reference 29

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.275	2.261	0.000	0.000	.7843	1.275	1.000	ssp ×
1.275	3.647	.398	1.851	.6987	1.431	.891	im5 ◇
1.275	3.746	.467	2.230	.6865	1.457	.875	im5 ◇
1.275	3.998	.667	3.400	.6535	1.530	.833	im5 ◇
1.275	3.974	.974	4.935	.5921	1.669	.755	im5 ◇
1.274	4.861	1.263	7.822	.5810	1.721	.740	im5 ◇
1.275	5.534	1.680	11.854	.5462	1.831	.696	im5 ◇
1.275	5.836	1.884	14.019	.5311	1.883	.677	im5 ◇
1.274	6.273	2.226	17.790	.5064	1.975	.645	im5 ◇
1.275	6.584	2.470	20.735	.4901	2.040	.625	im5 ◇
1.275	6.942	2.824	24.995	.4653	2.149	.593	im5 ◇
1.274	7.099	3.415	30.886	.4073	2.455	.519	im5 ◇
1.275	7.412	3.759	35.524	.3865	2.587	.493	im5 ◇
1.275	7.372	3.808	35.793	.3792	2.637	.483	im5 ◇
1.275	8.044	4.251	43.599	.3698	2.704	.472	im5 ◇
1.275	7.947	4.335	43.924	.3565	2.805	.455	im5 ◇
1.275	8.382	4.399	47.012	.3727	2.683	.475	im5 ◇
1.274	8.651	4.497	49.563	.3769	2.653	.480	im5 ◇
1.275	8.401	4.548	48.715	.3597	2.780	.459	im5 ◇



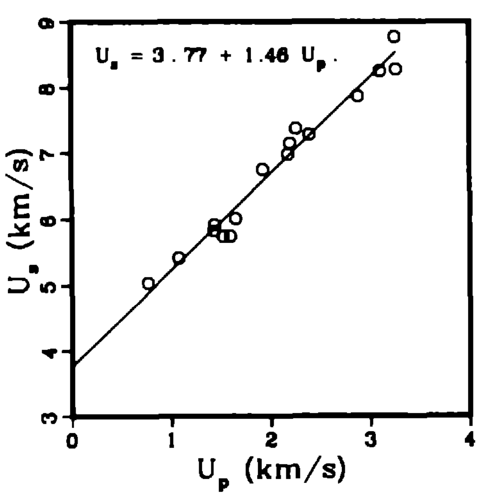


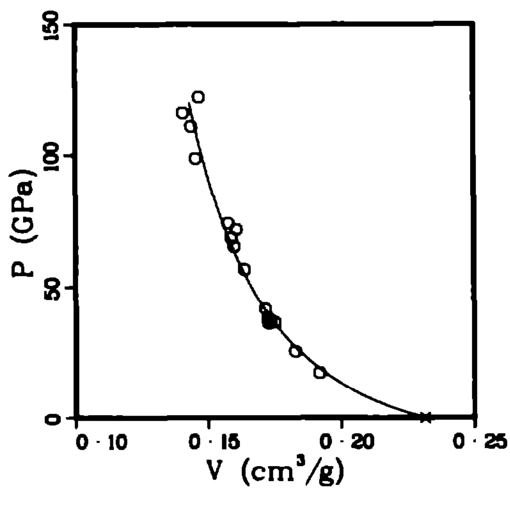
PYROLUSITE, Ironton, Minnesota

Average ρ_0 = 4.318 g/cm^3.

References 6, 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
4.417	5.039	.769	17.116	.1918	5.212	.847	iml	o
4.389	5.413	1.074	25.516	.1826	5.475	.802	iml	o
4.372	5.822	1.429	36.373	.1726	5.794	.755	iml	o
4.332	5.917	1.434	36.757	.1749	5.718	.758	iml	o
4.241	5.740	1.521	37.026	.1733	5.770	.735	iml	o
4.190	5.744	1.594	38.363	.1724	5.799	.722	iml	o
4.237	6.013	1.647	41.961	.1714	5.835	.726	iml	o
4.366	6.751	1.925	56.739	.1637	6.108	.715	iml	o
4.305	6.983	2.179	65.505	.1598	6.258	.688	iml	o
4.362	7.154	2.198	68.590	.1588	6.297	.693	iml	o
4.317	7.379	2.259	71.961	.1607	6.222	.694	iml	o
4.261	7.287	2.393	74.302	.1576	6.344	.672	iml	o
4.358	7.870	2.881	98.811	.1455	6.875	.634	iml	o
4.341	8.254	3.102	111.147	.1438	6.955	.624	iml	o
4.291	8.770	3.250	122.304	.1467	6.817	.629	iml	o
4.306	8.278	3.263	116.310	.1407	7.108	.606	iml	o

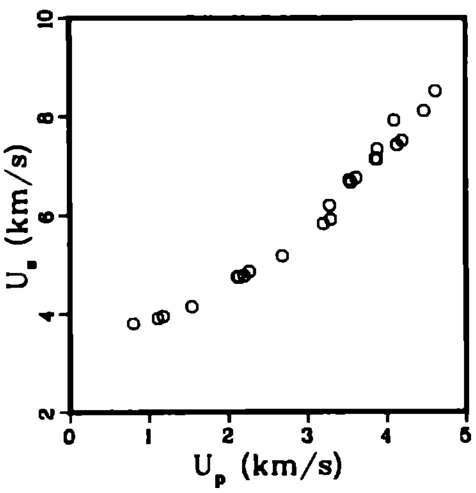


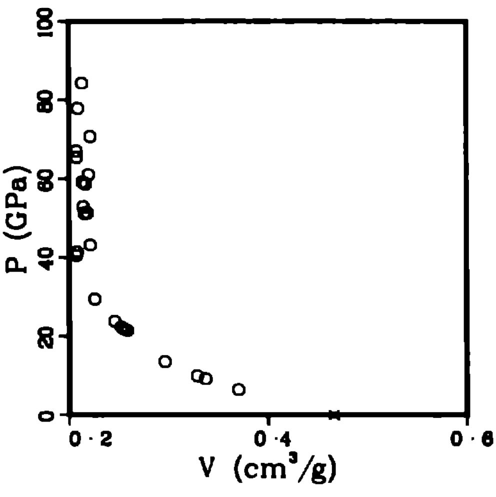


QUARTZ , ceramic , ρ_0 = 2.1 g/cm^3 .

Average ρ_0 = 2.145 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.133	3.798	.799	6.473	.3702	2.701	.790	iml o
2.125	3.907	1.109	9.207	.3370	2.967	.716	iml o
2.137	3.954	1.176	9.937	.3288	3.042	.703	iml o
2.123	4.144	1.537	13.522	.2963	3.375	.629	iml o
2.170	4.751	2.118	21.836	.2554	3.916	.554	iml o
2.133	4.739	2.125	21.480	.2586	3.867	.552	iml o
2.134	4.766	2.198	22.355	.2525	3.961	.539	iml o
2.170	4.856	2.264	23.857	.2460	4.065	.534	iml o
2.133	5.165	2.678	29.503	.2257	4.430	.482	iml o
2.174	5.826	3.199	40.518	.2074	4.821	.451	iml o
2.126	6.199	3.281	43.241	.2214	4.516	.471	iml o
2.130	5.914	3.294	41.494	.2080	4.808	.443	iml o
2.170	6.709	3.531	51.406	.2183	4.581	.474	iml o
2.169	6.660	3.548	51.253	.2154	4.642	.467	iml o
2.166	6.755	3.617	52.922	.2145	4.663	.465	iml o
2.124	7.156	3.862	58.700	.2167	4.614	.460	iml o
2.138	7.134	3.876	59.119	.2136	4.682	.457	iml o
2.142	7.344	3.884	61.099	.2199	4.546	.471	iml o
2.179	7.924	4.099	70.775	.2215	4.514	.483	iml o
2.134	7.429	4.133	65.522	.2079	4.810	.444	iml o
2.126	7.518	4.199	67.114	.2077	4.816	.441	iml o
2.145	8.112	4.474	77.849	.2091	4.783	.448	iml o
2.145	8.513	4.619	84.345	.2132	4.689	.457	iml o



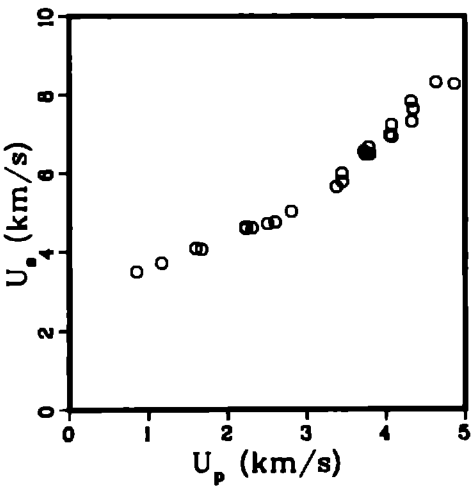


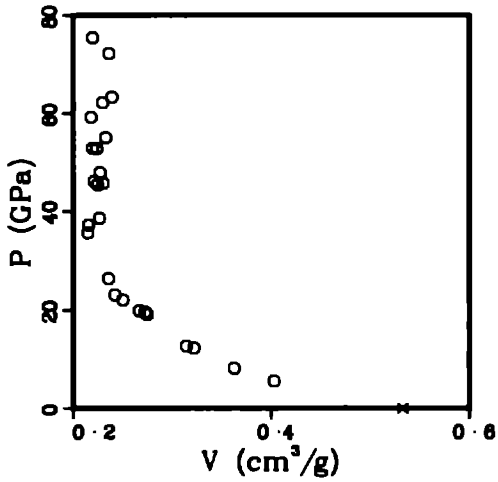
QUARTZ, ceramic, ρ_0 = 1.9 g/cm^3.

Average ρ_0 = 1.877 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.879	3.497	.849	5.579	.4030	2.481	.757	iml o
1.893	3.715	1.164	8.186	.3627	2.757	.687	iml o
1.889	4.079	1.597	12.305	.3221	3.104	.608	iml o
1.871	4.055	1.670	12.670	.3144	3.181	.588	iml o
1.876	4.597	2.227	19.206	.2748	3.639	.516	iml o
1.902	4.628	2.229	19.621	.2725	3.669	.518	iml o
1.871	4.610	2.308	19.907	.2669	3.747	.499	iml o
1.871	4.711	2.504	22.071	.2504	3.994	.468	iml o
1.870	4.750	2.598	23.077	.2423	4.128	.453	iml o
1.873	5.022	2.804	26.375	.2358	4.241	.442	iml o
1.874	5.647	3.374	35.705	.2148	4.656	.403	iml o
1.873	5.987	3.445	38.631	.2267	4.411	.425	iml o
1.870	5.776	3.448	37.242	.2155	4.640	.403	iml o
1.875	6.554	3.721	45.726	.2305	4.338	.432	iml o
1.875	6.471	3.743	45.414	.2248	4.448	.422	iml o
1.899	6.660	3.784	47.858	.2274	4.398	.432	iml o
1.875	6.484	3.792	46.101	.2214	4.516	.415	iml o
1.873	6.971	4.048	52.853	.2239	4.467	.419	iml o
1.872	7.225	4.072	55.075	.2331	4.290	.436	iml o
1.875	6.929	4.073	52.916	.2198	4.549	.412	iml o
1.872	7.828	4.319	63.291	.2395	4.176	.448	iml o
1.872	7.313	4.325	59.209	.2183	4.582	.409	iml o

(Continued)





QUARTZ, ceramic, ρ_0 = 1.9 g/cm^3.
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.875	7.633	4.343	62.156	.2299	4.350	.431	iml o
1.875	8.318	4.632	72.242	.2363	4.231	.443	iml o
1.875	8.275	4.863	75.452	.2199	4.547	.412	iml o

QUARTZ, fused

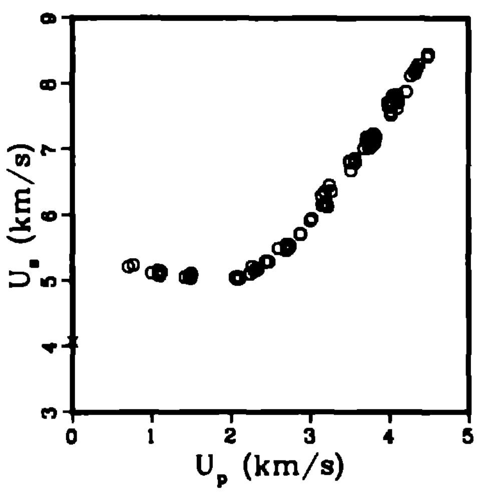
Average ρ_0 = 2.204 g/cm^3.

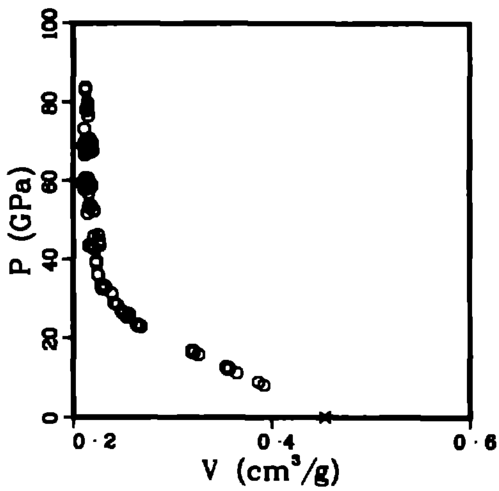
Sound velocities longitudinal 5.96 km/s.
shear 3.77 km/s.

References 6, 30, 38, 39

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.204	4.071	0.000	0.000	.4537	2.204	1.000	ssp ×
2.203	5.212	.707	8.118	.3924	2.549	.864	iml o
2.204	5.239	.772	8.914	.3869	2.585	.853	iml o
2.203	5.116	1.001	11.282	.3651	2.739	.804	iml o
2.204	5.155	1.092	12.407	.3576	2.796	.788	iml o
2.204	5.076	1.094	12.239	.3559	2.810	.784	iml o
2.204	5.091	1.100	12.343	.3557	2.811	.784	iml o
2.204	5.143	1.108	12.559	.3560	2.809	.785	iml o
2.204	5.137	1.124	12.726	.3544	2.821	.781	iml o
2.203	5.056	1.424	15.861	.3261	3.067	.718	iml o
2.204	5.061	1.477	16.475	.3213	3.112	.708	iml o
2.204	5.049	1.491	16.592	.3197	3.128	.705	iml o
2.204	5.047	1.491	16.585	.3197	3.128	.705	iml o
2.204	5.047	1.493	16.608	.3195	3.130	.704	iml o
2.204	5.084	1.494	16.740	.3204	3.121	.706	iml o
2.204	5.113	1.506	16.971	.3201	3.124	.705	iml o
2.203	5.047	2.063	22.938	.2684	3.726	.591	iml o
2.204	5.031	2.075	23.008	.2666	3.751	.588	iml o
2.204	5.049	2.083	23.180	.2665	3.752	.587	iml o

(Continued)





QUARTZ , fused
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.202	5.026	2.101	23.252	.2643	3.784	.582	iml o
2.204	5.049	2.105	23.424	.2646	3.780	.583	iml o
2.204	5.040	2.106	23.394	.2641	3.786	.582	iml o
2.204	5.106	2.245	25.264	.2542	3.933	.560	iml o
2.204	5.220	2.272	26.139	.2562	3.903	.565	iml o
2.204	5.153	2.302	26.144	.2510	3.984	.553	iml o
2.203	5.182	2.340	26.713	.2490	4.017	.548	iml o
2.204	5.185	2.342	26.764	.2488	4.020	.548	iml o
2.204	5.295	2.444	28.522	.2443	4.093	.538	iml o
2.204	5.292	2.480	28.926	.2411	4.148	.531	iml o
2.203	5.491	2.601	31.463	.2389	4.186	.526	iml o
2.204	5.464	2.703	32.551	.2293	4.362	.505	iml o
2.204	5.553	2.703	33.082	.2329	4.294	.513	iml o
2.204	5.553	2.723	33.326	.2312	4.325	.510	iml o
2.204	5.503	2.728	33.087	.2288	4.371	.504	iml o
2.204	5.539	2.729	33.316	.2302	4.344	.507	iml o
2.204	5.525	2.742	33.390	.2285	4.376	.504	iml o
2.204	5.713	2.877	36.226	.2252	4.440	.496	iml o
2.204	5.708	2.877	36.194	.2250	4.444	.496	iml o
2.204	5.914	3.002	39.129	.2234	4.476	.492	iml o
2.204	5.950	3.022	39.630	.2233	4.479	.492	iml o
2.204	6.291	3.147	43.634	.2268	4.410	.500	iml o
2.204	6.153	3.153	42.759	.2212	4.520	.488	iml o
2.204	6.161	3.186	43.262	.2191	4.564	.483	iml o
2.204	6.353	3.190	44.666	.2259	4.427	.498	iml o
2.204	6.162	3.195	43.391	.2185	4.577	.481	iml o
2.204	6.169	3.209	43.631	.2177	4.593	.480	iml o
2.203	6.131	3.223	43.532	.2153	4.645	.474	iml o
2.204	6.453	3.249	46.209	.2253	4.439	.497	iml o
2.204	6.363	3.269	45.845	.2206	4.533	.486	iml o
2.203	6.821	3.495	52.518	.2213	4.518	.488	iml o
2.203	6.816	3.504	52.615	.2206	4.534	.486	iml o
2.204	6.681	3.520	51.832	.2147	4.658	.473	iml o
2.202	6.857	3.561	53.768	.2183	4.581	.481	iml o
2.202	6.801	3.571	53.479	.2157	4.636	.475	iml o
2.204	7.015	3.680	56.897	.2157	4.636	.475	iml o
2.204	7.123	3.713	58.291	.2172	4.604	.479	iml o
2.204	7.191	3.714	58.863	.2194	4.558	.484	iml o
2.204	7.143	3.737	58.832	.2163	4.622	.477	iml o
2.204	7.038	3.743	58.060	.2124	4.708	.468	iml o
2.204	7.193	3.744	59.355	.2176	4.597	.479	iml o
2.203	7.020	3.747	57.948	.2116	4.725	.466	iml o
2.204	7.072	3.786	59.011	.2108	4.743	.465	iml o

(Continued)

QUARTZ , fused
(Continued)

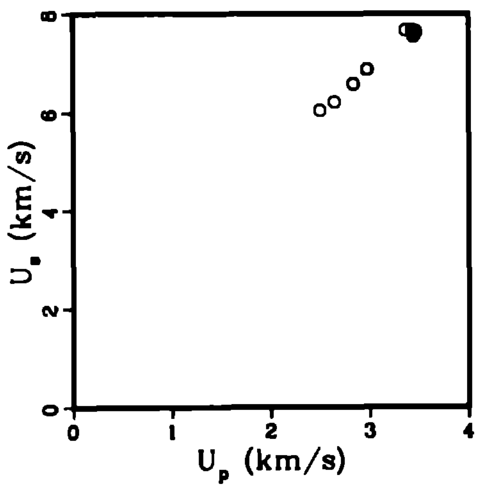
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.203	7.242	3.802	60.658	.2156	4.638	.475	iml	o
2.204	7.103	3.802	59.520	.2109	4.743	.465	iml	o
2.204	7.213	3.804	60.474	.2144	4.663	.473	iml	o
2.202	7.136	3.809	59.853	.2117	4.723	.466	iml	o
2.202	7.107	3.814	59.688	.2104	4.752	.463	iml	o
2.203	7.200	3.827	60.702	.2127	4.703	.468	iml	o
2.204	7.716	3.980	67.684	.2197	4.552	.484	iml	o
2.204	7.655	3.993	67.368	.2171	4.607	.478	iml	o
2.203	7.528	4.020	66.668	.2115	4.728	.466	iml	o
2.204	7.575	4.022	67.148	.2128	4.699	.469	iml	o
2.203	7.690	4.045	68.527	.2152	4.648	.474	iml	o
2.204	7.822	4.046	69.752	.2190	4.566	.483	iml	o
2.204	7.841	4.095	70.768	.2168	4.613	.478	iml	o
2.204	7.631	4.099	68.940	.2100	4.762	.463	iml	o
2.203	7.778	4.105	70.339	.2144	4.665	.472	iml	o
2.204	7.722	4.116	70.051	.2119	4.720	.467	iml	o
2.204	7.888	4.216	73.296	.2112	4.735	.466	iml	o
2.204	8.126	4.274	76.546	.2151	4.649	.474	iml	o
2.204	8.197	4.320	78.046	.2146	4.660	.473	iml	o
2.204	8.168	4.333	78.004	.2130	4.694	.470	iml	o
2.204	8.237	4.342	78.826	.2145	4.661	.473	iml	o
2.204	8.293	4.368	79.837	.2147	4.657	.473	iml	o
2.204	8.418	4.479	83.100	.2123	4.710	.468	iml	o
2.204	8.461	4.494	83.804	.2127	4.701	.469	iml	o

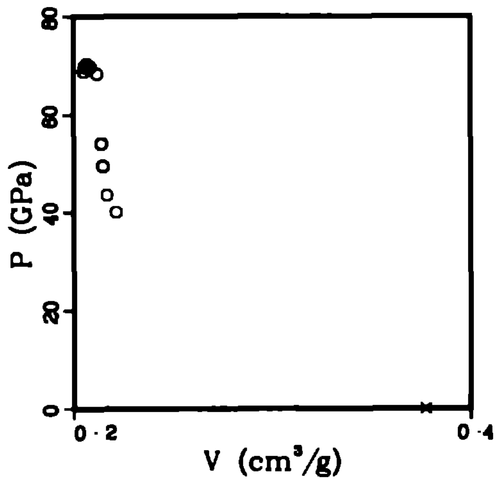
QUARTZ, single-crystal

Average ρ_0 = 2.650 g/cm^3.

References 6, 30, 32, 38, 39

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.650	6.047	2.499	40.045	.2214	4.517	.587	iml o
2.650	6.215	2.647	43.595	.2166	4.616	.574	iml o
2.650	6.580	2.837	49.469	.2147	4.659	.569	iml o
2.650	6.580	2.837	49.469	.2147	4.659	.569	iml o
2.650	6.867	2.976	54.156	.2138	4.677	.567	iml o
2.650	6.867	2.976	54.156	.2138	4.677	.567	iml o
2.650	7.667	3.363	68.328	.2118	4.721	.561	iml o
2.650	7.667	3.432	69.730	.2084	4.798	.552	iml o
2.650	7.539	3.442	68.765	.2051	4.876	.543	iml o
2.650	7.628	3.442	69.577	.2071	4.829	.549	iml o
2.650	7.608	3.462	69.798	.2056	4.863	.545	iml o
2.650	7.657	3.462	70.248	.2067	4.837	.548	iml o

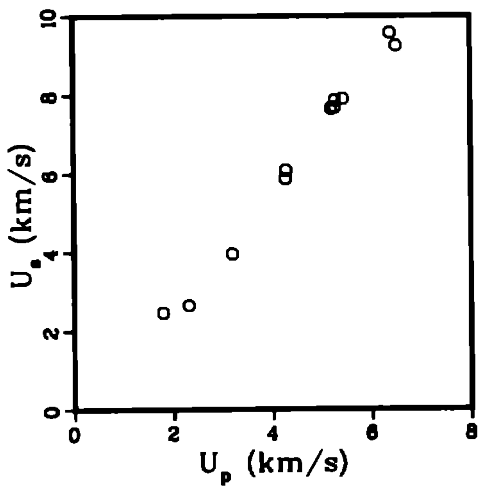


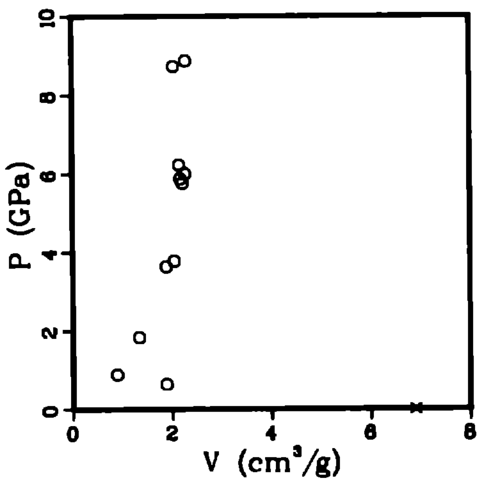


QUARTZ, spun

Average ρ_0 = 0.145 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.145	2.461	1.789	.638	1.8832	.531	.273	im1 o
.145	2.649	2.309	.887	.8852	1.130	.128	im1 o
.145	3.957	3.190	1.830	1.3368	.748	.194	im1 o
.145	5.873	4.268	3.635	1.8847	.531	.273	im1 o
.145	6.086	4.278	3.775	2.0488	.488	.297	im1 o
.145	7.656	5.192	5.764	2.2196	.451	.322	im1 o
.145	7.693	5.267	5.875	2.1748	.460	.315	im1 o
.145	7.861	5.271	6.008	2.2722	.440	.329	im1 o
.145	7.902	5.434	6.226	2.1540	.464	.312	im1 o
.145	9.574	6.391	8.872	2.2928	.436	.332	im1 o
.145	9.251	6.507	8.728	2.0456	.489	.297	im1 o



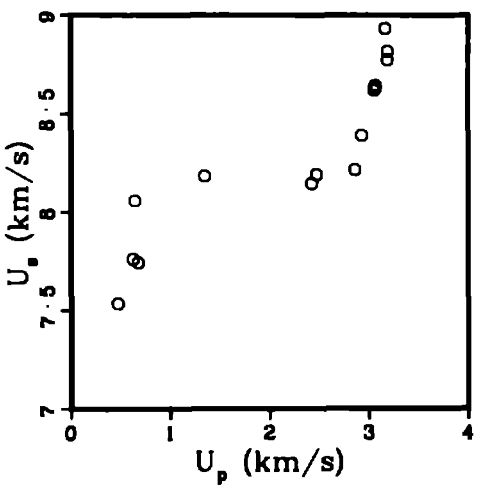


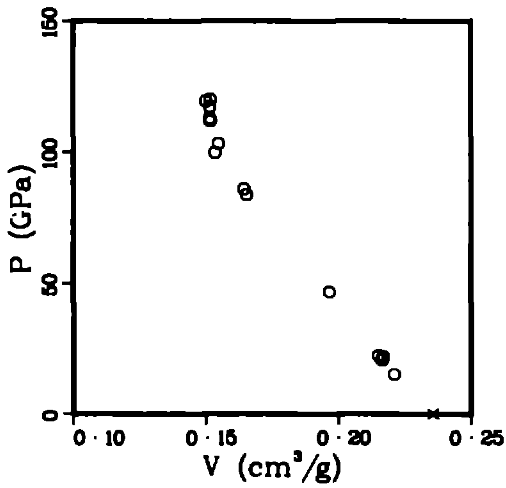
RUTILE

Average ρ_0 = 4.243 g/cm^3.

References 6, 30, 32, 40

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.245	7.535	.468	14.969	.2209	4.526	.938	iml o
4.250	7.762	.624	20.585	.2164	4.622	.920	iml o
4.245	8.059	.642	21.963	.2168	4.612	.920	iml o
4.245	7.744	.676	22.222	.2150	4.651	.913	iml o
4.250	8.183	1.343	46.707	.1967	5.084	.836	iml o
4.250	8.145	2.421	83.806	.1654	6.048	.703	iml o
4.250	8.191	2.469	85.950	.1644	6.084	.699	iml o
4.250	8.215	2.858	99.783	.1534	6.517	.652	iml o
4.207	8.388	2.926	103.254	.1548	6.461	.651	iml o
4.250	8.619	3.056	111.944	.1519	6.585	.645	iml o
4.250	8.643	3.068	112.696	.1518	6.589	.645	iml o
4.250	8.634	3.071	112.689	.1516	6.596	.644	iml o
4.250	8.932	3.166	120.185	.1519	6.584	.646	iml o
4.196	8.773	3.188	117.355	.1517	6.591	.637	iml o
4.250	8.816	3.191	119.560	.1501	6.661	.638	iml o



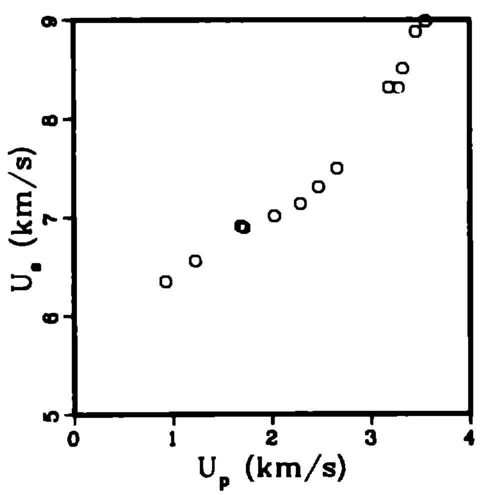


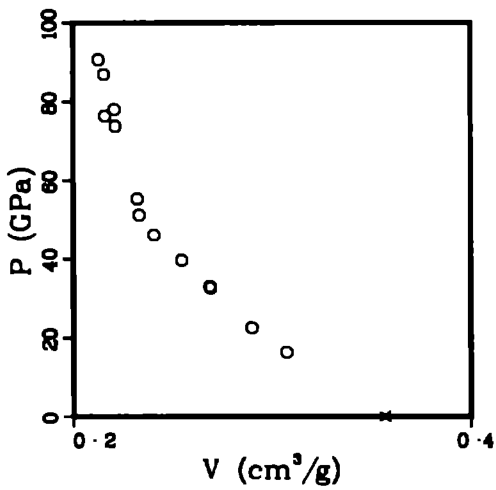
SERPENTINE, Ver-myen, Italy

Average ρ_0 = 2.802 g/cm^3.

References 6, 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.779	6.351	.926	16.343	.3074	3.253	.854	iml o
2.804	6.557	1.226	22.541	.2900	3.449	.813	iml o
2.809	6.911	1.686	32.730	.2691	3.715	.756	iml o
2.792	6.894	1.719	33.087	.2689	3.719	.751	iml o
2.793	7.014	2.025	39.670	.2547	3.927	.711	iml o
2.822	7.138	2.289	46.108	.2407	4.154	.679	iml o
2.837	7.307	2.471	51.224	.2333	4.287	.662	iml o
2.777	7.494	2.658	55.315	.2324	4.303	.645	iml o
2.790	8.316	3.182	73.828	.2213	4.519	.617	iml o
2.800	8.311	3.283	76.398	.2161	4.628	.605	iml o
2.758	8.510	3.326	78.063	.2209	4.528	.609	iml o
2.833	8.881	3.457	86.978	.2156	4.639	.611	iml o
2.838	8.988	3.558	90.757	.2129	4.698	.604	iml o





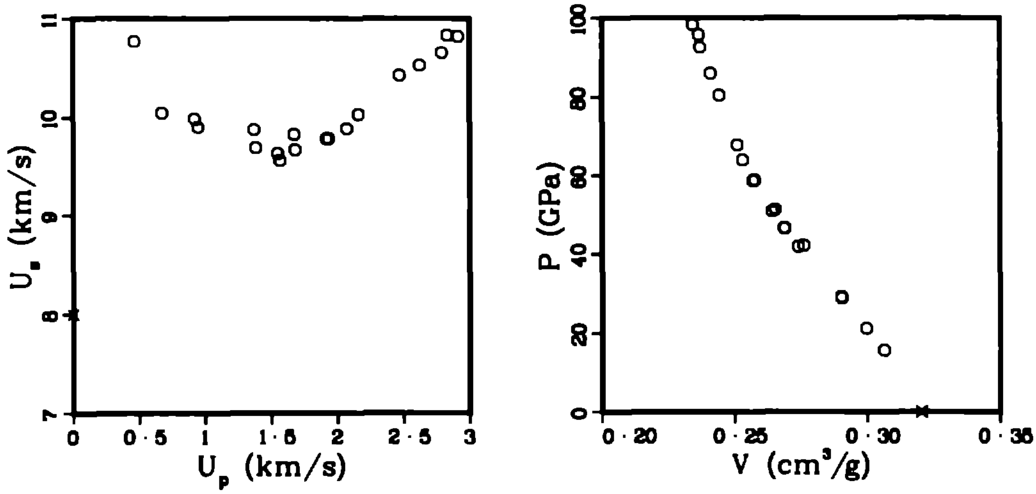
SILICON CARBIDE, ρ_0 = 3.1 g/cm^3.

Average ρ_0 = 3.122 g/cm^3.

Sound velocities longitudinal 11.73 km/s.
shear 7.43 km/s.

References 13, 30

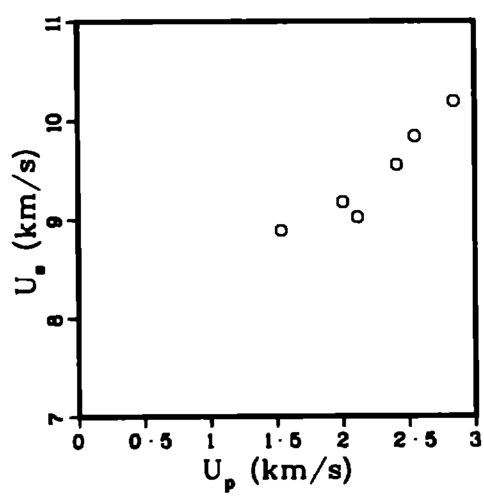
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.121	7.999	0.000	0.000	.3204	3.121	1.000	ssp ×
3.124	10.771	.464	15.613	.3063	3.265	.957	iml o
3.114	10.047	.674	21.087	.2996	3.338	.933	iml o
3.127	9.989	.921	28.768	.2903	3.445	.908	iml o
3.118	9.903	.944	29.148	.2901	3.447	.905	iml o
3.120	9.877	1.368	42.157	.2761	3.622	.861	iml o
3.129	9.691	1.381	41.876	.2740	3.649	.857	iml o
3.123	9.633	1.547	46.540	.2688	3.720	.839	iml o
3.110	9.561	1.564	46.505	.2689	3.718	.836	iml o
3.128	9.826	1.670	51.329	.2654	3.768	.830	iml o
3.129	9.669	1.678	50.767	.2641	3.786	.826	iml o
3.130	9.783	1.915	58.639	.2569	3.892	.804	iml o
3.116	9.784	1.931	58.870	.2576	3.882	.803	iml o
3.126	9.887	2.069	63.946	.2530	3.953	.791	iml o
3.126	10.031	2.162	67.794	.2509	3.985	.784	iml o
3.123	10.425	2.472	80.482	.2443	4.094	.763	iml o
3.115	10.526	2.623	86.004	.2410	4.149	.751	iml o
3.115	10.655	2.790	92.601	.2370	4.220	.738	iml o
3.124	10.833	2.831	95.808	.2364	4.229	.739	iml o
3.120	10.821	2.912	98.314	.2343	4.269	.731	iml o

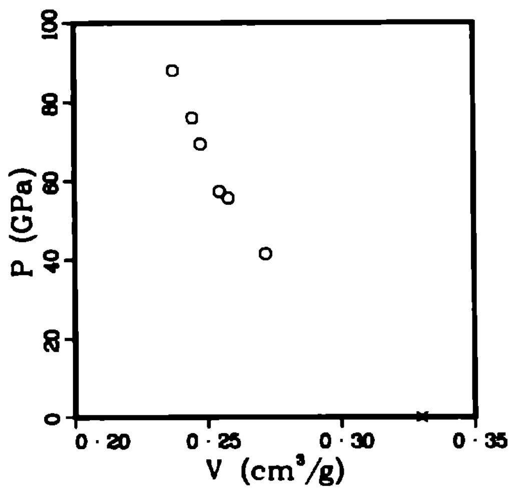


SILICON CARBIDE, ρ_0 = 3.0 g/cm^3.

Average ρ_0 = 3.029 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.044	8.888	1.535	41.530	.2718	3.679	.827	iml o
3.032	9.176	2.002	55.699	.2579	3.878	.782	iml o
3.008	9.023	2.112	57.322	.2546	3.927	.766	iml o
3.020	9.550	2.410	69.507	.2476	4.039	.748	iml o
3.032	9.844	2.547	76.020	.2445	4.090	.741	iml o
3.040	10.194	2.842	88.073	.2372	4.215	.721	iml o



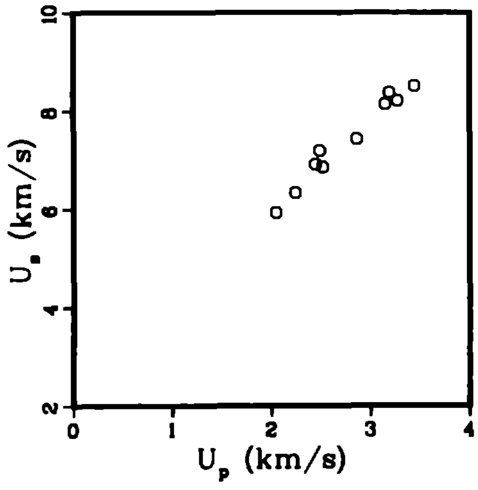


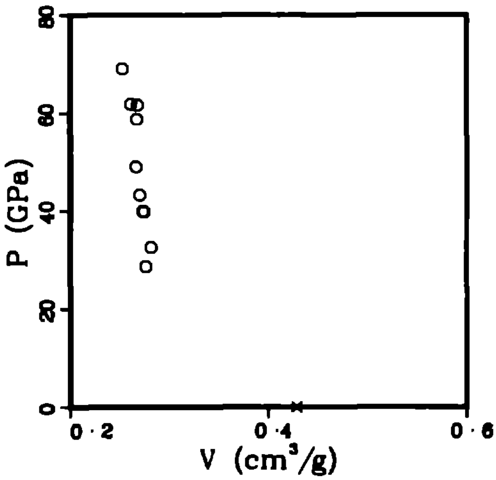
SILICON CARBIDE , ρ_0 = 2.3 g/cm^3 .

Average ρ_0 = 2.333 g/cm^3 .

References 13 , 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.368	5.928	2.048	28.749	.2764	3.618	.655	iml o
2.295	6.339	2.241	32.602	.2817	3.550	.646	iml o
2.364	6.912	2.443	39.919	.2735	3.656	.647	iml o
2.423	7.191	2.485	43.298	.2701	3.702	.654	iml o
2.307	6.856	2.517	39.811	.2743	3.645	.633	iml o
2.311	7.425	2.857	49.024	.2662	3.756	.615	iml o
2.292	8.144	3.150	58.798	.2675	3.738	.613	iml o
2.308	8.375	3.192	61.700	.2681	3.729	.619	iml o
2.302	8.213	3.272	61.861	.2613	3.826	.602	iml o
2.357	8.512	3.444	69.096	.2526	3.959	.595	iml o





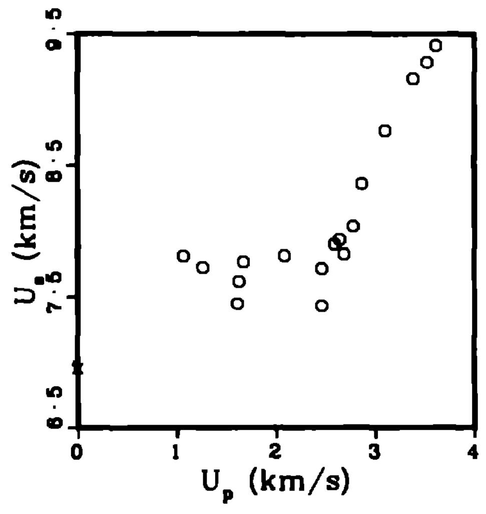
SILLIMANITE, Dillon, Montana

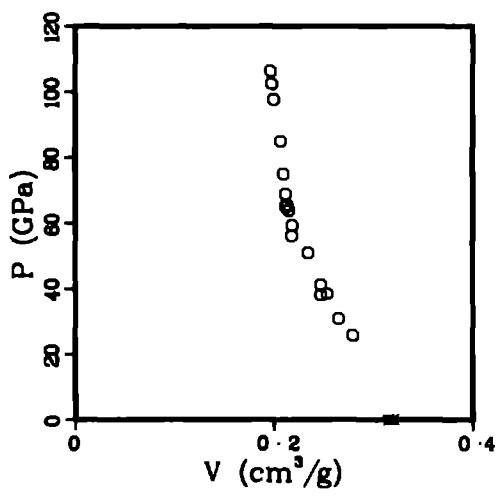
Average ρ_0 = 3.127 g/cm^3.

Sound velocities longitudinal 9.00 km/s.
shear 4.95 km/s.

References 6, 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
3.172	6.952	0.000	0.000	.3153	3.172	1.000	ssp	×
3.086	7.808	1.068	25.734	.2797	3.575	.863	iml	o
3.158	7.725	1.262	30.787	.2649	3.775	.837	iml	o
3.173	7.446	1.608	37.991	.2471	4.047	.784	iml	o
3.101	7.616	1.626	38.402	.2536	3.943	.787	iml	o
3.173	7.765	1.673	41.220	.2473	4.044	.785	iml	o
3.122	7.814	2.087	50.913	.2348	4.260	.733	iml	o
3.071	7.430	2.459	56.108	.2179	4.590	.669	iml	o
3.120	7.714	2.461	59.231	.2183	4.582	.681	iml	o
3.129	7.900	2.587	63.948	.2149	4.653	.673	iml	o
3.127	7.936	2.639	65.489	.2135	4.685	.667	iml	o
3.096	7.825	2.688	65.120	.2120	4.716	.656	iml	o
3.089	8.037	2.776	68.918	.2119	4.719	.655	iml	o
3.131	8.360	2.866	75.018	.2099	4.764	.657	iml	o
3.128	8.767	3.099	84.984	.2067	4.838	.647	iml	o
3.152	9.158	3.386	97.740	.2000	5.001	.630	iml	o
3.134	9.284	3.521	102.447	.1981	5.049	.621	iml	o
3.127	9.412	3.611	106.277	.1971	5.073	.616	iml	o

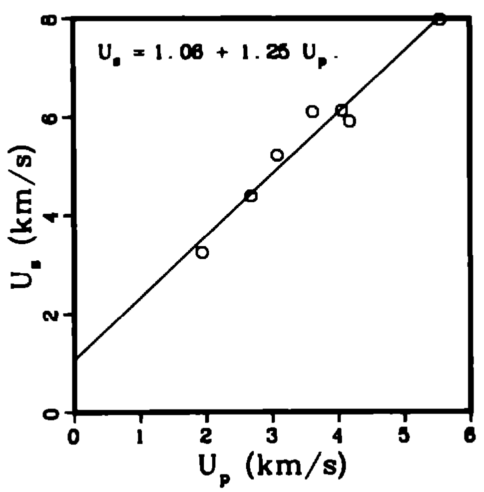


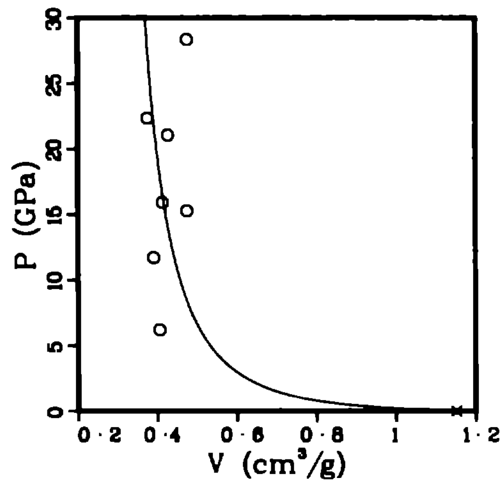


SODIUM CHLORIDE, powdered, unpressed

Average ρ_0 = 0.868 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.987	3.238	1.942	6.205	.4056	2.465	.400	iml o
.993	4.385	2.683	11.684	.3908	2.559	.388	iml o
.989	5.213	3.082	15.890	.4133	2.419	.409	iml o
.953	6.103	3.620	21.054	.4269	2.342	.407	iml o
.898	6.128	4.061	22.347	.3756	2.662	.337	iml o
.617	5.913	4.181	15.254	.4747	2.106	.293	iml o
.640	7.979	5.552	28.352	.4753	2.104	.304	iml o





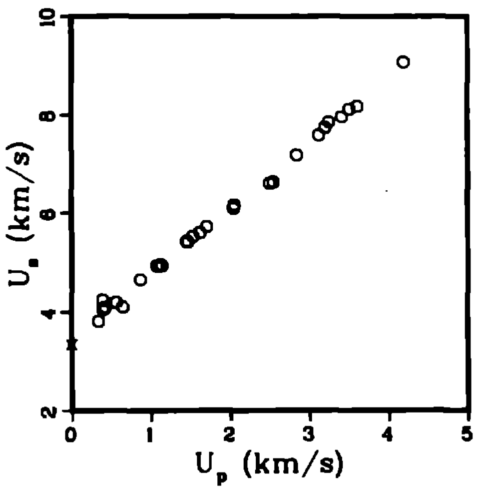
SODIUM CHLORIDE, pressed

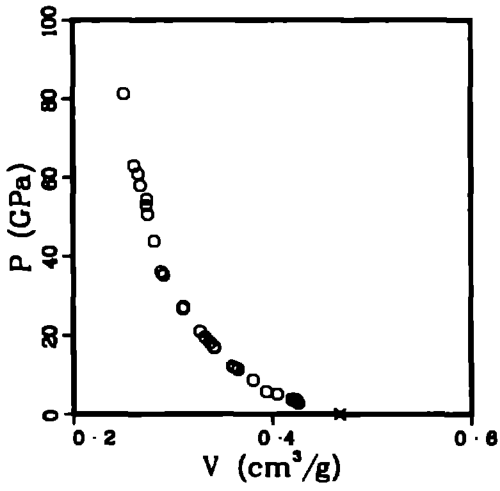
Average ρ_0 = 2.137 g/cm^3.

Sound velocities longitudinal 4.47 km/s.
shear 2.57 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.137	3.343	0.000	0.000	.4679	2.137	1.000	ssp ×
2.139	3.810	.339	2.763	.4259	2.348	.911	iml o
2.140	4.239	.394	3.574	.4239	2.359	.907	iml o
2.137	4.050	.397	3.436	.4221	2.369	.902	iml o
2.137	4.093	.424	3.709	.4195	2.384	.896	iml o
2.137	4.190	.565	5.059	.4048	2.470	.865	iml o
2.138	4.096	.647	5.666	.3938	2.539	.842	iml o
2.138	4.650	.865	8.600	.3807	2.627	.814	iml o
2.139	4.933	1.075	11.343	.3656	2.735	.782	iml o
2.135	4.950	1.123	11.868	.3621	2.761	.773	iml o
2.138	4.942	1.137	12.014	.3601	2.777	.770	iml o
2.138	5.426	1.458	16.914	.3420	2.924	.731	iml o
2.135	5.411	1.463	16.901	.3417	2.926	.730	iml o
2.139	5.524	1.533	18.114	.3378	2.961	.722	iml o
2.134	5.603	1.625	19.430	.3327	3.006	.710	iml o
2.139	5.723	1.709	20.921	.3279	3.050	.701	iml o
2.138	6.098	2.048	26.701	.3106	3.219	.664	iml o
2.139	6.165	2.058	27.139	.3114	3.211	.666	iml o
2.137	6.604	2.499	35.268	.2909	3.438	.622	iml o
2.134	6.632	2.548	36.061	.2886	3.465	.616	iml o

(Continued)





SODIUM CHLORIDE, pressed
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.143	7.176	2.844	43.736	.2817	3.550	.604	iml o
2.135	7.578	3.124	50.543	.2753	3.632	.588	iml o
2.137	7.727	3.201	52.857	.2741	3.648	.586	iml o
2.134	7.849	3.251	54.453	.2745	3.643	.586	iml o
2.134	7.954	3.413	57.932	.2675	3.738	.571	iml o
2.138	8.114	3.509	60.873	.2655	3.767	.568	iml o
2.134	8.169	3.611	62.949	.2615	3.825	.558	iml o
2.138	9.064	4.192	81.236	.2514	3.978	.538	iml o

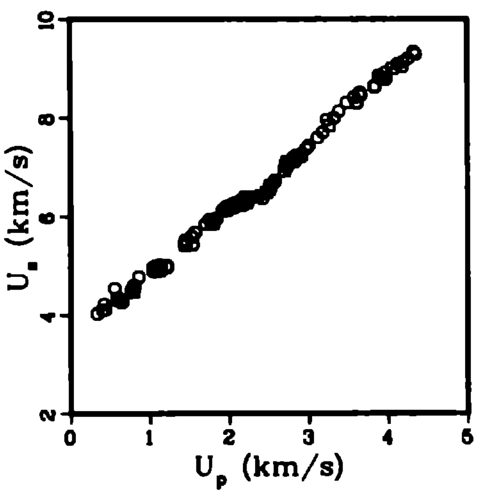
SODIUM CHLORIDE, single-crystal, [100]

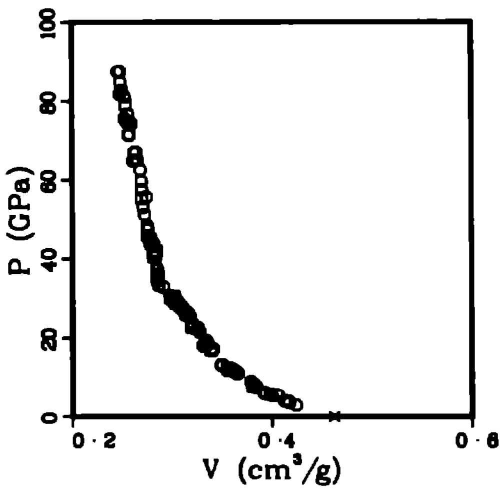
Average ρ_0 = 2.163 g/cm^3.

Reference 41

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.164	4.030	.332	2.895	.4240	2.358	.918	im1	o
2.164	4.101	.399	3.541	.4171	2.397	.903	im1	o
2.164	4.228	.420	3.843	.4162	2.403	.901	im1	o
2.164	4.122	.441	3.934	.4127	2.423	.893	im1	o
2.164	4.547	.554	5.451	.4058	2.464	.878	im1	o
2.164	4.305	.583	5.431	.3995	2.503	.865	im1	o
2.164	4.356	.600	5.656	.3985	2.510	.862	im1	o
2.164	4.262	.636	5.866	.3931	2.544	.851	im1	o
2.162	4.283	.647	5.991	.3927	2.547	.849	im1	o
2.162	4.269	.648	5.981	.3923	2.549	.848	im1	o
2.162	4.511	.765	7.461	.3841	2.604	.830	im1	o
2.162	4.491	.766	7.438	.3836	2.607	.829	im1	o
2.162	4.594	.789	7.837	.3831	2.610	.828	im1	o
2.165	4.480	.790	7.662	.3804	2.629	.824	im2	□
2.164	4.591	.807	8.017	.3809	2.626	.824	im1	o
2.164	4.778	.858	8.871	.3791	2.638	.820	im1	o
2.165	4.952	1.034	11.086	.3654	2.736	.791	im1	o
2.160	4.887	1.040	10.978	.3644	2.744	.787	im1	o
2.164	4.989	1.070	11.552	.3630	2.755	.786	im1	o
2.162	4.986	1.085	11.696	.3619	2.763	.782	im1	o
2.165	4.900	1.110	11.775	.3573	2.799	.773	im2	□

(Continued)





SODIUM CHLORIDE, single-crystal, [100]
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.165	4.930	1.110	11.848	.3579	2.794	.775	im2 □
2.161	4.986	1.118	12.046	.3590	2.786	.776	im1 ○
2.162	5.003	1.123	12.147	.3587	2.788	.776	im1 ○
2.162	4.970	1.125	12.088	.3578	2.795	.774	im1 ○
2.164	5.006	1.127	12.209	.3581	2.793	.775	im1 ○
2.165	4.940	1.140	12.192	.3553	2.815	.769	im2 □
2.162	5.003	1.214	13.131	.3503	2.855	.757	im1 ○
2.162	4.990	1.215	13.108	.3499	2.858	.757	im1 ○
2.162	4.969	1.217	13.074	.3493	2.863	.755	im1 ○
2.165	5.410	1.440	16.866	.3389	2.950	.734	im2 □
2.165	5.509	1.443	17.211	.3409	2.933	.738	im1 ○
2.160	5.426	1.445	16.936	.3397	2.944	.734	im1 ○
2.164	5.473	1.448	17.149	.3398	2.943	.735	im1 ○
2.164	5.587	1.526	18.450	.3359	2.977	.727	im1 ○
2.162	5.433	1.535	18.030	.3319	3.013	.717	im1 ○
2.162	5.417	1.536	17.989	.3314	3.018	.716	im1 ○
2.162	5.670	1.570	19.246	.3345	2.990	.723	im1 ○
2.164	5.839	1.698	21.455	.3277	3.051	.709	im1 ○
2.162	5.935	1.750	22.455	.3262	3.066	.705	im1 ○
2.165	5.850	1.780	22.544	.3214	3.112	.696	im2 □
2.165	5.850	1.800	22.797	.3198	3.127	.692	im2 □
2.162	5.940	1.822	23.399	.3207	3.119	.693	im1 ○
2.162	5.956	1.837	23.655	.3199	3.126	.692	im1 ○
2.162	6.115	1.918	25.357	.3175	3.150	.686	im1 ○
2.162	6.120	1.918	25.378	.3176	3.149	.687	im1 ○
2.162	6.151	1.947	25.892	.3161	3.163	.683	im1 ○
2.162	6.146	1.947	25.871	.3160	3.164	.683	im1 ○
2.165	6.130	1.960	26.012	.3142	3.183	.680	im2 □
2.165	6.126	1.964	26.048	.3138	3.187	.679	im1 ○
2.160	6.202	1.969	26.377	.3160	3.165	.683	im1 ○
2.162	6.195	2.001	26.801	.3131	3.194	.677	im1 ○
2.162	6.171	2.004	26.737	.3123	3.202	.675	im1 ○
2.164	6.175	2.005	26.792	.3121	3.204	.675	im1 ○
2.162	6.185	2.018	26.985	.3116	3.209	.674	im1 ○
2.164	6.245	2.040	27.569	.3112	3.214	.673	im1 ○
2.162	6.214	2.060	27.675	.3092	3.234	.668	im1 ○
2.162	6.183	2.064	27.591	.3081	3.245	.666	im1 ○
2.162	6.244	2.083	28.120	.3082	3.244	.666	im1 ○
2.162	6.272	2.084	28.259	.3088	3.238	.668	im1 ○
2.162	6.261	2.085	28.223	.3085	3.241	.667	im1 ○
2.165	6.240	2.130	28.775	.3042	3.287	.659	im2 □
2.162	6.333	2.156	29.520	.3051	3.278	.660	im1 ○
2.162	6.267	2.164	29.321	.3028	3.302	.655	im1 ○

(Continued)

SODIUM CHLORIDE, single-crystal, [100]
(Continued)

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
2.165	6.226	2.174	29.304	.3006	3.327	.651	im1 ○
2.165	6.390	2.210	30.574	.3021	3.310	.654	im2 □
2.165	6.280	2.220	30.184	.2986	3.349	.646	im2 □
2.162	6.315	2.244	30.637	.2982	3.354	.645	im1 ○
2.161	6.415	2.373	32.896	.2916	3.430	.630	im1 ○
2.163	6.361	2.418	33.269	.2866	3.489	.620	im1 ○
2.165	6.480	2.470	34.652	.2858	3.499	.619	im2 □
2.165	6.550	2.510	35.594	.2849	3.510	.617	im2 □
2.165	6.620	2.520	36.117	.2861	3.496	.619	im2 □
2.160	6.693	2.572	37.183	.2851	3.508	.616	im1 ○
2.165	6.733	2.582	37.638	.2848	3.512	.617	im1 ○
2.165	6.920	2.700	40.451	.2817	3.550	.610	im2 □
2.165	7.020	2.710	41.187	.2836	3.526	.614	im2 □
2.162	7.026	2.725	41.393	.2831	3.532	.612	im1 ○
2.162	6.997	2.729	41.283	.2821	3.544	.610	im1 ○
2.165	7.100	2.730	41.964	.2843	3.518	.615	im2 □
2.162	7.193	2.815	43.777	.2815	3.552	.609	im1 ○
2.162	7.104	2.827	43.419	.2785	3.591	.602	im1 ○
2.164	7.172	2.838	44.046	.2792	3.581	.604	im1 ○
2.165	7.230	2.870	44.924	.2785	3.590	.603	im2 □
2.162	7.249	2.906	45.544	.2771	3.609	.599	im1 ○
2.162	7.205	2.912	45.361	.2756	3.629	.596	im1 ○
2.165	7.372	2.971	47.418	.2757	3.627	.597	im1 ○
2.165	7.446	3.009	48.507	.2752	3.633	.596	im1 ○
2.164	7.597	3.113	51.177	.2728	3.666	.590	im1 ○
2.165	7.709	3.181	53.091	.2713	3.686	.587	im1 ○
2.164	7.962	3.231	55.669	.2746	3.642	.594	im1 ○
2.165	7.840	3.260	55 334	.2698	3.706	.584	im2 □
2.165	7.997	3.323	57.533	.2700	3.704	.584	im1 ○
2.164	8.132	3.386	59.506	.2697	3.708	.584	im1 ○
2.164	8.306	3.482	62.586	.2684	3.726	.581	im1 ○
2.165	8.410	3.576	65.111	.2655	3.767	.575	im1 ○
2.162	8.314	3.608	64.853	.2618	3.820	.566	im1 ○
2.162	8.297	3.611	64.775	.2612	3.828	.565	im1 ○
2.162	8.504	3.650	67.108	.2640	3.788	.571	im1 ○
2.161	8.493	3.654	67.063	.2637	3.793	.570	im1 ○
2.162	8.451	3.658	66.836	.2623	3.812	.567	im1 ○
2.162	8.630	3.833	71.516	.2571	3.890	.556	im1 ○
2.162	8.623	3.834	71.477	.2569	3.893	.555	im1 ○
2.160	8.630	3.841	71.599	.2569	3.892	.555	im1 ○
2.162	8.852	3.888	74.409	.2594	3.855	.561	im1 ○
2.162	8.815	3.893	74.193	.2583	3.872	.558	im1 ○
2.165	8.779	3.928	74.658	.2552	3.918	.553	im1 ○

(Continued)

SODIUM CHLORIDE, single-crystal, [100]
(Continued)

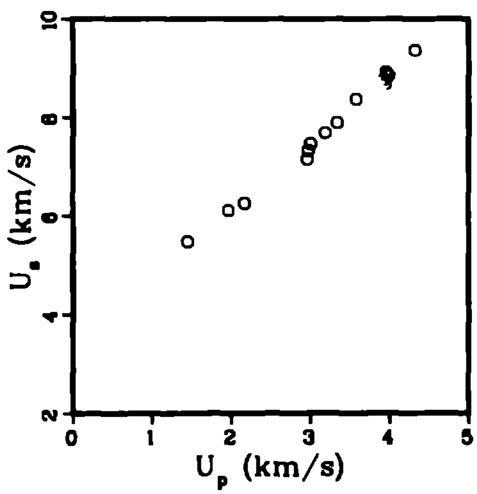
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.165	8.792	3.932	74.844	.2553	3.917	.553	im1 ○
2.165	8.777	3.977	75.572	.2526	3.959	.547	im1 ○
2.165	8.918	3.977	76.786	.2559	3.908	.554	im1 ○
2.165	9.000	4.060	79.109	.2535	3.944	.549	im2 □
2.162	9.093	4.126	81.113	.2527	3.958	.546	im1 ○
2.164	9.027	4.185	81.752	.2479	4.034	.536	im1 ○
2.162	9.130	4.193	82.766	.2501	3.998	.541	im1 ○
2.162	9.204	4.258	84.730	.2486	4.023	.537	im1 ○
2.165	9.347	4.327	87.562	.2481	4.031	.537	im1 ○
2.162	9.291	4.353	87.439	.2458	4.068	.531	im1 ○

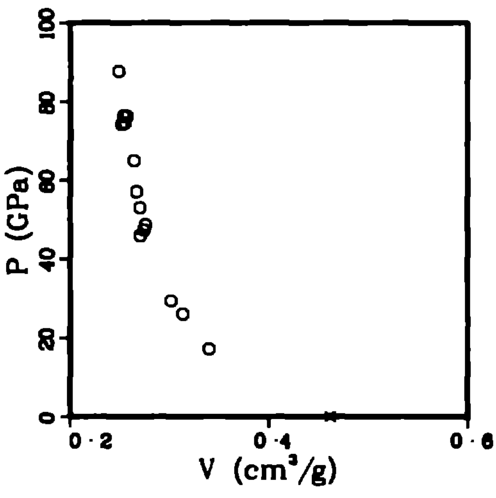
SODIUM CHLORIDE, single-crystal, [110]

Average ρ_0 = 2.165 g/cm^3.

Reference 41

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.165	5.472	1.446	17.131	.3398	2.943	.736	iml o
2.165	6.109	1.966	26.002	.3132	3.192	.678	iml o
2.165	6.254	2.171	29.395	.3016	3.316	.653	iml o
2.165	7.145	2.961	45.803	.2705	3.697	.586	iml o
2.165	7.326	2.977	47.218	.2742	3.647	.594	iml o
2.165	7.462	3.006	48.563	.2758	3.626	.597	iml o
2.165	7.686	3.185	52.999	.2705	3.697	.586	iml o
2.165	7.896	3.338	57.063	.2666	3.751	.577	iml o
2.165	8.372	3.581	64.907	.2643	3.783	.572	iml o
2.165	8.770	3.929	74.600	.2550	3.922	.552	iml o
2.165	8.677	3.950	74.204	.2516	3.974	.545	iml o
2.165	8.918	3.955	76.361	.2571	3.890	.557	iml o
2.165	8.849	3.988	76.402	.2537	3.941	.549	iml o
2.165	9.366	4.324	87.679	.2487	4.022	.538	iml o





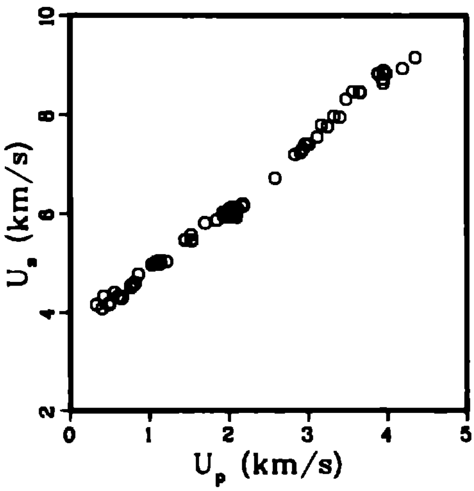
SODIUM CHLORIDE, single-crystal, [110]

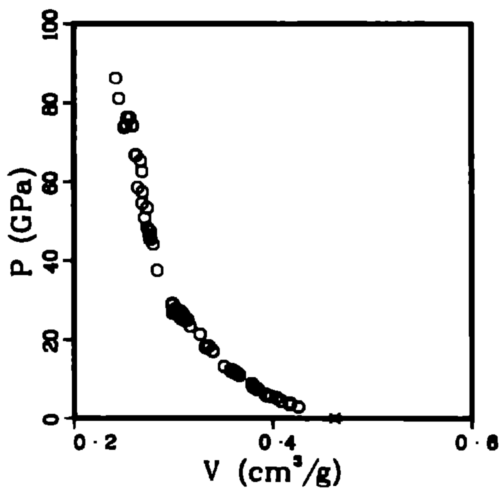
Average ρ_0 = 2.163 g/cm^3.

Reference 41

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.164	4.157	.328	2.951	.4256	2.349	.921	iml o
2.164	4.080	.400	3.532	.4168	2.399	.902	iml o
2.164	4.326	.418	3.913	.4175	2.395	.903	iml o
2.162	4.177	.488	4.407	.4085	2.448	.883	iml o
2.162	4.161	.489	4.399	.4082	2.450	.882	iml o
2.164	4.402	.558	5.315	.4035	2.478	.873	iml o
2.164	4.315	.602	5.621	.3976	2.515	.860	iml o
2.164	4.305	.634	5.906	.3941	2.538	.853	iml o
2.162	4.304	.646	6.011	.3931	2.544	.850	iml o
2.162	4.289	.647	6.000	.3928	2.546	.849	iml o
2.162	4.531	.763	7.474	.3846	2.600	.832	iml o
2.162	4.506	.765	7.453	.3840	2.604	.830	iml o
2.164	4.589	.807	8.014	.3808	2.626	.824	iml o
2.164	4.587	.816	8.100	.3799	2.632	.822	iml o
2.164	4.770	.858	8.857	.3790	2.639	.820	iml o
2.165	4.958	1.026	11.013	.3663	2.730	.793	iml o
2.164	4.978	1.071	11.537	.3627	2.757	.785	iml o
2.162	5.013	1.083	11.738	.3626	2.758	.784	iml o
2.162	4.991	1.085	11.708	.3620	2.763	.783	iml o
2.164	4.989	1.105	11.930	.3598	2.780	.779	iml o
2.162	5.011	1.122	12.156	.3590	2.786	.776	iml o

(Continued)





SODIUM CHLORIDE , single-crystal , [111]
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.164	5.032	1.125	12.250	.3588	2.787	.776	iml o
2.162	4.975	1.125	12.100	.3579	2.794	.774	iml o
2.164	5.023	1.133	12.315	.3579	2.794	.774	iml o
2.162	5.026	1.212	13.170	.3510	2.849	.759	iml o
2.165	5.450	1.448	17.085	.3392	2.948	.734	iml o
2.164	5.468	1.448	17.134	.3397	2.943	.735	iml o
2.164	5.570	1.527	18.406	.3354	2.981	.726	iml o
2.162	5.459	1.532	18.081	.3327	3.005	.719	iml o
2.162	5.443	1.534	18.052	.3322	3.010	.718	iml o
2.164	5.808	1.700	21.366	.3268	3.060	.707	iml o
2.162	5.866	1.847	23.424	.3169	3.156	.685	iml o
2.162	6.023	1.928	25.106	.3145	3.180	.680	iml o
2.162	5.940	1.938	24.888	.3116	3.209	.674	iml o
2.162	5.964	1.968	25.376	.3099	3.227	.670	iml o
2.162	5.934	1.971	25.287	.3089	3.237	.668	iml o
2.165	5.945	1.984	25.536	.3077	3.249	.666	iml o
2.162	6.096	2.012	26.517	.3099	3.227	.670	iml o
2.162	6.037	2.019	26.352	.3078	3.248	.666	iml o
2.164	5.968	2.029	26.204	.3050	3.279	.660	iml o
2.164	6.129	2.054	27.243	.3072	3.255	.665	iml o
2.162	5.978	2.088	26.986	.3010	3.322	.651	iml o
2.162	5.924	2.094	26.819	.2990	3.344	.647	iml o
2.162	6.097	2.104	27.734	.3029	3.301	.655	iml o
2.162	6.082	2.106	27.692	.3024	3.307	.654	iml o
2.162	6.164	2.176	28.999	.2993	3.342	.647	iml o
2.162	6.153	2.178	28.973	.2988	3.347	.646	iml o
2.165	6.189	2.179	29.197	.2993	3.341	.648	iml o
2.165	6.710	2.585	37.553	.2840	3.522	.615	iml o
2.164	7.192	2.837	44.154	.2798	3.574	.606	iml o
2.162	7.242	2.907	45.515	.2769	3.612	.599	iml o
2.162	7.236	2.908	45.493	.2767	3.615	.598	iml o
2.165	7.309	2.938	4C.491	.2762	3.620	.598	iml o
2.165	7.406	2.966	47.557	.2769	3.611	.600	iml o
2.165	7.406	3.014	48.326	.2739	3.651	.593	iml o
2.164	7.551	3.117	50.933	.2714	3.685	.587	iml o
2.165	7.789	3.170	53.456	.2739	3.651	.593	iml o
2.164	7.763	3.249	54.580	.2687	3.722	.581	iml o
2.165	7.971	3.327	57.415	.2691	3.716	.583	iml o
2.164	7.953	3.403	58.567	.2644	3.782	.572	iml o
2.164	8.314	3.481	62.628	.2686	3.723	.581	iml o
2.165	8.465	3.568	65.390	.2672	3.742	.578	iml o
2.162	8.461	3.656	66.878	.2627	3.807	.568	iml o
2.162	8.449	3.658	66.820	.2623	3.813	.567	iml o

(Continued)

SODIUM CHLORIDE, single-crystal, [111]
(Continued)

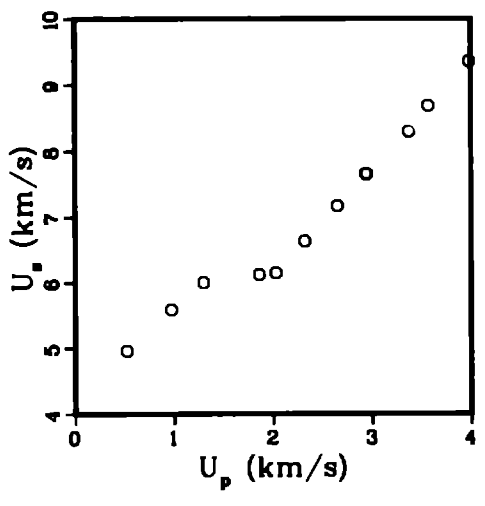
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.162	8.839	3.889	74.318	.2590	3.861	.560	iml o
2.162	8.827	3.891	74.256	.2586	3.866	.559	iml o
2.165	8.718	3.943	74.422	.2530	3.953	.548	iml o
2.165	8.635	3.950	73.844	.2506	3.990	.543	iml o
2.165	8.901	3.958	76.273	.2565	3.899	.555	iml o
2.165	8.839	3.989	76.335	.2534	3.946	.549	iml o
2.164	8.944	4.194	81.174	.2454	4.075	.531	iml o
2.165	9.163	4.356	86.414	.2423	4.127	.525	iml o

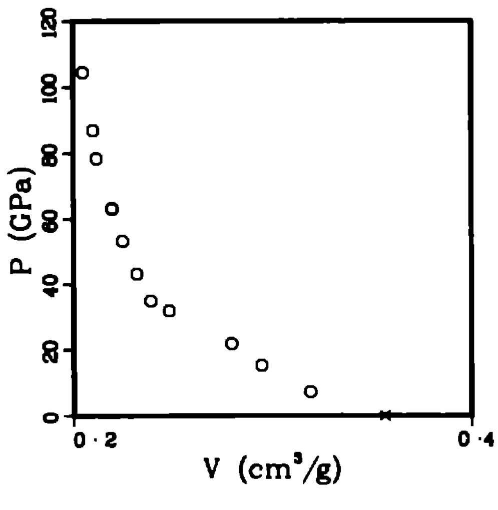
SODIUM FLUORIDE, single-crystal, [100]

Average ρ_0 = 2.805 g/cm^3.

Reference 35

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.805	4.957	.521	7.244	.3190	3.134	.895	iml o
2.805	5.585	.971	15.212	.2945	3.395	.826	iml o
2.805	5.998	1.296	21.804	.2795	3.578	.784	iml o
2.805	6.117	1.860	31.914	.2481	4.031	.696	iml o
2.805	6.143	2.027	34.927	.2389	4.186	.670	iml o
2.805	6.632	2.320	43.158	.2318	4.314	.650	iml o
2.805	7.166	2.650	53.267	.2247	4.451	.630	iml o
2.805	7.654	2.942	63.163	.2195	4.556	.616	iml o
2.805	7.648	2.943	63.135	.2193	4.560	.615	iml o
2.805	8.295	3.372	78.458	.2116	4.726	.593	iml o
2.805	8.680	3.569	86.896	.2099	4.764	.589	iml o
2.805	9.357	3.982	104.513	.2048	4.883	.574	iml o





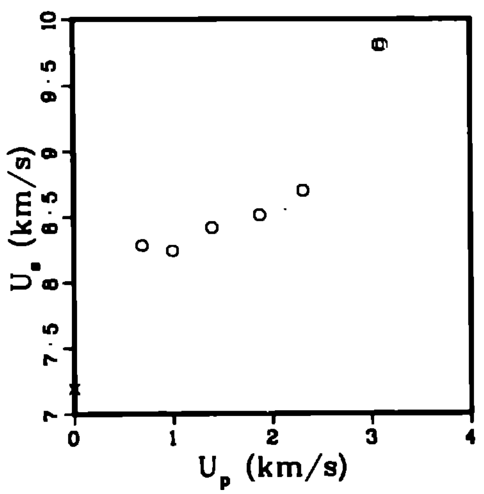
SPINEL, ceramic, ρ_0 = 3.48 g/cm^3.

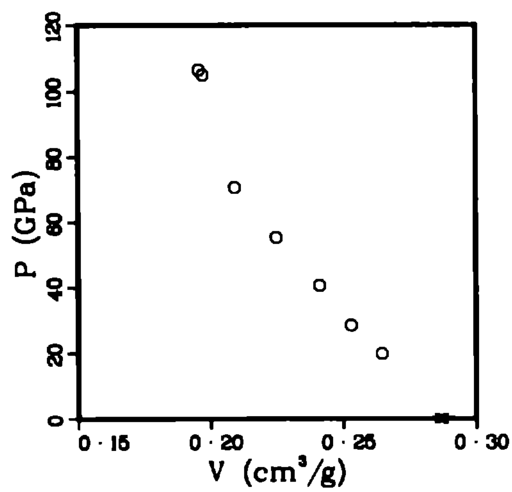
Average ρ_0 = 3.479 g/cm^3.

Sound velocities longitudinal 9.52 km/s.
shear 5.40 km/s.

Reference 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.493	7.194	0.000	0.000	.2863	3.493	1.000	ssp ×
3.466	8.282	.688	19.749	.2645	3.780	.917	iml o
3.476	8.241	.995	28.502	.2530	3.953	.879	iml o
3.461	8.418	1.392	40.555	.2412	4.147	.835	iml o
3.469	8.513	1.874	55.342	.2248	4.448	.780	iml o
3.510	8.698	2.311	70.555	.2092	4.780	.734	iml o
3.477	9.804	3.079	104.959	.1973	5.069	.686	iml o
3.484	9.806	3.118	106.524	.1958	5.108	.682	iml o





SPINEL, ceramic, ρ_0 = 3.42 g/cm^3.

Average ρ_0 = 3.417 g/cm^3.

Sound velocities longitudinal 9.41 km/s.
shear 5.34 km/s.

References 6, 30, 32

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
3.409	7.108	0.000	0.000	.2933	3.409	1.000	ssp	×
3.410	8.227	.987	27.689	.2581	3.875	.880	iml	o
3.409	8.176	1.367	38.101	.2443	4.093	.833	iml	o
3.424	8.197	1.554	43.615	.2367	4.225	.810	iml	o
3.415	8.128	1.563	43.384	.2365	4.228	.808	iml	o
3.424	8.191	1.661	46.584	.2328	4.295	.797	iml	o
3.416	8.160	1.666	46.439	.2330	4.292	.796	iml	o
3.422	8.225	1.957	55.082	.2227	4.490	.762	iml	o
3.407	8.129	1.982	54.892	.2219	4.506	.756	iml	o
3.427	8.204	2.134	59.998	.2159	4.632	.740	iml	o
3.415	8.137	2.146	59.633	.2156	4.638	.736	iml	o
3.409	8.336	2.295	65.218	.2126	4.704	.725	iml	o
3.424	8.415	2.475	71.312	.2062	4.851	.706	iml	o
3.428	8.959	2.736	84.027	.2026	4.935	.695	iml	o
3.427	8.959	2.737	84.033	.2027	4.935	.694	iml	o
3.426	9.028	2.796	86.480	.2015	4.963	.690	iml	o
3.428	8.998	2.799	86.336	.2010	4.976	.689	iml	o
3.413	9.279	2.985	94.533	.1987	5.032	.678	iml	o
3.416	9.479	3.123	101.124	.1963	5.094	.671	iml	o

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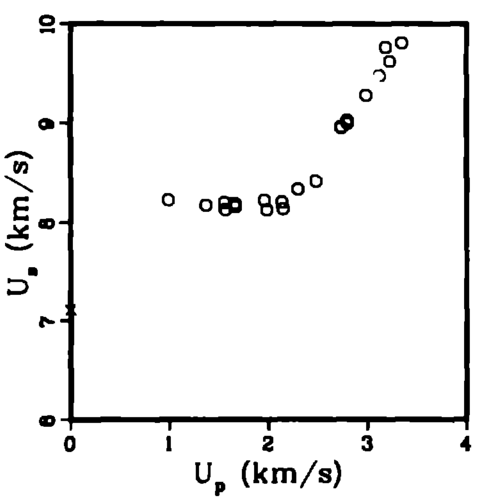
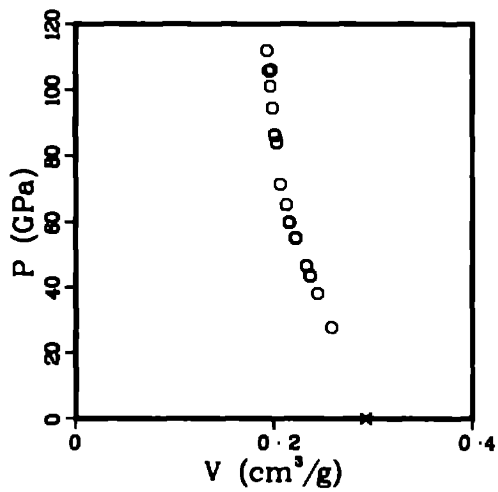




SPINEL, ceramic, ρ_0 = 3.42 g/cm^3.
(Continued)

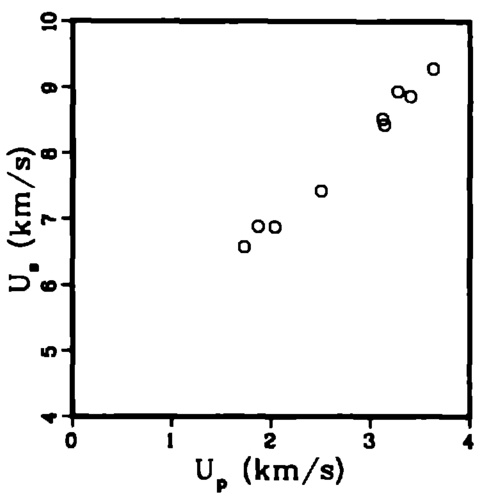
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.414	9.768	3.185	106.213	.1974	5.066	.674	iml o
3.405	9.618	3.228	105.715	.1951	5.125	.664	iml o
3.411	9.808	3.348	112.008	.1931	5.179	.659	iml o

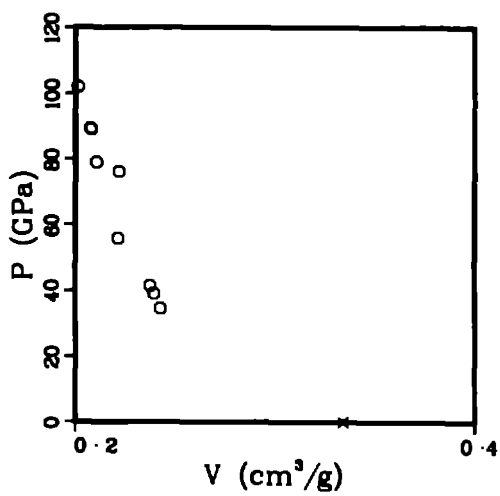
SPINEL, ceramic, ρ_0 = 3.0 g/cm^3.

Average ρ_0 = 2.991 g/cm^3.

Reference 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.037	6.573	1.727	34.475	.2428	4.119	.737	iml o
3.042	6.881	1.869	39.122	.2394	4.176	.728	iml o
2.963	6.878	2.037	41.513	.2375	4.210	.704	iml o
2.993	7.426	2.507	55.721	.2213	4.518	.662	iml o
2.857	8.527	3.124	76.106	.2218	4.509	.634	iml o
2.984	8.439	3.139	79.046	.2105	4.751	.628	iml o
3.050	8.941	3.271	89.200	.2079	4.810	.634	iml o
2.969	8.867	3.399	89.482	.2077	4.815	.617	iml o
3.026	9.283	3.630	101.968	.2012	4.969	.609	iml o



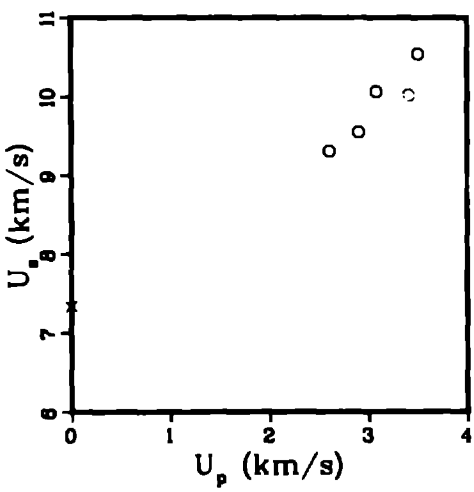


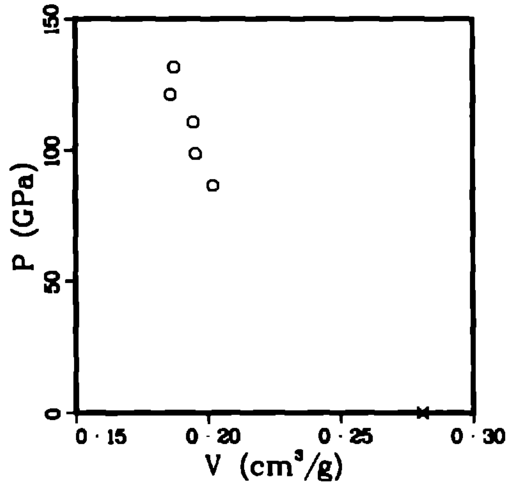
SPINEL, hot-pressed

Average ρ_0 = 3.560 g/cm^3.

Sound velocities longitudinal 9.70 km/s.
shear 5.50 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.561	7.332	0.000	0.000	.2808	3.561	1.000	ssp ×
3.564	9.305	2.610	86.555	.2019	4.953	.720	iml o
3.560	9.545	2.903	98.645	.1955	5.116	.696	iml o
3.565	10.064	3.081	110.541	.1946	5.138	.694	iml o
3.549	10.020	3.412	121.334	.1858	5.382	.659	iml o
3.562	10.538	3.507	131.640	.1873	5.339	.667	iml o

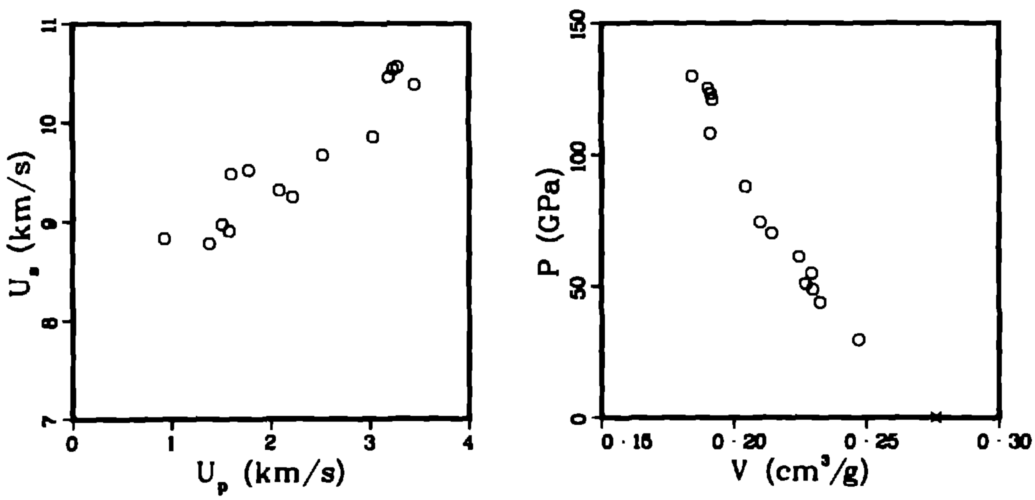




SPINEL, single-crystal

Average ρ_0 = 3.622 g/cm^3.

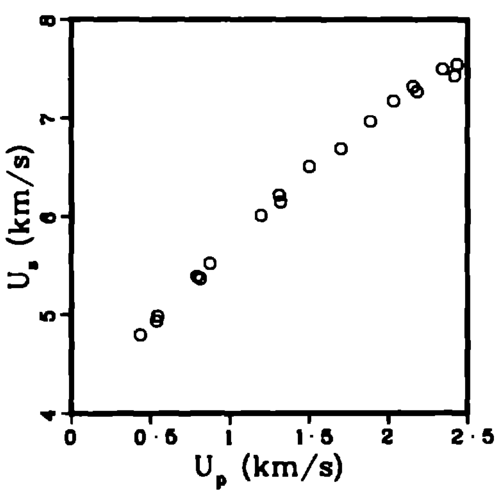
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.621	8.829	.927	29.636	.2472	4.046	.895	iml o
3.621	8.780	1.382	43.937	.2327	4.297	.843	iml o
3.621	8.972	1.506	48.926	.2298	4.351	.832	iml o
3.621	8.904	1.579	50.909	.2272	4.402	.823	iml o
3.623	9.483	1.599	54.937	.2295	4.358	.831	iml o
3.623	9.525	1.774	61.219	.2246	4.452	.814	iml o
3.623	9.317	2.081	70.245	.2144	4.665	.777	iml o
3.621	9.246	2.218	74.258	.2099	4.764	.760	iml o
3.621	9.670	2.516	88.098	.2043	4.894	.740	iml o
3.621	9.859	3.033	108.276	.1912	5.230	.692	iml o
3.622	10.464	3.191	120.941	.1919	5.211	.695	iml o
3.622	10.540	3.233	123.423	.1914	5.225	.693	iml o
3.622	10.562	3.277	125.363	.1904	5.251	.690	iml o
3.622	10.388	3.452	129.883	.1843	5.425	.668	iml o

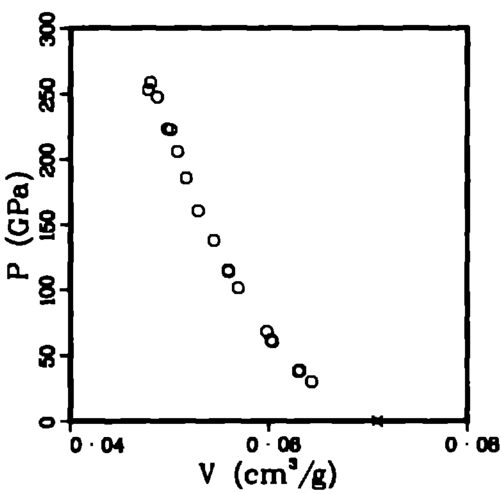


TANTALUM CARBIDE, ρ_0 = 14.1 g/cm^3.

Average ρ_0 = 14.094 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
14.130	4.795	.435	29.473	.0644	15.540	.909	iml o
14.140	4.934	.538	37.535	.0630	15.871	.891	iml o
14.100	4.983	.545	38.292	.0632	15.832	.891	iml o
14.130	5.386	.793	60.351	.0604	16.570	.853	iml o
14.080	5.362	.814	61.455	.0602	16.600	.848	iml o
14.060	5.520	.876	67.987	.0598	16.712	.841	iml o
14.070	6.004	1.195	100.949	.0569	17.566	.801	iml o
14.100	6.217	1.311	114.922	.0560	17.868	.789	iml o
14.030	6.144	1.319	113.698	.0560	17.865	.785	iml o
14.120	6.505	1.500	137.776	.0545	18.352	.769	iml o
14.100	6.687	1.702	160.476	.0529	18.914	.745	iml o
14.120	6.967	1.886	185.533	.0516	19.361	.729	iml o
14.100	7.174	2.034	205.746	.0508	19.680	.716	iml o
14.080	7.322	2.158	222.476	.0501	19.964	.705	iml o
14.060	7.270	2.183	223.138	.0498	20.094	.700	iml o
14.100	7.497	2.342	247.567	.0488	20.506	.688	iml o
14.080	7.424	2.419	252.858	.0479	20.885	.674	iml o
14.090	7.537	2.433	258.376	.0481	20.806	.677	iml o

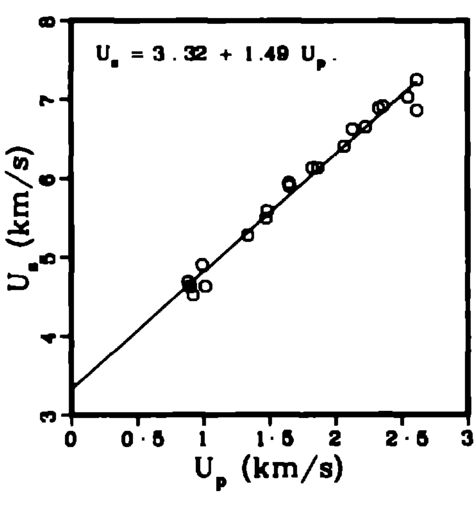


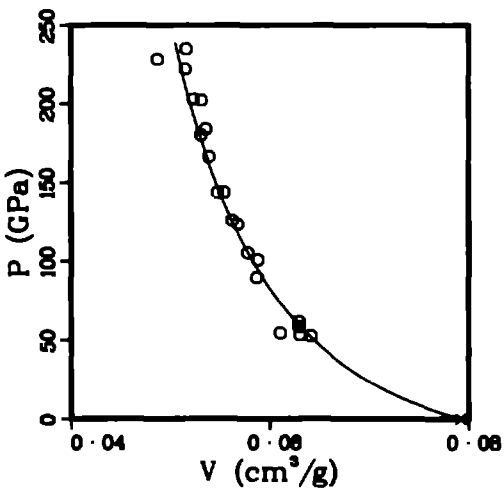


TANTALUM CARBIDE, ρ_0 = 12.6 g/cm^3.

Average ρ_0 = 12.626 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
12.640	4.686	.887	52.538	.0641	15.591	.811	iml	o
12.780	4.628	.901	53.290	.0630	15.870	.805	iml	o
13.030	4.516	.923	54.313	.0611	16.377	.796	iml	o
12.670	4.899	.990	61.450	.0630	15.879	.798	iml	o
12.400	4.634	1.017	58.438	.0629	15.887	.781	iml	o
12.720	5.275	1.336	89.643	.0587	17.034	.747	iml	o
12.440	5.494	1.476	100.878	.0588	17.010	.731	iml	o
12.710	5.588	1.484	105.399	.0578	17.306	.734	iml	o
12.840	5.940	1.651	125.921	.0562	17.783	.722	iml	o
12.670	5.900	1.654	123.641	.0568	17.606	.720	iml	o
12.820	6.134	1.827	143.671	.0548	18.258	.702	iml	o
12.540	6.135	1.870	143.865	.0554	18.038	.695	iml	o
12.570	6.404	2.066	166.309	.0539	18.557	.677	iml	o
12.780	6.623	2.130	180.287	.0531	18.839	.678	iml	o
12.410	6.652	2.229	184.007	.0536	18.664	.665	iml	o
12.640	6.887	2.329	202.743	.0524	19.099	.662	iml	o
12.390	6.914	2.361	202.254	.0531	18.815	.659	iml	o
12.380	7.031	2.550	221.962	.0515	19.425	.637	iml	o
12.710	6.862	2.617	228.244	.0487	20.546	.619	iml	o
12.380	7.248	2.619	235.003	.0516	19.384	.639	iml	o

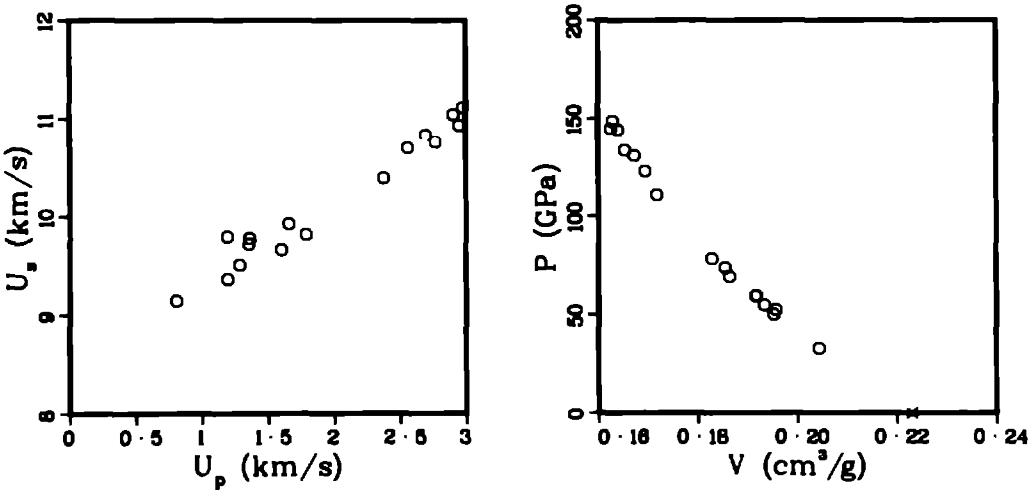




TITANIUM DIBORIDE

Average ρ_0 = 4.484 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.462	9.142	.805	32.837	.2044	4.893	.912	iml o
4.490	9.794	1.190	52.330	.1957	5.111	.878	iml o
4.469	9.366	1.195	50.019	.1952	5.123	.872	iml o
4.472	9.509	1.287	54.729	.1933	5.172	.865	iml o
4.490	9.720	1.356	59.180	.1916	5.218	.860	iml o
4.490	9.778	1.360	59.708	.1917	5.215	.861	iml o
4.475	9.662	1.604	69.353	.1864	5.366	.834	iml o
4.490	9.924	1.656	73.789	.1856	5.389	.833	iml o
4.473	9.814	1.786	78.402	.1829	5.468	.818	iml o
4.490	10.395	2.377	110.943	.1718	5.821	.771	iml o
4.490	10.707	2.561	123.119	.1694	5.902	.761	iml o
4.490	10.834	2.697	131.195	.1673	5.978	.751	iml o
4.490	10.764	2.771	133.923	.1654	6.047	.743	iml o
4.490	11.041	2.908	144.161	.1641	6.095	.737	iml o
4.490	10.931	2.951	144.836	.1626	6.150	.730	iml o
4.490	11.113	2.980	148.694	.1630	6.135	.732	iml o



TITANIUM CARBIDE
(Continued)

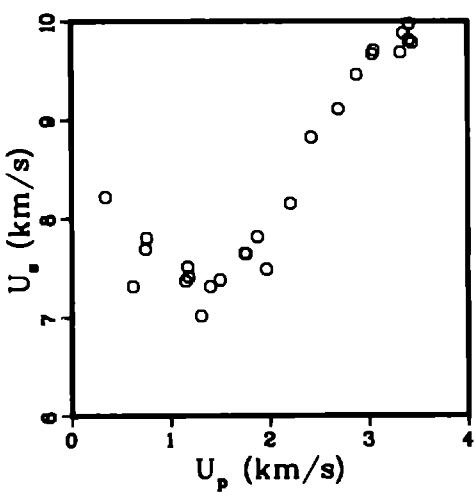
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.320	9.811	3.408	144.443	.1511	6.619	.653	iml o
4.402	9.975	3.410	149.733	.1495	6.688	.658	iml o
4.364	9.786	3.440	146.909	.1486	6.730	.648	iml o

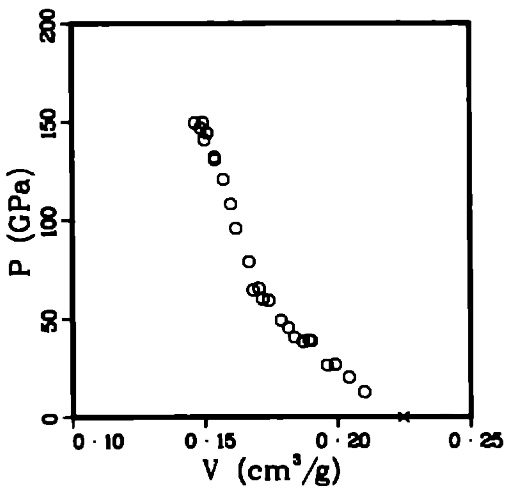
TITANIUM CARBIDE

Average ρ_0 = 4.450 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
4.564	8.216	.342	12.824	.2100	4.762	.958	iml o
4.483	7.311	.618	20.255	.2042	4.897	.915	iml o
4.608	7.684	.744	26.343	.1960	5.102	.903	iml o
4.537	7.804	.756	26.768	.1991	5.024	.903	iml o
4.512	7.366	1.150	38.221	.1870	5.347	.844	iml o
4.460	7.505	1.171	39.196	.1892	5.285	.844	iml o
4.424	7.406	1.180	38.662	.1900	5.262	.841	iml o
4.430	7.017	1.306	40.597	.1837	5.443	.814	iml o
4.456	7.311	1.399	45.576	.1815	5.510	.809	iml o
4.460	7.377	1.498	49.286	.1787	5.596	.797	iml o
4.490	7.647	1.748	60.018	.1718	5.820	.771	iml o
4.422	7.636	1.758	59.361	.1741	5.745	.770	iml o
4.460	7.815	1.874	65.318	.1704	5.867	.760	iml o
4.382	7.482	1.965	64.425	.1683	5.943	.737	iml o
4.373	8.151	2.208	78.703	.1667	5.998	.729	iml o
4.484	8.825	2.421	95.802	.1618	6.179	.726	iml o
4.403	9.109	2.696	108.128	.1599	6.254	.704	iml o
4.426	9.464	2.881	120.678	.1572	6.363	.696	iml o
4.454	9.671	3.039	130.904	.1540	6.495	.686	iml o
4.455	9.709	3.055	132.140	.1538	6.500	.685	iml o
4.379	9.687	3.323	140.960	.1500	6.666	.657	iml o
4.509	9.881	3.355	149.477	.1465	6.827	.660	iml o

(Continued)

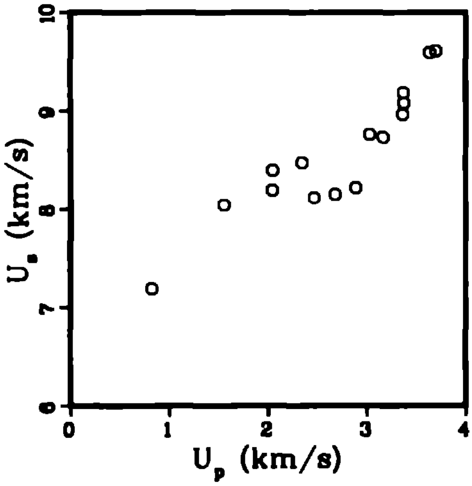


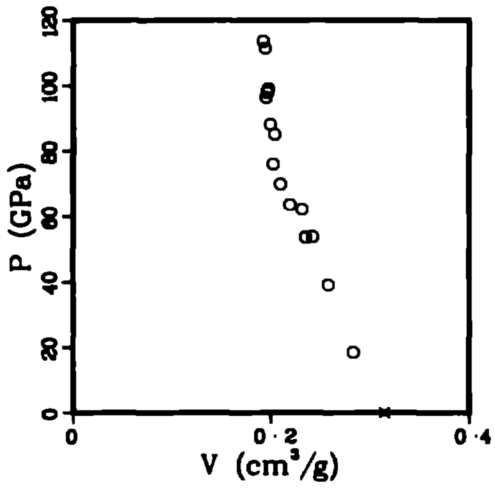


TOURMALINE

Average ρ_0 = 3.179 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
3.122	7.187	.824	18.489	.2836	3.526	.885	iml o
3.126	8.041	1.555	39.087	.2580	3.875	.807	iml o
3.197	8.191	2.045	53.552	.2347	4.261	.750	iml o
3.127	8.392	2.049	53.769	.2417	4.137	.756	iml o
3.126	8.471	2.346	62.123	.2313	4.323	.723	iml o
3.175	8.115	2.467	63.563	.2192	4.562	.696	iml o
3.200	8.149	2.679	69.860	.2098	4.767	.671	iml o
3.201	8.216	2.888	75.953	.2026	4.936	.648	iml o
3.211	8.754	3.026	85.058	.2038	4.907	.654	iml o
3.197	8.727	3.161	88.193	.1995	5.013	.638	iml o
3.200	8.964	3.361	96.410	.1953	5.120	.625	iml o
3.200	9.185	3.370	99.051	.1978	5.055	.633	iml o
3.198	9.081	3.374	97.984	.1965	5.089	.628	iml o
3.200	9.591	3.632	111.470	.1942	5.150	.621	iml o
3.201	9.608	3.695	113.640	.1923	5.201	.615	iml o



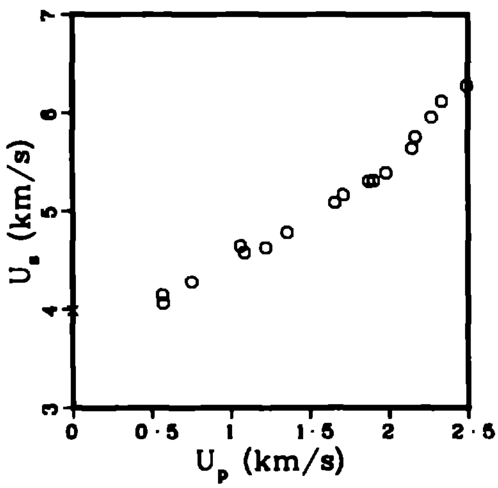


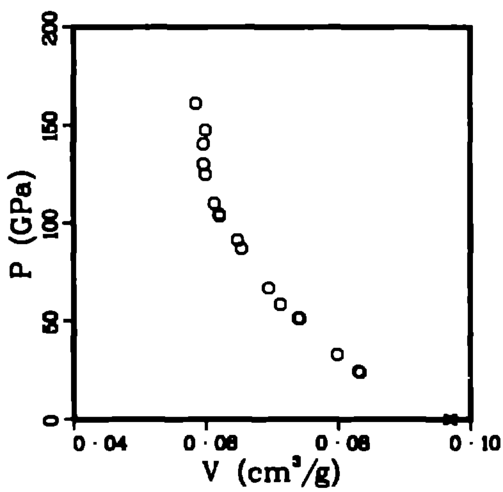
URANIUM DIOXIDE, ρ_0 = 10.3 g/cm^3.

Average ρ_0 = 10.337 g/cm^3.

Sound velocities longitudinal 5.01 km/s.
shear 2.63 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
10.300	3.985	0.000	0.000	.0971	10.300	1.000	ssp ×
10.380	4.141	.568	24.415	.0831	12.030	.863	iml o
10.310	4.059	.571	23.895	.0833	11.998	.859	iml o
10.310	4.276	.753	33.196	.0799	12.514	.824	iml o
10.390	4.642	1.063	51.269	.0742	13.476	.771	iml o
10.300	4.573	1.088	51.247	.0740	13.516	.762	iml o
10.320	4.627	1.223	58.399	.0713	14.028	.736	iml o
10.310	4.783	1.355	66.819	.0695	14.385	.717	iml o
10.310	5.086	1.658	86.940	.0654	15.297	.674	iml o
10.320	5.168	1.712	91.307	.0648	15.432	.669	iml o
10.420	5.308	1.874	103.650	.0621	16.106	.647	iml o
10.340	5.312	1.904	104.579	.0620	16.117	.642	iml o
10.310	5.390	1.983	110.197	.0613	16.311	.632	iml o
10.320	5.637	2.147	124.899	.0600	16.669	.619	iml o
10.430	5.754	2.169	130.171	.0597	16.740	.623	iml o
10.380	5.962	2.268	140.356	.0597	16.753	.620	iml o
10.320	6.123	2.334	147.484	.0600	16.677	.619	iml o
10.300	6.277	2.493	161.180	.0585	17.086	.603	iml o

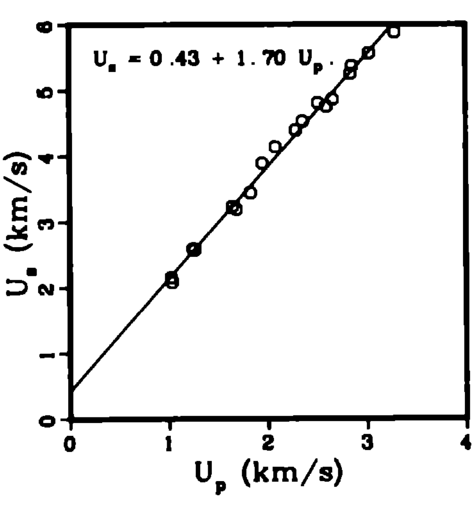


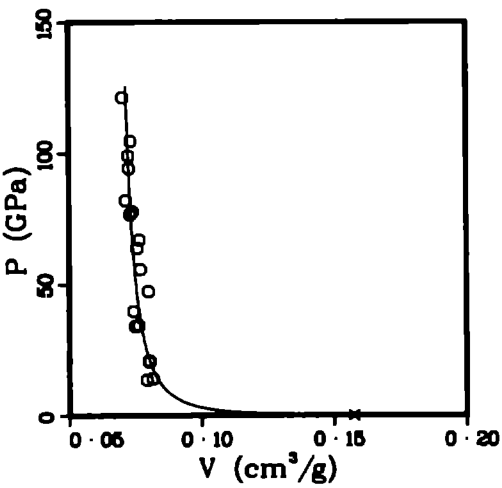


URANIUM DIOXIDE, ρ_0 = 6.3 g/cm^3.

Average ρ_0 = 6.347 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
6.425	2.152	1.025	14.172	.0815	12.269	.524	iml o
6.359	2.081	1.032	13.657	.0793	12.615	.504	iml o
6.445	2.585	1.246	20.759	.0804	12.442	.518	iml o
6.354	2.571	1.262	20.616	.0801	12.480	.509	iml o
6.443	3.234	1.645	34.276	.0763	13.113	.491	iml o
6.303	3.193	1.684	33.891	.0750	13.337	.473	iml o
6.309	3.444	1.828	39.719	.0744	13.446	.469	iml o
6.247	3.891	1.948	47.350	.0799	12.510	.499	iml o
6.466	4.142	2.081	55.734	.0770	12.995	.498	iml o
6.342	4.397	2.285	63.719	.0757	13.203	.480	iml o
6.269	4.532	2.356	66.937	.0766	13.057	.480	iml o
6.451	4.809	2.512	77.929	.0740	13.506	.478	iml o
6.216	4.758	2.595	76.749	.0731	13.673	.455	iml o
6.346	4.865	2.659	82.092	.0715	13.995	.453	iml o
6.317	5.254	2.840	94.258	.0727	13.749	.459	iml o
6.465	5.373	2.855	99.173	.0725	13.795	.469	iml o
6.219	5.567	3.028	104.833	.0733	13.636	.456	iml o
6.277	5.883	3.286	121.344	.0703	14.219	.441	iml o

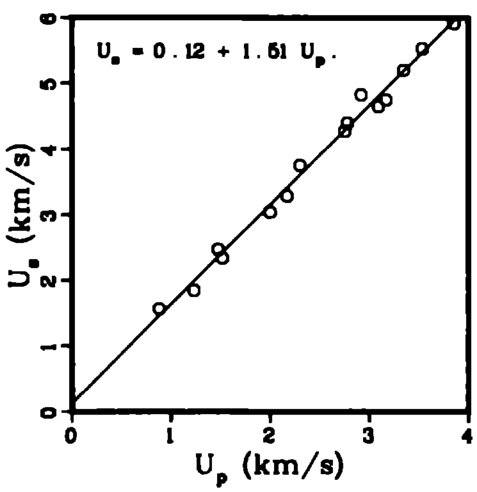


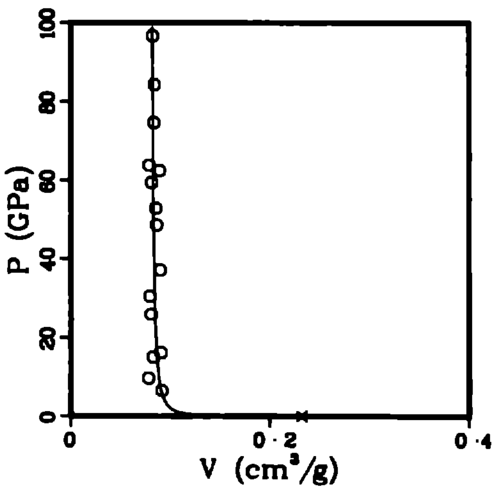


URANIUM DIOXIDE, ρ_0 = 4.3 g/cm^3.

Average ρ_0 = 4.306 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.772	1.563	.880	6.564	.0916	10.920	.437	im1 o
4.281	1.848	1.230	9.731	.0781	12.801	.334	im1 o
4.428	2.468	1.476	16.130	.0908	11.016	.402	im1 o
4.234	2.337	1.517	15.010	.0829	12.067	.351	im1 o
4.249	3.042	1.999	25.838	.0807	12.393	.343	im1 o
4.270	3.287	2.171	30.471	.0795	12.577	.340	im1 o
4.297	3.750	2.302	37.094	.0899	11.128	.386	im1 o
4.128	4.277	2.753	48.605	.0863	11.585	.356	im1 o
4.317	4.404	2.780	52.854	.0854	11.707	.369	im1 o
4.430	4.827	2.918	62.397	.0893	11.201	.395	im1 o
4.125	4.651	3.092	59.321	.0813	12.306	.335	im1 o
4.233	4.752	3.169	63.745	.0787	12.707	.333	im1 o
4.283	5.206	3.348	74.651	.0833	12.001	.357	im1 o
4.304	5.535	3.536	84.237	.0839	11.917	.361	im1 o
4.237	5.918	3.855	96.662	.0823	12.154	.349	im1 o

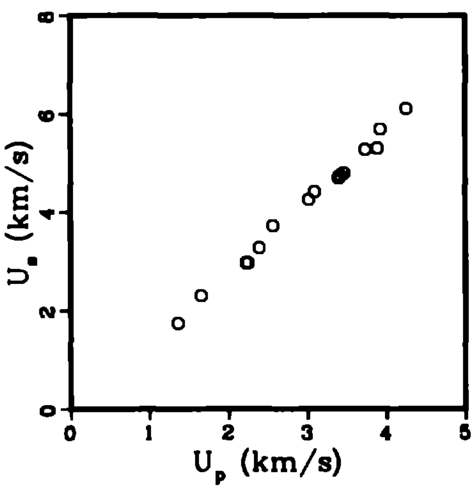


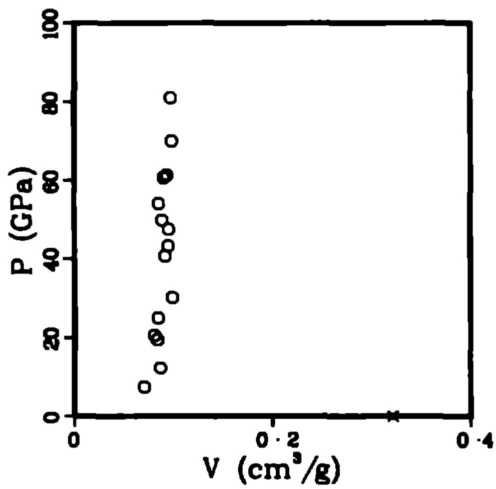


URANIUM DIOXIDE, ρ_0 = 3.1 g/cm^3.

Average ρ_0 = 3.111 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
3.144	1.741	1.355	7.417	.0705	14.181	.222	iml	o
3.236	2.298	1.651	12.277	.0870	11.494	.282	iml	o
3.108	2.968	2.225	20.525	.0805	12.415	.250	iml	o
2.910	2.971	2.248	19.435	.0836	11.958	.243	iml	o
3.183	3.273	2.393	24.930	.0845	11.839	.269	iml	o
3.145	3.728	2.567	30.097	.0990	10.099	.311	iml	o
3.160	4.259	3.023	40.685	.0918	10.889	.290	iml	o
3.155	4.426	3.098	43.261	.0951	10.515	.300	iml	o
3.122	4.699	3.394	49.791	.0890	11.242	.278	iml	o
2.927	4.746	3.418	47.481	.0956	10.460	.280	iml	o
3.258	4.800	3.462	54.140	.0856	11.688	.279	iml	o
3.118	5.269	3.733	61.328	.0935	10.696	.292	iml	o
2.945	5.295	3.890	60.660	.0901	11.099	.265	iml	o
3.136	5.682	3.926	69.956	.0985	10.147	.309	iml	o
3.113	6.116	4.256	81.030	.0977	10.236	.304	iml	o

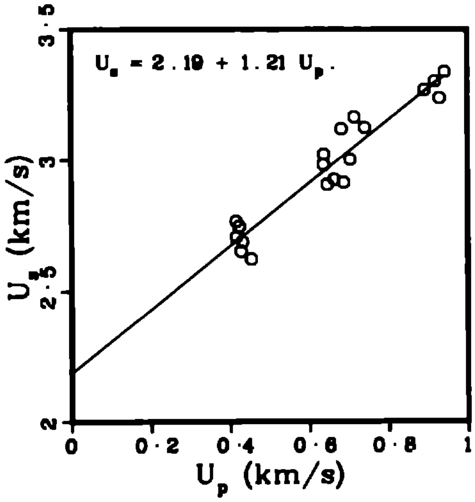


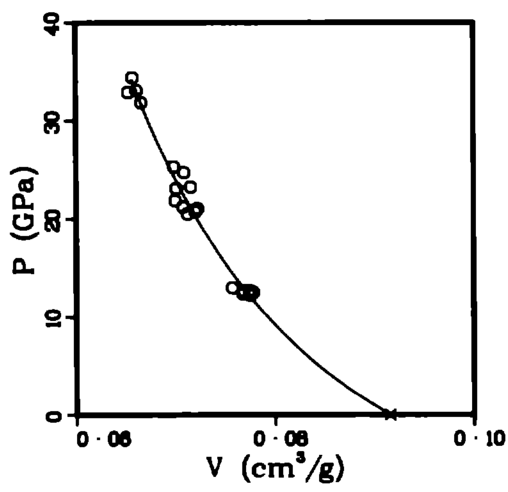


URANIUM HYDRIDE

Average ρ_0 = 10.920 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
10.920	2.766	.416	12.565	.0778	12.853	.850	iml o
10.920	2.706	.416	12.293	.0775	12.904	.846	iml o
10.920	2.747	.424	12.719	.0774	12.913	.846	iml o
10.920	2.651	.428	12.390	.0768	13.022	.839	iml o
10.920	2.688	.432	12.680	.0769	13.011	.839	iml o
10.920	2.622	.454	12.999	.0757	13.207	.827	iml o
10.920	2.982	.637	20.743	.0720	13.886	.786	iml o
10.920	3.022	.638	21.054	.0722	13.842	.789	iml o
10.920	2.906	.646	20.500	.0712	14.041	.778	iml o
10.920	2.925	.664	21.209	.0708	14.127	.773	iml o
10.920	3.119	.682	23.229	.0716	13.976	.781	iml o
10.920	2.914	.687	21.861	.0700	14.289	.764	iml o
10.920	3.002	.704	23.078	.0701	14.265	.765	iml o
10.920	3.164	.715	24.704	.0709	14.108	.774	iml o
10.920	3.124	.741	25.279	.0699	14.316	.763	iml o
10.920	3.268	.892	31.832	.0666	15.020	.727	iml o
10.920	3.301	.918	33.091	.0661	15.127	.722	iml o
10.920	3.237	.930	32.874	.0653	15.322	.713	iml o
10.920	3.338	.943	34.373	.0657	15.220	.717	iml o



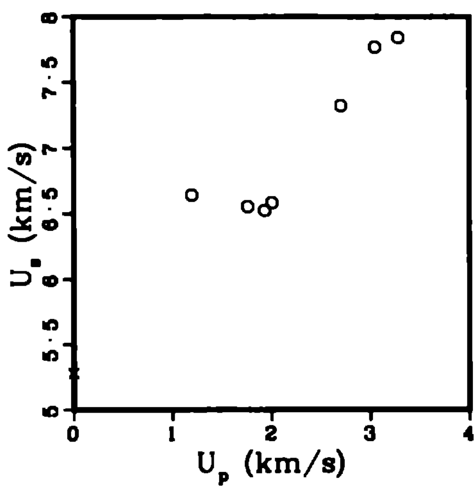


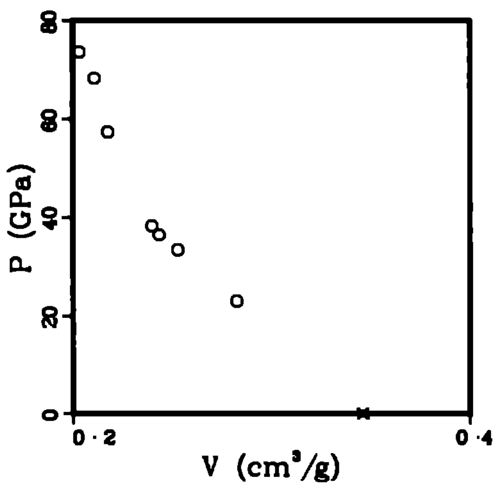
WOLLASTONITE, ρ_0 = 2.89 g/cm^3.

Average ρ_0 = 2.890 g/cm^3.

Sound velocities longitudinal 7.07 km/s.
shear 4.07 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.890	5.282	0.000	0.000	.3460	2.890	1.000	ssp ×
2.902	6.639	1.195	23.023	.2828	3.539	.820	iml o
2.892	6.552	1.760	33.349	.2529	3.954	.731	iml o
2.891	6.523	1.933	36.453	.2434	4.108	.704	iml o
2.899	6.581	2.006	38.271	.2398	4.170	.695	iml o
2.899	7.322	2.704	57.396	.2176	4.596	.631	iml o
2.884	7.769	3.047	68.270	.2107	4.745	.608	iml o
2.862	7.842	3.282	73.661	.2032	4.922	.581	iml o

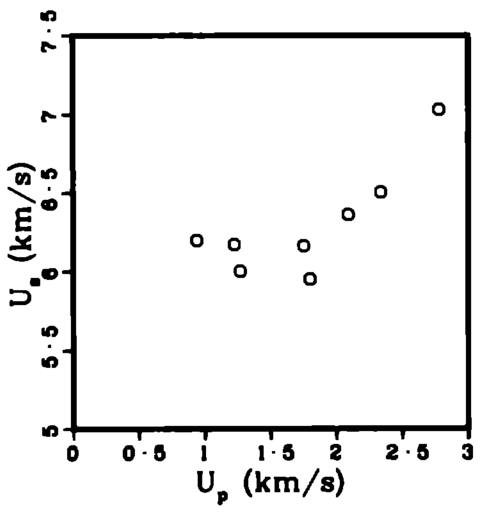


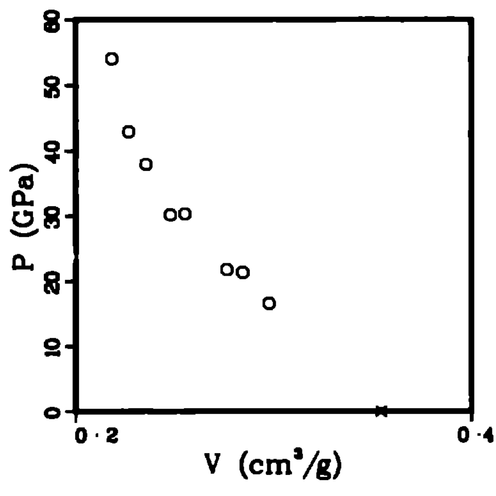


WOLLASTONITE. ρ_0 = 2.82 g/cm^3.

Average ρ_0 = 2.822 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.849	6.199	.940	16.601	.2978	3.358	.848	iml o
2.818	6.173	1.225	21.310	.2844	3.516	.802	iml o
2.852	6.001	1.269	21.719	.2765	3.617	.789	iml o
2.803	6.164	1.752	30.271	.2554	3.916	.716	iml o
2.814	5.951	1.799	30.126	.2479	4.033	.698	iml o
2.850	6.363	2.090	37.901	.2356	4.244	.672	iml o
2.824	6.506	2.337	42.938	.2269	4.407	.641	iml o
2.769	7.032	2.778	54.092	.2185	4.577	.605	iml o

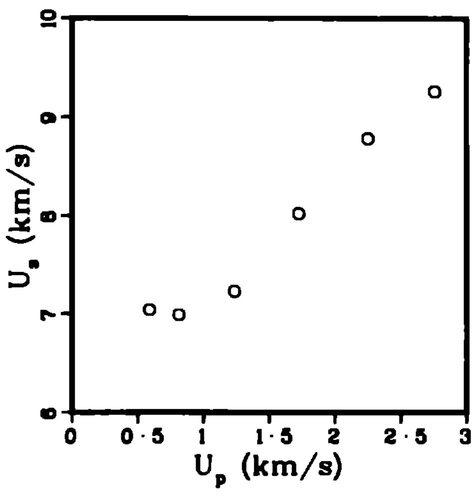


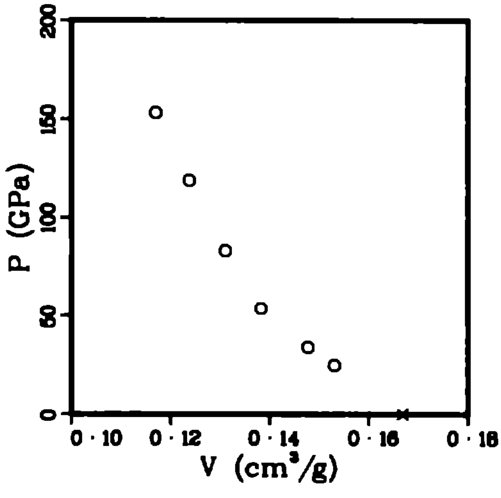


ZIRCONIUM DIBORIDE

Average ρ_0 = 5.992 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
5.984	7.041	.590	24.859	.1531	6.531	.916	iml o
5.981	6.989	.813	33.984	.1477	6.768	.884	iml o
5.994	7.230	1.237	53.607	.1383	7.231	.829	iml o
5.987	8.022	1.726	82.896	.1311	7.628	.785	iml o
6.007	8.784	2.251	118.775	.1238	8.077	.744	iml o
5.999	9.256	2.758	153.143	.1170	8.545	.702	iml o



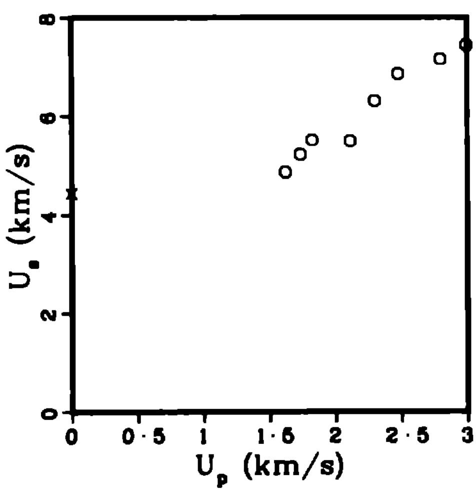


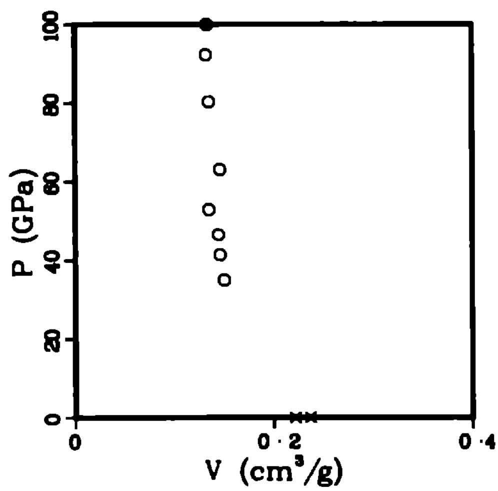
ZIRCONIUM DIOXIDE

Average ρ_0 = 4.512 g/cm³.

Sound velocities longitudinal 5.88 km/s.
shear 3.35 km/s.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
4.224	4.428	0.000	0.000	.2367	4.224	1.000	ssp ×
4.440	4.864	1.622	35.029	.1501	6.661	.667	iml o
4.570	5.219	1.736	41.405	.1460	6.848	.667	iml o
4.630	5.511	1.825	46.567	.1445	6.922	.669	iml o
4.560	5.493	2.113	52.927	.1349	7.411	.615	iml o
4.350	6.305	2.299	63.054	.1461	6.846	.635	iml o
4.730	6.854	2.477	80.303	.1350	7.407	.639	iml o
4.610	7.156	2.797	92.271	.1321	7.568	.609	iml o
4.490	7.436	2.994	99.963	.1330	7.516	.597	iml o





ROCKS AND MIXTURES OF MINERALS

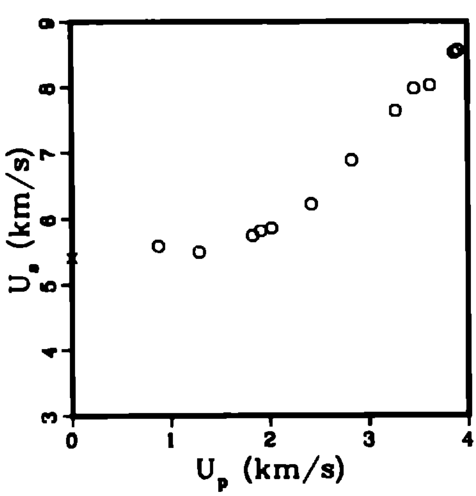
ALBITITE , Sylmar , Pennsylvania

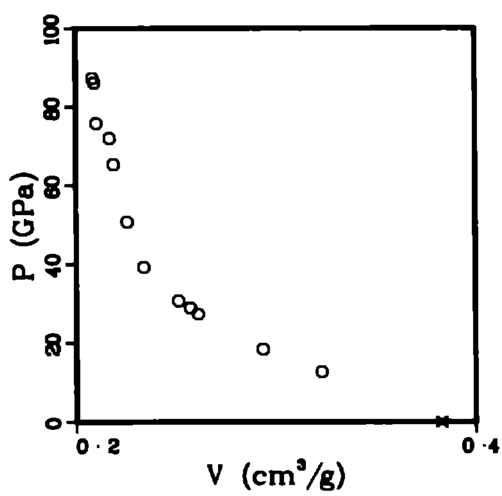
Average ρ_0 = 2.610 g/cm^3 .

Sound velocities longitudinal 6.46 km/s .
shear 3.07 km/s .

References 6 , 32 , 42

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.611	5.400	0.000	0.000	.3830	2.611	1.000	ssp	×
2.611	5.578	.874	12.729	.3230	3.096	.843	iml	o
2.607	5.485	1.287	18.403	.2936	3.406	.765	iml	o
2.611	5.738	1.826	27.357	.2611	3.830	.682	iml	o
2.611	5.811	1.908	28.949	.2572	3.887	.672	iml	o
2.608	5.854	2.017	30.794	.2513	3.979	.655	iml	o
2.611	6.216	2.420	39.277	.2339	4.276	.611	iml	o
2.611	6.881	2.828	50.809	.2256	4.433	.589	iml	o
2.611	7.637	3.272	65.244	.2189	4.568	.572	iml	o
2.611	7.977	3.459	72.044	.2169	4.610	.566	iml	o
2.611	8.026	3.620	75.860	.2103	4.756	.549	iml	o
2.611	8.528	3.867	86.105	.2093	4.777	.547	iml	o
2.611	8.565	3.903	87.284	.2085	4.797	.544	iml	o



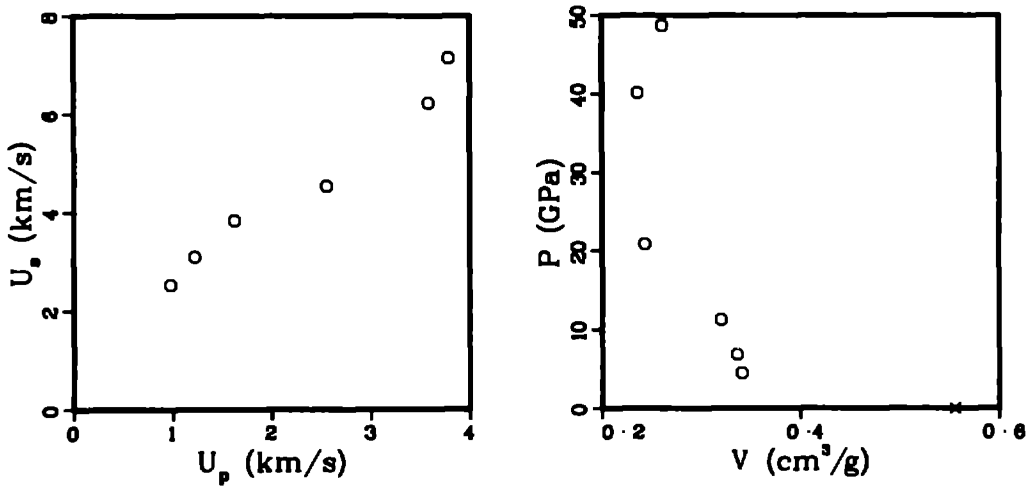


ALLUVIUM , Nevada Test Site , ρ_0 = 1.80 g/cm^3 .

Average ρ_0 = 1.800 g/cm^3 .

Reference 43

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.800	2.522	.976	4.431	.3406	2.936	.613	iml o
1.800	3.094	1.224	6.817	.3358	2.978	.604	iml o
1.800	3.836	1.626	11.227	.3201	3.124	.576	iml o
1.800	4.542	2.553	20.872	.2433	4.110	.438	iml o
1.800	6.225	3.583	40.148	.2358	4.241	.424	iml o
1.800	7.140	3.789	48.696	.2607	3.835	.469	iml o

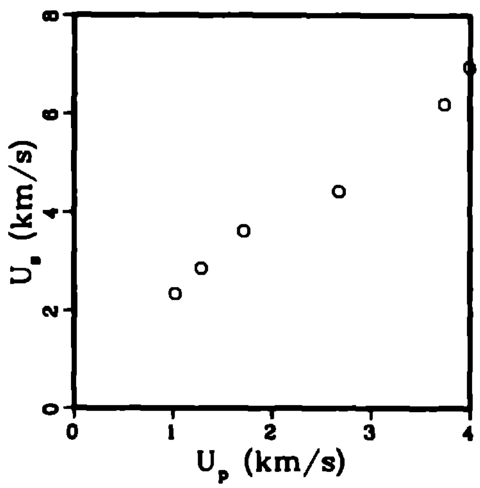


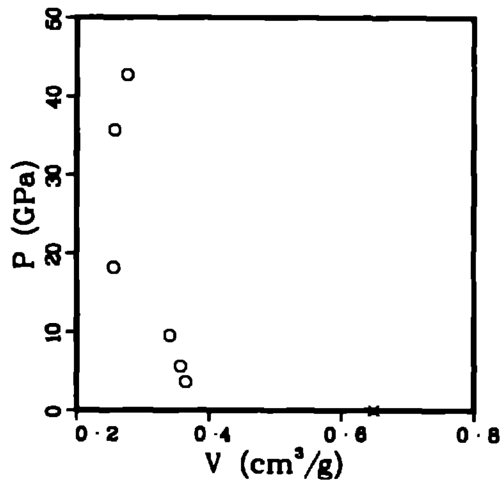
ALLUVIUM, Nevada Test Site, ρ_0 = 1.54 g/cm^3.

Average ρ_0 = 1.540 g/cm^3.

Reference 43

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.540	2.335	1.022	3.675	.3651	2.739	.562	iml o
1.540	2.857	1.288	5.667	.3566	2.804	.549	iml o
1.540	3.612	1.715	9.540	.3410	2.932	.525	iml o
1.540	4.416	2.674	18.185	.2562	3.904	.394	iml o
1.540	6.199	3.742	35.723	.2574	3.885	.396	iml o
1.540	6.958	3.993	42.786	.2767	3.614	.426	iml o





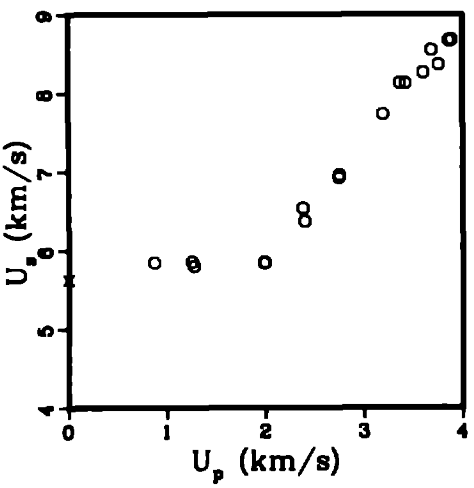
ANORTHOSITE, Tahawus, New York

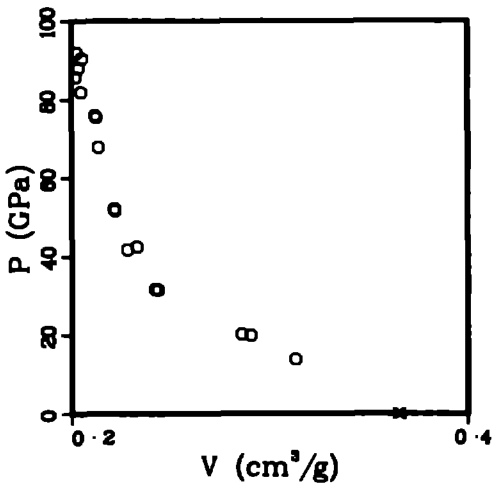
Average ρ_0 = 2.732 g/cm^3.

Sound velocities longitudinal 7.05 km/s.
shear 3.68 km/s.

References 6, 32, 42

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.740	5.625	0.000	0.000	.3650	2.740	1.000	ssp ×
2.720	5.844	.869	13.813	.3130	3.195	.851	iml o
2.706	5.855	1.253	19.852	.2905	3.443	.786	iml o
2.730	5.799	1.272	20.137	.2860	3.497	.781	iml o
2.727	5.839	1.985	31.607	.2420	4.132	.660	iml o
2.709	5.849	1.990	31.531	.2435	4.106	.660	iml o
2.730	6.531	2.381	42.452	.2328	4.296	.635	iml o
2.733	6.366	2.400	41.756	.2280	4.387	.623	iml o
2.719	6.924	2.746	51.697	.2219	4.506	.603	iml o
2.728	6.955	2.749	52.157	.2217	4.511	.605	iml o
2.748	7.730	3.196	67.890	.2134	4.685	.587	iml o
2.758	8.132	3.365	75.470	.2125	4.705	.586	iml o
2.730	8.130	3.424	75.995	.2120	4.716	.579	iml o
2.752	8.266	3.603	81.961	.2050	4.878	.564	iml o
2.795	8.553	3.686	88.116	.2036	4.912	.569	iml o
2.726	8.369	3.759	85.757	.2021	4.949	.551	iml o
2.701	8.672	3.863	90.483	.2053	4.871	.555	iml o
2.725	8.684	3.888	92.005	.2027	4.934	.552	iml o



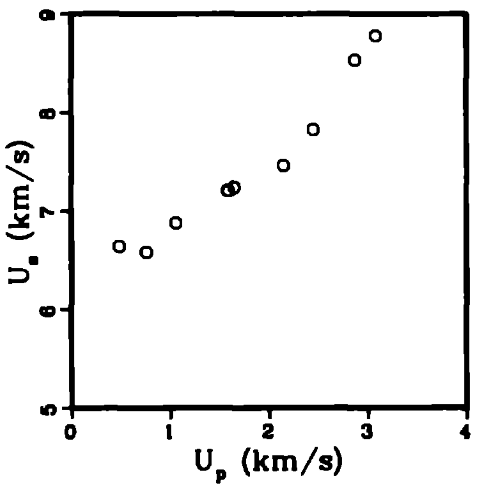


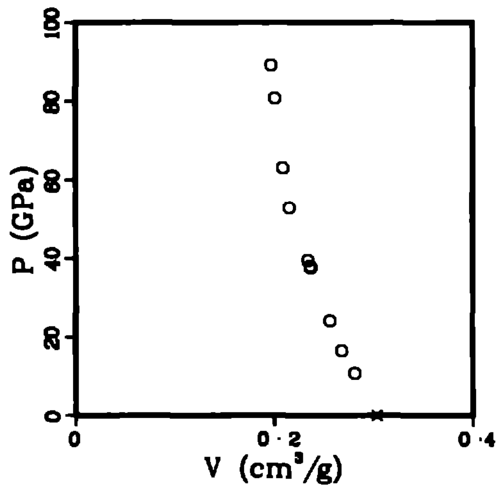
BRONZITITE , Bushveld Complex , Transvaal

Average ρ_0 = 3.296 g/cm^3 .

References 6 , 32 , 42

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.296	6.645	.485	10.622	.2813	3.556	.927	iml o
3.298	6.582	.759	16.476	.2682	3.728	.885	iml o
3.296	6.880	1.061	24.060	.2566	3.897	.846	iml o
3.292	7.210	1.587	37.668	.2369	4.221	.780	iml o
3.296	7.210	1.595	37.904	.2363	4.232	.779	iml o
3.296	7.246	1.652	39.454	.2342	4.269	.772	iml o
3.302	7.466	2.147	52.929	.2158	4.635	.712	iml o
3.287	7.824	2.451	63.034	.2089	4.786	.687	iml o
3.298	8.529	2.869	80.701	.2012	4.970	.664	iml o
3.296	8.776	3.080	89.091	.1969	5.078	.649	iml o





BRONZITITE, Stillwater Complex, Montana

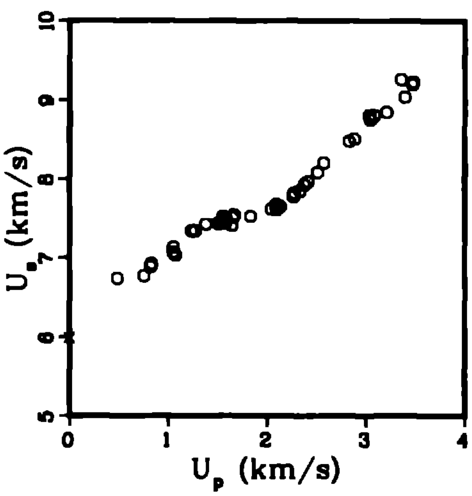
Average ρ_0 = 3.276 g/cm^3.

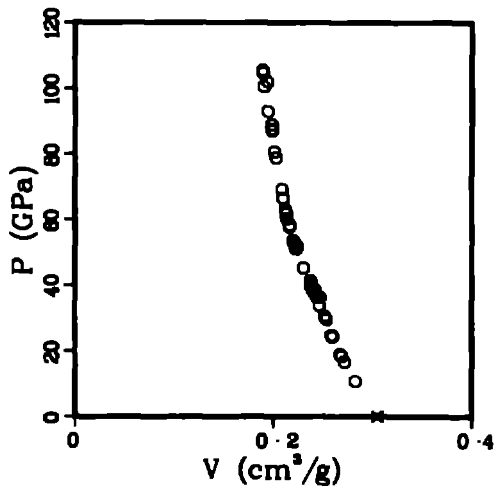
Sound velocities longitudinal 7.86 km/s.
shear 4.41 km/s.

References 6, 32, 42

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
3.280	5.987	0.000	0.000	.3049	3.280	1.000	ssp	×
3.278	6.739	.483	10.670	.2832	3.531	.928	iml	o
3.270	6.768	.752	16.643	.2718	3.679	.889	iml	o
3.273	6.886	.822	18.526	.2691	3.717	.881	iml	o
3.290	6.923	.832	18.950	.2674	3.739	.880	iml	o
3.279	7.134	1.049	24.539	.2601	3.844	.853	iml	o
3.277	7.071	1.050	24.330	.2598	3.848	.852	iml	o
3.271	7.035	1.075	24.737	.2590	3.861	.847	iml	o
3.276	7.334	1.233	29.624	.2539	3.938	.832	iml	o
3.280	7.339	1.270	30.571	.2521	3.966	.827	iml	o
3.298	7.422	1.378	33.730	.2469	4.050	.814	iml	o
3.280	7.430	1.506	36.702	.2431	4.114	.797	iml	o
3.225	7.437	1.511	36.240	.2471	4.047	.797	iml	o
3.274	7.450	1.542	37.611	.2422	4.129	.793	iml	o
3.280	7.524	1.555	38.375	.2419	4.134	.793	iml	o
3.274	7.480	1.565	38.326	.2415	4.140	.791	iml	o
3.282	7.433	1.575	38.422	.2401	4.164	.788	iml	o
3.276	7.505	1.579	38.822	.2410	4.149	.790	iml	o
3.275	7.407	1.640	39.783	.2377	4.206	.779	iml	o

(Continued)



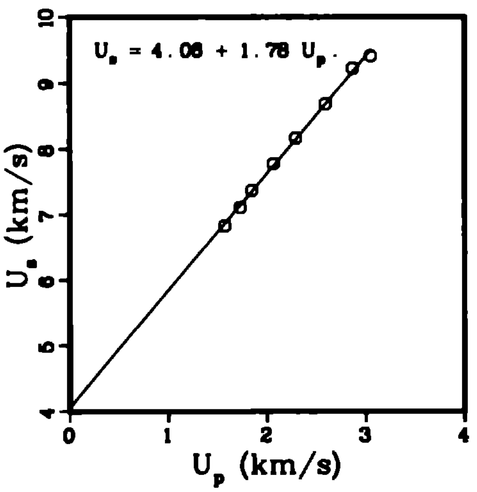


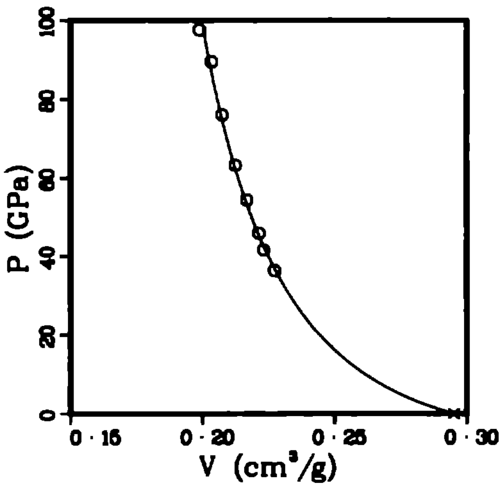
BRONZITITE, Stillwater Complex, Montana
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.278	7.514	1.653	40.715	.2380	4.203	.780	iml o
3.276	7.545	1.670	41.278	.2377	4.207	.779	iml o
3.279	7.526	1.833	45.234	.2307	4.335	.756	iml o
3.278	7.618	2.043	51.017	.2233	4.479	.732	iml o
3.281	7.675	2.094	52.730	.2216	4.512	.727	iml o
3.232	7.612	2.096	51.566	.2242	4.460	.725	iml o
3.280	7.651	2.131	53.478	.2200	4.546	.721	iml o
3.276	7.778	2.266	57.739	.2163	4.623	.709	iml o
3.271	7.818	2.277	58.229	.2167	4.615	.709	iml o
3.288	7.847	2.334	60.219	.2137	4.680	.703	iml o
3.281	7.928	2.380	61.908	.2133	4.688	.700	iml o
3.278	7.967	2.415	63.070	.2126	4.704	.697	iml o
3.285	8.083	2.509	66.621	.2099	4.764	.690	iml o
3.281	8.203	2.572	69.223	.2092	4.780	.686	iml o
3.283	8.479	2.832	78.833	.2029	4.929	.666	iml o
3.282	8.510	2.887	80.633	.2013	4.967	.661	iml o
3.283	8.807	3.033	87.694	.1997	5.008	.656	iml o
3.276	8.755	3.042	87.249	.1992	5.020	.653	iml o
3.276	8.810	3.083	88.980	.1984	5.040	.650	iml o
3.276	8.850	3.208	93.008	.1946	5.139	.638	iml o
3.279	9.262	3.358	101.983	.1944	5.144	.637	iml o
3.276	9.040	3.393	100.484	.1907	5.244	.625	iml o
3.275	9.197	3.472	104.577	.1901	5.261	.622	iml o
3.281	9.228	3.481	105.394	.1898	5.268	.623	iml o

CORUNDUM MIXTURE,
85.2/9.7/2.7/2.4 wt% $Al_2O_3/SiO_2/MgO/CaO-BaO$
Average ρ_0 = 3.389 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.387	6.828	1.573	36.378	.2272	4.401	.770	iml o
3.392	7.107	1.728	41.657	.2231	4.482	.757	iml o
3.387	7.367	1.844	46.012	.2213	4.518	.750	iml o
3.388	7.777	2.066	54.436	.2167	4.614	.734	iml o
3.387	8.167	2.290	63.345	.2125	4.707	.720	iml o
3.382	8.680	2.590	76.031	.2075	4.820	.702	iml o
3.388	9.223	2.866	89.555	.2034	4.915	.689	iml o
3.399	9.412	3.050	97.574	.1989	5.029	.676	iml o





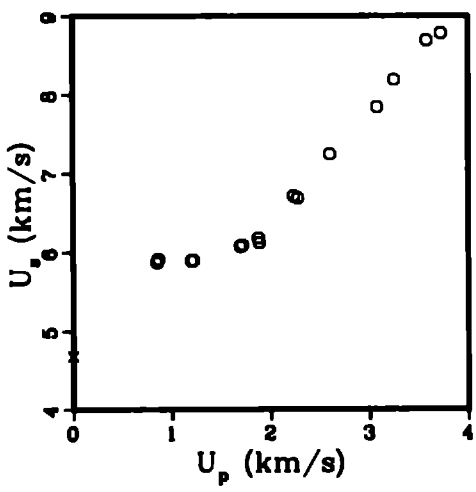
DIABASE, Centreville, Virginia

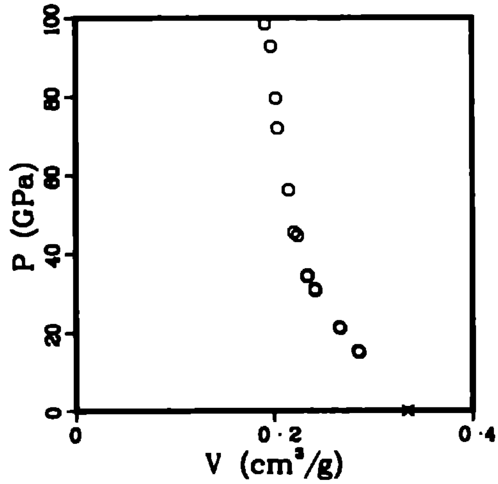
Average ρ_0 = 2.987 g/cm^3.

Sound velocities longitudinal 6.37 km/s.
shear 3.74 km/s.

References 6, 32, 42

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.990	4.683	0.000	0.000	.3344	2.990	1.000	ssp ×
2.993	5.872	.849	14.921	.2858	3.499	.855	iml o
3.001	5.915	.863	15.319	.2846	3.514	.854	iml o
2.988	5.893	1.198	21.095	.2666	3.750	.797	iml o
2.987	5.900	1.216	21.430	.2658	3.762	.794	iml o
2.987	6.075	1.693	30.721	.2415	4.141	.721	iml o
2.980	6.094	1.713	31.108	.2412	4.145	.719	iml o
2.975	6.181	1.878	34.534	.2340	4.273	.696	iml o
2.970	6.122	1.884	34.256	.2331	4.290	.692	iml o
2.981	6.713	2.233	44.686	.2239	4.467	.667	iml o
2.995	6.688	2.275	45.570	.2203	4.539	.660	iml o
2.982	7.249	2.602	56.246	.2150	4.652	.641	iml o
2.982	7.846	3.079	72.039	.2037	4.908	.608	iml o
2.987	8.195	3.252	79.604	.2019	4.952	.603	iml o
2.981	8.693	3.581	92.797	.1973	5.069	.588	iml o
3.008	8.784	3.727	98.476	.1914	5.225	.576	iml o





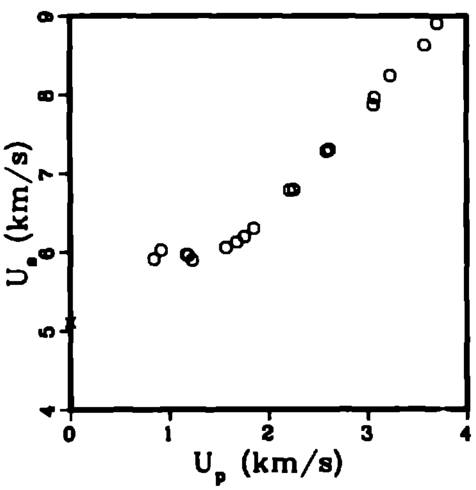
DIABASE, Frederick, Maryland

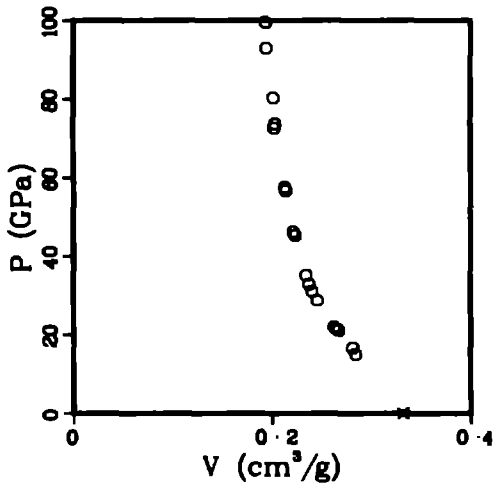
Average ρ_0 = 3.015 g/cm³.

Sound velocities longitudinal 6.74 km/s.
shear 3.81 km/s.

References 6, 32, 42

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
3.015	5.106	0.000	0.000	.3317	3.015	1.000	ssp ×
3.014	5.912	.843	15.021	.2845	3.515	.857	iml o
3.015	6.026	.915	16.624	.2813	3.555	.848	iml o
3.012	5.968	1.171	21.049	.2669	3.747	.804	iml o
3.012	5.960	1.188	21.326	.2658	3.762	.801	iml o
3.015	5.897	1.229	21.851	.2626	3.809	.792	iml o
3.015	6.059	1.571	28.699	.2457	4.070	.741	iml o
3.017	6.129	1.680	31.065	.2406	4.156	.726	iml o
3.015	6.196	1.758	32.841	.2376	4.209	.716	iml o
3.008	6.302	1.854	35.145	.2346	4.262	.706	iml o
3.015	6.792	2.212	45.297	.2237	4.471	.674	iml o
3.015	6.798	2.254	46.198	.2217	4.511	.668	iml o
3.015	7.277	2.587	56.759	.2138	4.678	.644	iml o
3.015	7.302	2.616	57.593	.2128	4.698	.642	iml o
3.017	7.873	3.060	72.684	.2026	4.935	.611	iml o
3.016	7.964	3.071	73.764	.2037	4.909	.614	iml o
3.015	8.239	3.233	80.310	.2015	4.962	.608	iml o
3.016	8.629	3.575	93.040	.1942	5.149	.586	iml o
3.015	8.907	3.704	99.469	.1937	5.161	.584	iml o





DUNITE, Jackson County, North Carolina

Average ρ_0 = 3.240 g/cm^3.

Sound velocities longitudinal 7.49 km/s.
shear 4.40 km/s.

References 44, 45

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.240	5.503	0.000	0.000	.3086	3.240	1.000	ssp ×
3.240	6.970	.130	2.936	.3029	3.302	.981	im2 □
3.240	5.770	.150	2.804	.3006	3.326	.974	im2 □
3.240	6.360	.430	8.861	.2878	3.475	.932	im2 □
3.240	6.500	.550	11.583	.2825	3.539	.915	im2 □
3.260	6.811	.763	16.942	.2724	3.671	.888	im1 ○
3.231	6.857	.802	17.768	.2733	3.659	.883	im1 ○
3.240	6.910	.880	19.702	.2693	3.713	.873	im2 □
3.240	7.020	.890	20.243	.2695	3.710	.873	im2 □
3.240	7.380	.950	22.716	.2689	3.719	.871	im2 □
3.240	7.270	1.130	26.617	.2607	3.836	.845	im2 □
3.240	7.260	1.150	27.051	.2598	3.850	.842	im2 □
3.248	7.529	1.395	34.114	.2508	3.987	.815	im1 ○
3.230	7.647	1.454	35.914	.2507	3.988	.810	im1 ○
3.240	7.420	1.460	35.100	.2479	4.034	.803	im2 □
3.240	7.520	1.530	37.278	.2458	4.068	.797	im2 □
3.240	7.810	1.610	40.740	.2450	4.081	.794	im2 □
3.240	8.020	1.710	44.434	.2428	4.118	.787	im2 □
3.240	7.510	1.780	43.312	.2355	4.246	.763	im2 □

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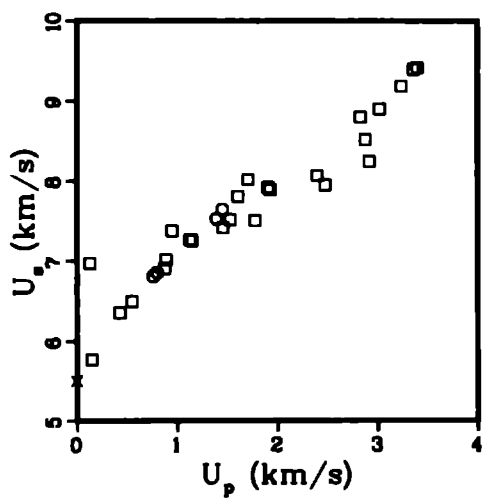
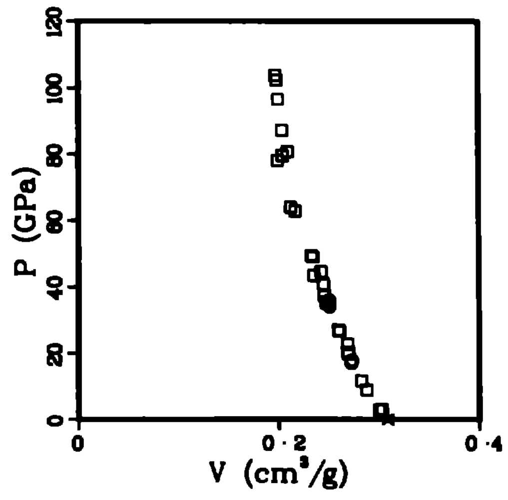




DUNITE, Jackson County, North Carolina
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.240	7.920	1.910	49.012	.2342	4.270	.759	im2 □
3.240	7.890	1.930	49.338	.2331	4.289	.755	im2 □
3.240	8.070	2.400	62.752	.2169	4.611	.703	im2 □
3.240	7.950	2.480	63.880	.2124	4.709	.688	im2 □
3.240	8.800	2.830	80.689	.2094	4.776	.678	im2 □
3.240	8.520	2.880	79.502	.2043	4.894	.662	im2 □
3.240	8.250	2.920	78.052	.1994	5.015	.646	im2 □
3.240	8.900	3.020	87.085	.2039	4.904	.661	im2 □
3.240	9.190	3.240	96.473	.1998	5.004	.647	im2 □
3.240	9.400	3.360	102.332	.1983	5.042	.643	im2 □
3.240	9.420	3.400	103.771	.1972	5.070	.639	im2 □

DUNITE , Mooihoek Mine , Transvaal

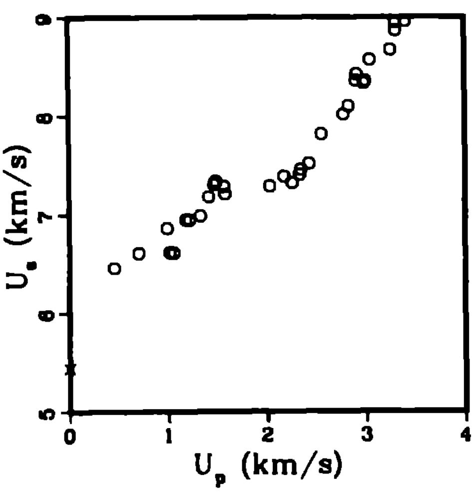
Average ρ_0 = 3.791 g/cm^3.

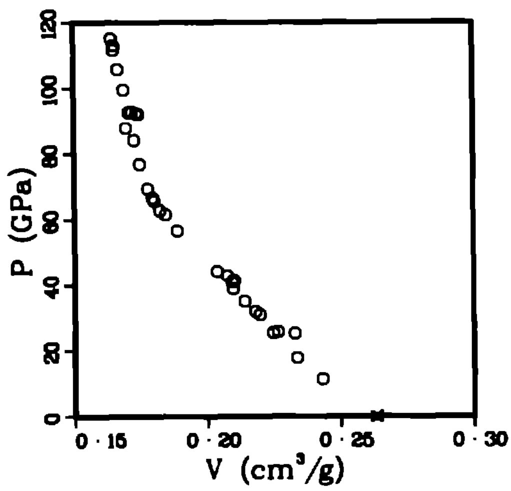
Sound velocities longitudinal 7.17 km/s.
shear 4.05 km/s.

References 6, 30, 32, 42

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
3.800	5.435	0.000	0.000	.2632	3.800	1.000	ssp	×
3.826	6.461	.454	11.223	.2430	4.115	.930	iml	o
3.826	6.613	.701	17.736	.2337	4.280	.894	iml	o
3.777	6.862	.993	25.736	.2264	4.416	.855	iml	o
3.768	6.617	1.016	25.332	.2246	4.452	.846	iml	o
3.611	6.616	1.056	25.228	.2327	4.297	.840	iml	o
3.777	6.950	1.180	30.975	.2198	4.549	.830	iml	o
3.782	6.950	1.216	31.962	.2181	4.584	.825	iml	o
3.785	6.988	1.327	35.099	.2140	4.672	.810	iml	o
3.831	7.182	1.414	38.905	.2096	4.770	.803	iml	o
3.816	7.309	1.470	41.000	.2093	4.777	.799	iml	o
3.797	7.341	1.487	41.448	.2100	4.761	.797	iml	o
3.852	7.290	1.572	44.143	.2036	4.911	.784	iml	o
3.764	7.211	1.580	42.885	.2075	4.820	.781	iml	o
3.820	7.290	2.033	56.615	.1888	5.297	.721	iml	o
3.827	7.388	2.177	61.552	.1843	5.426	.705	iml	o
3.796	7.326	2.258	62.794	.1822	5.487	.692	iml	o
3.800	7.410	2.336	65.777	.1802	5.549	.685	iml	o
3.816	7.459	2.345	66.747	.1797	5.566	.686	iml	o

(Continued)





DUNITE, Mooihoek Mine, Transvaal
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.806	7.515	2.429	69.474	.1778	5.624	.677	iml o
3.850	7.812	2.557	76.905	.1747	5.723	.673	iml o
3.782	8.013	2.778	84.188	.1727	5.789	.653	iml o
3.838	8.101	2.828	87.927	.1696	5.896	.651	iml o
3.822	8.353	2.904	92.711	.1707	5.859	.652	iml o
3.769	8.418	2.914	92.454	.1735	5.764	.654	iml o
3.735	8.331	2.986	92.913	.1718	5.822	.642	iml o
3.678	8.356	3.001	92.231	.1742	5.739	.641	iml o
3.816	8.566	3.048	99.633	.1688	5.924	.644	iml o
3.749	8.668	3.255	105.776	.1666	6.003	.624	iml o
3.820	8.951	3.306	113.041	.1651	6.057	.631	iml o
3.803	8.868	3.309	111.596	.1648	6.067	.627	iml o
3.772	8.962	3.407	115.172	.1643	6.085	.620	iml o

DUNITE, Twin Sisters Peaks, Washington

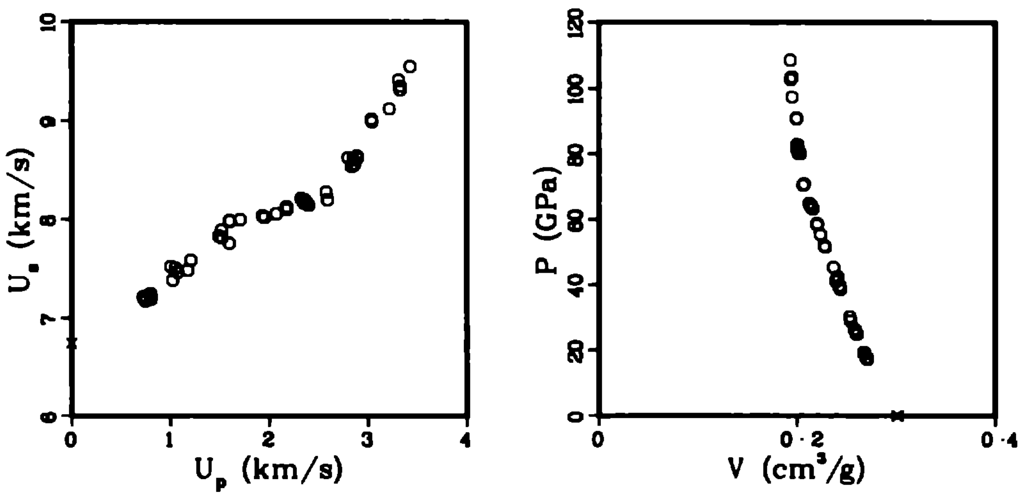
Average ρ_0 = 3.319 g/cm^3.

Sound velocities longitudinal 8.77 km/s.
shear 4.86 km/s.

References 6, 30, 32, 42

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
3.320	6.739	0.000	0.000	.3012	3.320	1.000	ssp	×
3.322	7.208	.722	17.288	.2709	3.692	.900	iml	o
3.317	7.215	.741	17.734	.2705	3.697	.897	iml	o
3.317	7.171	.744	17.697	.2702	3.701	.896	iml	o
3.321	7.243	.798	19.195	.2679	3.732	.890	iml	o
3.319	7.220	.800	19.171	.2679	3.733	.889	iml	o
3.321	7.187	.801	19.118	.2676	3.738	.889	iml	o
3.321	7.515	1.003	25.032	.2609	3.833	.867	iml	o
3.319	7.378	1.022	25.026	.2596	3.853	.861	iml	o
3.318	7.500	1.050	26.129	.2592	3.858	.860	iml	o
3.316	7.458	1.071	26.487	.2583	3.872	.856	iml	o
3.318	7.478	1.175	29.154	.2540	3.937	.843	iml	o
3.318	7.579	1.206	30.327	.2534	3.946	.841	iml	o
3.318	7.827	1.489	38.669	.2441	4.098	.810	iml	o
3.319	7.888	1.516	39.689	.2434	4.109	.808	iml	o
3.317	7.813	1.519	39.366	.2429	4.118	.806	iml	o
3.320	7.756	1.595	41.071	.2393	4.180	.794	iml	o
3.317	7.982	1.598	42.309	.2411	4.147	.800	iml	o
3.317	7.980	1.599	42.325	.2411	4.148	.800	iml	o

(Continued)



DUNITE , Twin Sisters Peaks , Washington
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.317	7.995	1.706	45.242	.2371	4.217	.787	iml o
3.321	8.031	1.930	51.475	.2288	4.372	.760	iml o
3.321	8.017	1.954	52.024	.2277	4.391	.756	iml o
3.320	8.053	2.071	55.370	.2237	4.469	.743	iml o
3.321	8.099	2.170	58.366	.2204	4.536	.732	iml o
3.317	8.124	2.176	58.637	.2207	4.530	.732	iml o
3.317	8.100	2.178	58.518	.2204	4.537	.731	iml o
3.320	8.207	2.322	63.268	.2160	4.630	.717	iml o
3.321	8.161	2.352	63.746	.2143	4.666	.712	iml o
3.321	8.194	2.362	64.275	.2143	4.666	.712	iml o
3.320	8.157	2.377	64.372	.2134	4.685	.709	iml o
3.320	8.141	2.399	64.840	.2124	4.707	.705	iml o
3.319	8.273	2.577	70.759	.2074	4.821	.689	iml o
3.318	8.194	2.588	70.362	.2062	4.850	.684	iml o
3.320	8.626	2.799	80.159	.2035	4.915	.676	iml o
3.317	8.533	2.835	80.242	.2013	4.967	.668	iml o
3.322	8.607	2.849	81.460	.2014	4.966	.669	iml o
3.321	8.562	2.864	81.436	.2004	4.990	.665	iml o
3.317	8.644	2.889	82.834	.2007	4.982	.666	iml o
3.317	8.626	2.892	82.747	.2004	4.990	.665	iml o
3.320	9.017	3.035	90.857	.1998	5.004	.663	iml o
3.321	8.990	3.039	90.732	.1993	5.017	.662	iml o
3.317	9.120	3.216	97.287	.1952	5.124	.647	iml o
3.320	9.417	3.310	103.485	.1953	5.119	.649	iml o
3.320	9.314	3.324	102.786	.1937	5.162	.643	iml o
3.319	9.354	3.327	103.290	.1941	5.151	.644	iml o
3.317	9.554	3.426	108.572	.1934	5.171	.641	iml o

ECLOGITE , Healdsburg , California

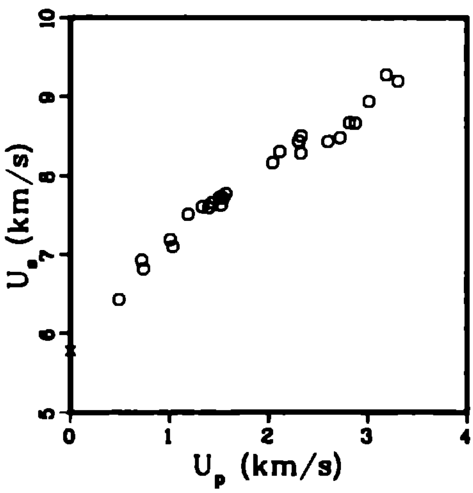
Average ρ_0 = 3.418 g/cm^3.

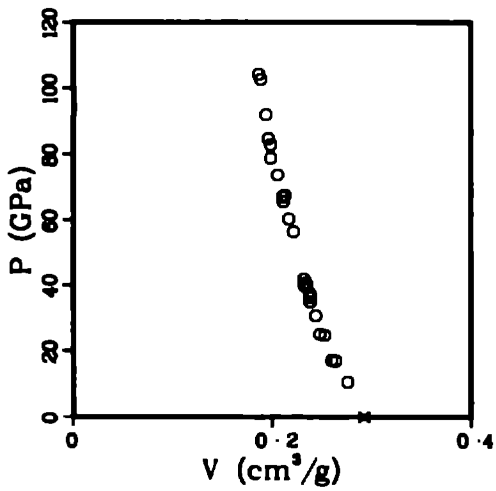
Sound velocities longitudinal 7.71 km/s .
shear 4.42 km/s .

References 6 , 32 , 42

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.420	5.779	0.000	0.000	.2924	3.420	1.000	ssp ×
3.346	6.430	.490	10.542	.2761	3.622	.924	iml o
3.448	6.927	.717	17.125	.2600	3.846	.896	iml o
3.379	6.817	.736	16.953	.2640	3.788	.892	iml o
3.469	7.191	1.006	25.095	.2479	4.033	.860	iml o
3.376	7.099	1.033	24.757	.2531	3.951	.854	iml o
3.452	7.511	1.187	30.777	.2439	4.100	.842	iml o
3.461	7.608	1.330	35.021	.2384	4.194	.825	iml o
3.420	7.598	1.398	36.327	.2386	4.191	.816	iml o
3.420	7.656	1.429	37.416	.2378	4.205	.813	iml o
3.427	7.728	1.508	39.938	.2349	4.258	.805	iml o
3.438	7.630	1.522	39.925	.2328	4.295	.801	iml o
3.426	7.714	1.536	40.594	.2338	4.278	.801	iml o
3.442	7.771	1.566	41.887	.2320	4.311	.798	iml o
3.384	8.168	2.040	56.387	.2217	4.511	.750	iml o
3.435	8.307	2.112	60.265	.2171	4.606	.746	iml o
3.446	8.436	2.303	66.949	.2110	4.740	.727	iml o
3.400	8.287	2.325	65.509	.2116	4.726	.719	iml o
3.405	8.502	2.327	67.365	.2133	4.688	.726	iml o

(Continued)





ECLOGITE, Healdsburg, California
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.360	8.434	2.599	73.651	.2059	4.857	.692	iml o
3.413	8.481	2.721	78.761	.1990	5.025	.679	iml o
3.394	8.668	2.814	82.786	.1990	5.025	.675	iml o
3.398	8.663	2.875	84.631	.1966	5.086	.668	iml o
3.412	8.934	3.012	91.814	.1943	5.147	.663	iml o
3.471	9.278	3.187	102.634	.1891	5.287	.656	iml o
3.427	9.198	3.305	104.179	.1870	5.349	.641	iml o

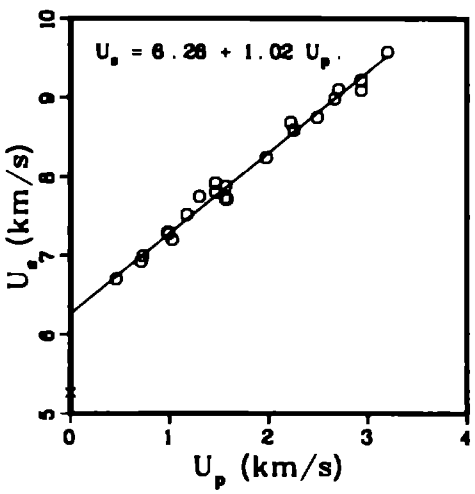
ECLOGITE, Sunnmore, Norway

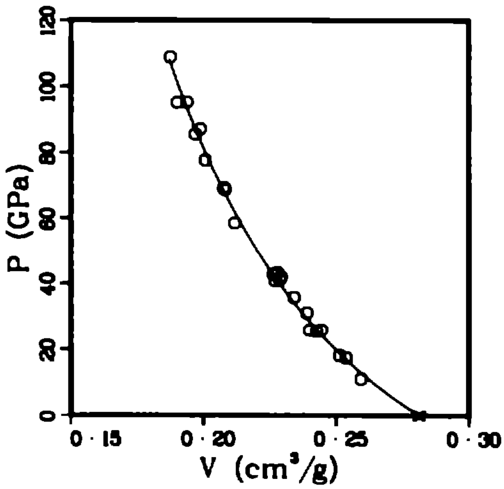
Average ρ_0 = 3.551 g/cm^3.

Sound velocities longitudinal 7.35 km/s.
shear 4.44 km/s.
References 6, 32, 42

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.560	5.267	0.000	0.000	.2809	3.560	1.000	ssp ×
3.590	6.701	.461	11.090	.2594	3.855	.931	iml o
3.533	6.922	.714	17.461	.2538	3.939	.897	iml o
3.564	6.996	.730	18.202	.2513	3.979	.896	iml o
3.566	7.298	.981	25.530	.2427	4.120	.866	iml o
3.601	7.282	.987	25.882	.2401	4.166	.864	iml o
3.507	7.205	1.027	25.950	.2445	4.090	.857	iml o
3.531	7.523	1.173	31.159	.2390	4.183	.844	iml o
3.553	7.751	1.301	35.829	.2342	4.270	.832	iml o
3.564	7.923	1.461	41.255	.2288	4.370	.816	iml o
3.580	7.810	1.464	40.933	.2270	4.406	.813	iml o
3.480	7.731	1.562	42.024	.2293	4.361	.798	iml o
3.517	7.880	1.564	43.345	.2279	4.388	.802	iml o
3.511	7.718	1.580	42.815	.2265	4.415	.795	iml o
3.589	8.247	1.976	58.487	.2119	4.720	.760	iml o
3.583	8.687	2.222	69.161	.2077	4.814	.744	iml o
3.541	8.593	2.256	68.645	.2083	4.802	.737	iml o
3.564	8.750	2.491	77.682	.2007	4.982	.715	iml o
3.571	8.983	2.665	85.489	1970	5.077	.703	iml o

(Continued)





ECLOGITE, Sunnmore, Norway
(Continued)

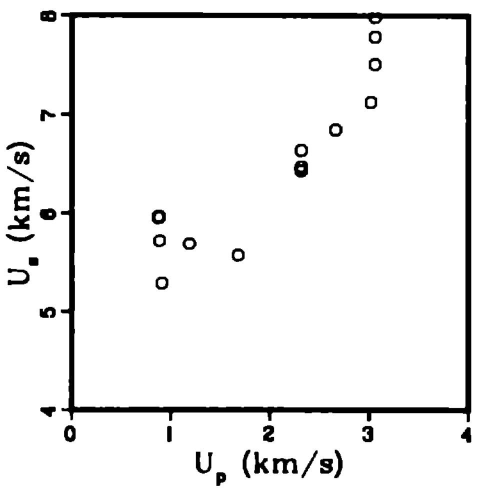
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.535	9.106	2.704	87.041	.1989	5.028	.703	iml o
3.519	9.222	2.930	95.085	.1939	5.158	.682	iml o
3.561	9.092	2.934	94.993	.1902	5.258	.677	iml o
3.553	9.578	3.198	108.830	.1875	5.334	.666	iml o

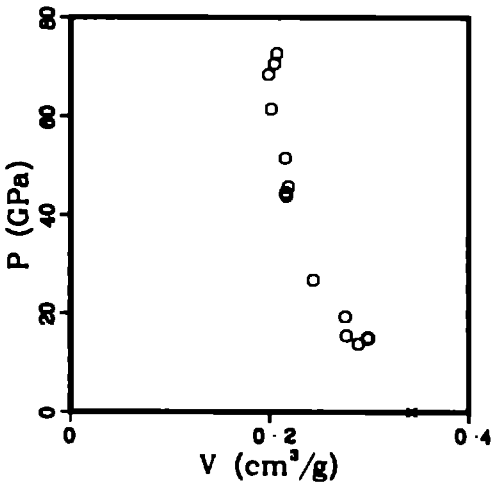
GABRO, Bytownite, Duluth, Minnesota

Average ρ_0 = 2.919 g/cm^3.

Reference 44

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.855	5.965	.877	14.935	.2988	3.347	.853	iml	o
2.855	5.954	.878	14.925	.2986	3.349	.853	iml	o
3.050	5.717	.886	15.449	.2771	3.609	.845	iml	o
2.863	5.286	.910	13.772	.2892	3.458	.828	iml	o
2.868	5.688	1.187	19.364	.2759	3.624	.791	iml	o
2.866	5.569	1.677	26.766	.2438	4.101	.699	iml	o
2.977	6.640	2.314	45.741	.2188	4.569	.652	iml	o
2.972	6.472	2.314	44.509	.2162	4.626	.642	iml	o
2.950	6.432	2.314	43.907	.2170	4.608	.640	iml	o
2.833	6.847	2.660	51.597	.2159	4.633	.612	iml	o
2.859	7.124	3.017	61.449	.2016	4.959	.577	iml	o
2.981	7.509	3.058	68.451	.1988	5.029	.593	iml	o
2.977	7.983	3.059	72.698	.2072	4.826	.617	iml	o
2.966	7.786	3.059	70.642	.2047	4.885	.607	iml	o



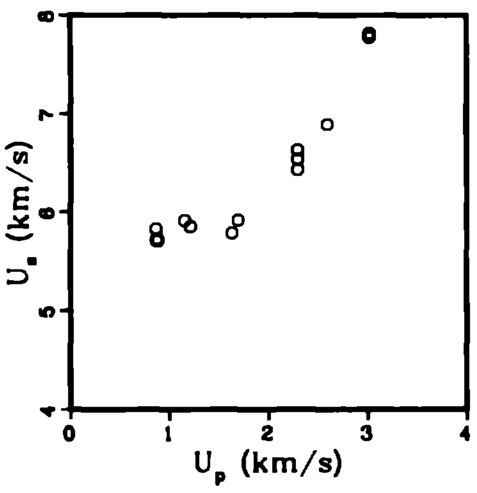


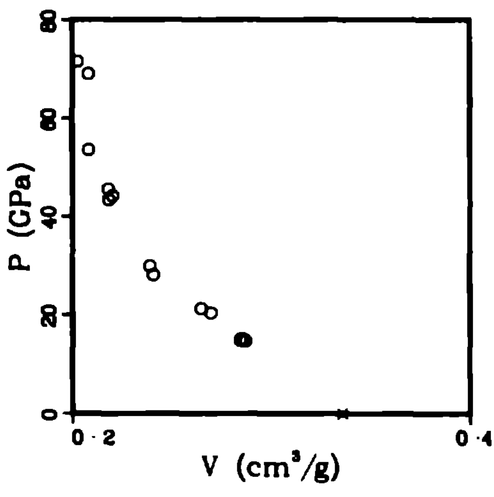
GABRO, San Marcos, Escondido, California

Average ρ_0 = 2.978 g/cm^3.

Reference 44

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.982	5.825	.864	15.008	.2856	3.501	.852	iml o
2.954	5.706	.870	14.664	.2869	3.485	.848	iml o
2.976	5.721	.875	14.897	.2846	3.513	.847	iml o
2.976	5.711	.877	14.905	.2844	3.516	.846	iml o
2.984	5.912	1.153	20.341	.2698	3.707	.805	iml o
2.994	5.849	1.212	21.224	.2648	3.777	.793	iml o
2.982	5.783	1.629	28.092	.2409	4.151	.718	iml o
2.986	5.918	1.692	29.900	.2391	4.182	.714	iml o
3.000	6.630	2.294	45.628	.2180	4.587	.654	iml o
2.950	6.541	2.294	44.265	.2201	4.543	.649	iml o
2.950	6.432	2.294	43.527	.2181	4.585	.643	iml o
2.993	6.892	2.597	53.570	.2082	4.803	.623	iml o
2.940	7.776	3.019	69.019	.2081	4.806	.612	iml o
3.030	7.815	3.020	71.512	.2025	4.938	.614	iml o





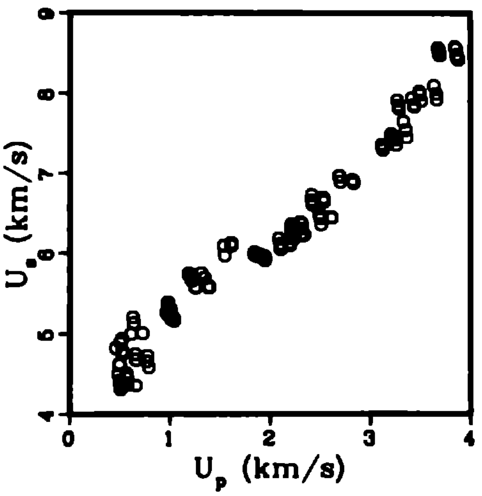
GAS SHALE, Devonian, Lincoln County, West Virginia

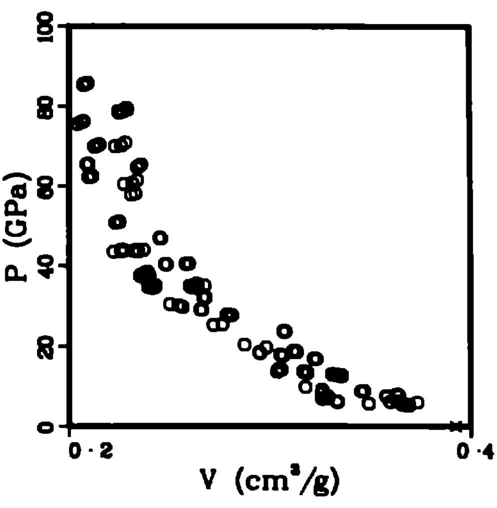
Average ρ_s = 2.548 g/cm^3.

References 46, 47

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.713	4.821	.460	6.017	.3334	2.999	.905	iml o
2.555	4.496	.485	5.571	.3492	2.864	.892	iml o
2.676	4.619	.496	6.131	.3336	2.998	.893	iml o
2.679	4.620	.496	6.139	.3332	3.001	.893	iml o
2.423	4.416	.499	5.339	.3661	2.732	.887	iml o
2.406	4.388	.501	5.289	.3682	2.716	.886	iml o
2.398	4.354	.503	5.252	.3688	2.711	.884	iml o
2.391	4.306	.506	5.210	.3691	2.709	.882	iml o
2.401	4.889	.506	5.940	.3734	2.678	.897	iml o
2.726	4.935	.520	6.995	.3282	3.047	.895	iml o
2.728	4.782	.527	6.875	.3262	3.066	.890	iml o
2.405	4.391	.528	5.576	.3658	2.734	.880	iml o
2.728	4.754	.528	6.848	.3259	3.069	.889	iml o
2.400	4.508	.567	6.134	.3643	2.745	.874	iml o
2.400	4.454	.570	6.093	.3633	2.752	.872	iml o
2.414	4.360	.573	6.031	.3598	2.779	.869	iml o
2.690	4.996	.614	8.252	.3261	3.067	.877	iml o
2.420	5.202	.631	7.944	.3631	2.754	.879	iml o
2.406	5.130	.636	7.850	.3641	2.747	.876	iml o
2.408	4.747	.656	7.499	.3579	2.794	.862	iml o

(Continued)





GAS SHALE, Devonian, Lincoln County,
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.579	4.355	.660	7.413	.3290	3.040	.848	iml o
2.398	4.676	.661	7.412	.3581	2.793	.859	iml o
2.690	5.004	.728	9.799	.3177	3.148	.855	iml o
2.565	4.658	.764	9.128	.3259	3.068	.836	iml o
2.409	4.725	.778	8.856	.3468	2.884	.835	iml o
2.398	4.585	.788	8.664	.3453	2.896	.828	iml o
2.690	5.254	.964	13.624	.3035	3.294	.817	iml o
2.565	5.342	.976	13.373	.3186	3.138	.817	iml o
2.690	5.388	.979	14.189	.3042	3.287	.818	iml o
2.675	5.386	.981	14.134	.3057	3.271	.818	iml o
2.554	5.304	1.006	13.628	.3173	3.152	.810	iml o
2.556	5.275	1.008	13.591	.3165	3.160	.809	iml o
2.406	5.213	1.011	12.680	.3350	2.985	.806	iml o
2.398	5.204	1.013	12.641	.3358	2.978	.805	iml o
2.404	5.178	1.014	12.622	.3345	2.989	.804	iml o
2.398	5.192	1.014	12.625	.3356	2.980	.805	iml o
2.420	5.189	1.036	13.009	.3307	3.024	.800	iml o
2.398	5.160	1.042	12.893	.3328	3.005	.798	iml o
2.690	5.743	1.187	18.338	.2949	3.391	.793	iml o
2.690	5.739	1.187	18.325	.2949	3.391	.793	iml o
2.579	5.691	1.212	17.789	.3052	3.277	.787	iml o
2.560	5.663	1.218	17.658	.3066	3.261	.785	iml o
2.409	5.579	1.254	16.854	.3218	3.107	.775	iml o
2.398	5.580	1.256	16.806	.3231	3.095	.775	iml o
2.685	5.752	1.315	20.309	.2873	3.481	.771	iml o
2.562	5.695	1.345	19.624	.2981	3.354	.764	iml o
2.414	5.592	1.386	18.710	.3116	3.209	.752	iml o
2.406	5.585	1.388	18.651	.3123	3.202	.751	iml o
2.398	5.582	1.390	18.606	.3132	3.193	.751	iml o
2.398	5.582	1.390	18.606	.3132	3.193	.751	iml o
2.705	6.091	1.539	25.357	.2763	3.620	.747	iml o
2.726	5.971	1.547	25.180	.2718	3.679	.741	iml o
2.394	6.124	1.612	23.633	.3078	3.249	.737	iml o
2.396	6.110	1.612	23.619	.3070	3.257	.736	iml o
2.398	6.097	1.613	23.583	.3067	3.261	.735	iml o
2.393	6.104	1.614	23.575	.3074	3.253	.736	iml o
2.767	5.984	1.841	30.483	.2502	3.997	.692	iml o
2.722	6.007	1.846	30.184	.2545	3.930	.693	iml o
2.679	5.966	1.866	29.824	.2565	3.898	.687	iml o
2.579	5.980	1.888	29.118	.2653	3.769	.684	iml o
2.564	5.976	1.897	29.067	.2662	3.756	.683	iml o
2.409	5.939	1.941	27.770	.2794	3.579	.673	iml o
2.398	5.960	1.942	27.755	.2811	3.557	.674	iml o

(Continued)

GAS SHALE, Devonian, Lincoln County, (Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.409	5.928	1.942	27.733	.2791	3.583	.672	iml o
2.408	5.937	1.946	27.821	.2792	3.582	.672	iml o
2.404	5.949	1.946	27.831	.2799	3.573	.673	iml o
2.398	5.929	1.946	27.668	.2801	3.570	.672	iml o
2.409	5.917	1.948	27.767	.2784	3.591	.671	iml o
2.726	6.182	2.087	35.170	.2430	4.115	.662	iml o
2.705	6.113	2.102	34.758	.2426	4.123	.656	iml o
2.726	6.052	2.104	34.711	.2393	4.179	.652	iml o
2.705	6.064	2.108	34.578	.2412	4.146	.652	iml o
2.393	6.126	2.197	32.207	.2680	3.731	.641	iml o
2.398	6.100	2.199	32.167	.2667	3.750	.640	iml o
2.705	6.294	2.210	37.626	.2399	4.169	.649	iml o
2.726	6.364	2.214	38.409	.2392	4.180	.652	iml o
2.726	6.189	2.218	37.420	.2354	4.249	.642	iml o
2.726	6.320	2.220	38.247	.2380	4.202	.649	iml o
2.705	6.247	2.236	37.784	.2374	4.213	.642	iml o
2.705	6.192	2.244	37.586	.2357	4.242	.638	iml o
2.393	6.389	2.300	35.164	.2674	3.739	.640	iml o
2.400	6.309	2.308	34.947	.2642	3.784	.634	iml o
2.414	6.239	2.313	34.836	.2607	3.836	.629	iml o
2.414	6.369	2.316	35.608	.2636	3.793	.636	iml o
2.393	6.225	2.322	34.589	.2620	3.817	.627	iml o
2.400	6.228	2.340	34.976	.2601	3.844	.624	iml o
2.705	6.731	2.414	43.953	.2371	4.218	.641	iml o
2.726	6.662	2.416	43.876	.2338	4.277	.637	iml o
2.726	6.608	2.424	43.665	.2323	4.305	.633	iml o
2.705	6.632	2.427	43.539	.2344	4.266	.634	iml o
2.726	6.483	2.489	43.987	.2260	4.425	.616	iml o
2.705	6.489	2.495	43.794	.2275	4.395	.616	iml o
2.705	6.436	2.503	43.576	.2259	4.426	.611	iml o
2.726	6.355	2.508	43.448	.2221	4.503	.605	iml o
2.393	6.693	2.532	40.553	.2598	3.849	.622	iml o
2.398	6.649	2.536	40.435	.2580	3.877	.619	iml o
2.393	6.453	2.614	40.365	.2486	4.022	.595	iml o
2.398	6.440	2.614	40.368	.2477	4.036	.594	iml o
2.728	6.962	2.690	51.089	.2249	4.446	.614	iml o
2.726	6.963	2.691	51.078	.2251	4.443	.614	iml o
2.728	6.894	2.700	50.778	.2230	4.484	.608	iml o
2.414	6.916	2.821	47.097	.2453	4.077	.592	iml o
2.400	6.901	2.829	46.855	.2459	4.067	.590	iml o
2.400	6.878	2.832	46.748	.2451	4.080	.588	iml o
2.726	7.363	3.114	62.503	.2117	4.724	.577	iml o
2.726	7.324	3.120	62.291	.2106	4.749	.574	iml o

(Continued)

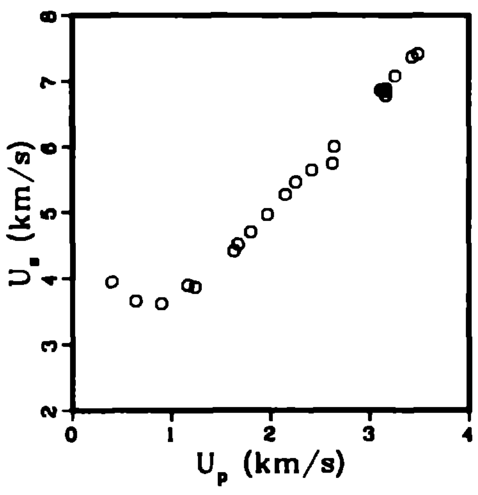
GAS SHALE, Devonian, Lincoln County,
(Continued)

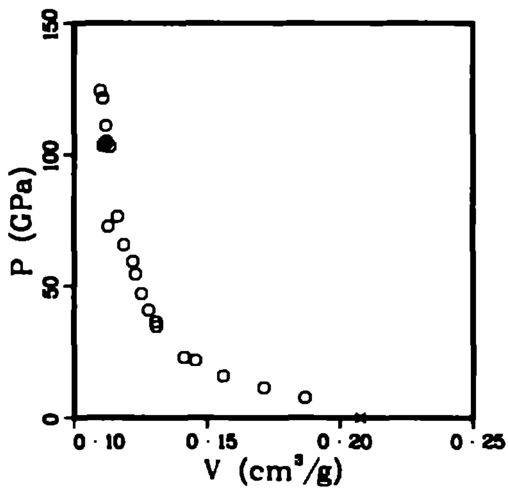
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.728	7.296	3.124	62.178	.2096	4.771	.572	iml o
2.726	7.494	3.210	65.576	.2097	4.769	.572	iml o
2.728	7.469	3.213	65.466	.2089	4.787	.570	iml o
2.726	7.461	3.215	65.389	.2088	4.790	.569	iml o
2.414	7.422	3.245	58.140	.2331	4.289	.563	iml o
2.414	7.355	3.256	57.810	.2309	4.332	.557	iml o
2.728	7.912	3.268	70.536	.2152	4.648	.587	iml o
2.726	7.849	3.279	70.159	.2136	4.682	.582	iml o
2.728	7.812	3.284	69.986	.2125	4.707	.580	iml o
2.414	7.652	3.330	61.512	.2340	4.274	.565	iml o
2.400	7.546	3.353	60.724	.2315	4.319	.556	iml o
2.414	7.450	3.362	60.463	.2273	4.399	.549	iml o
2.414	7.938	3.415	65.439	.2360	4.237	.570	iml o
2.400	7.858	3.435	64.781	.2345	4.264	.563	iml o
2.400	7.838	3.438	64.673	.2339	4.275	.561	iml o
2.726	8.022	3.488	76.275	.2073	4.823	.565	iml o
2.728	7.989	3.493	76.126	.2063	4.847	.563	iml o
2.726	7.910	3.506	75.599	.2042	4.896	.557	iml o
2.414	8.093	3.635	71.015	.2282	4.382	.551	iml o
2.400	7.996	3.658	70.198	.2261	4.424	.543	iml o
2.414	7.926	3.662	70.066	.2229	4.487	.538	iml o
2.728	8.567	3.675	85.888	.2093	4.777	.571	iml o
2.726	8.553	3.678	85.754	.2091	4.783	.570	iml o
2.728	8.524	3.682	85.619	.2082	4.802	.568	iml o
2.728	8.505	3.687	85.544	.2077	4.816	.566	iml o
2.726	8.511	3.687	85.542	.2079	4.809	.567	iml o
2.726	8.477	3.692	85.316	.2071	4.829	.564	iml o
2.414	8.581	3.844	79.627	.2287	4.373	.552	iml o
2.400	8.564	3.853	79.193	.2292	4.363	.550	iml o
2.400	8.485	3.865	78.707	.2269	4.408	.544	iml o
2.414	8.441	3.866	78.776	.2245	4.454	.542	iml o
2.400	8.424	3.877	78.384	.2249	4.446	.540	iml o

GLASS, high-density, Nuclear Pacific x-ray plate

Average ρ_0 = 4.817 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.817	3.951	.397	7.556	.1867	5.355	.900	iml o
4.815	3.658	.640	11.272	.1713	5.836	.825	iml o
4.817	3.616	.899	15.659	.1560	6.411	.751	iml o
4.817	3.894	1.165	21.852	.1455	6.873	.701	iml o
4.815	3.866	1.238	23.045	.1412	7.083	.680	iml o
4.817	4.415	1.628	34.623	.1310	7.631	.631	iml o
4.816	4.517	1.671	36.351	.1308	7.644	.630	iml o
4.817	4.703	1.803	40.846	.1280	7.812	.617	iml o
4.817	4.966	1.969	47.101	.1253	7.982	.604	iml o
4.817	5.276	2.150	54.641	.1230	8.130	.592	iml o
4.817	5.465	2.253	59.310	.1220	8.196	.588	iml o
4.817	5.643	2.414	65.618	.1188	8.418	.572	iml o
4.817	5.748	2.623	72.626	.1129	8.860	.544	iml o
4.817	6.005	2.639	76.336	.1164	8.594	.561	iml o
4.817	6.869	3.115	103.069	.1135	8.814	.547	iml o
4.817	6.855	3.155	104.180	.1121	8.924	.540	iml o
4.817	6.788	3.165	103.489	.1108	9.025	.534	iml o
4.817	6.883	3.167	105.003	.1121	8.922	.540	iml o
4.817	7.080	3.258	111.112	.1121	8.923	.540	iml o
4.817	7.361	3.428	121.550	.1109	9.015	.534	iml o
4.817	7.410	3.486	124.429	.1099	9.096	.530	iml o

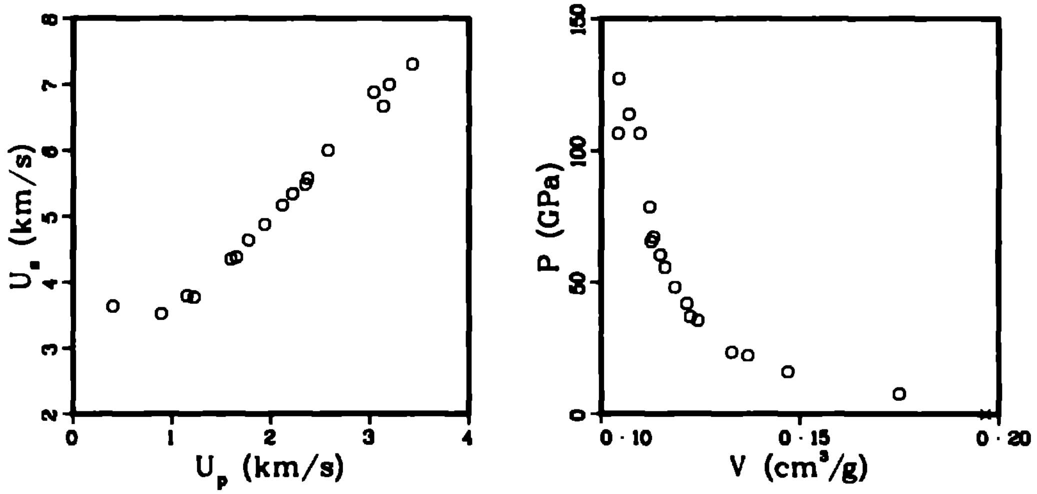




GLASS , high-density , Shott Optical Company

Average ρ_0 = 5.085 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
5.085	3.638	.402	7.437	.1749	5.717	.889	iml o
5.085	3.517	.889	15.899	.1469	6.805	.747	iml o
5.085	3.791	1.151	22.188	.1369	7.302	.696	iml o
5.085	3.768	1.222	23.414	.1329	7.526	.676	iml o
5.087	4.350	1.599	35.383	.1243	8.044	.632	iml o
5.085	4.379	1.654	36.830	.1224	8.171	.622	iml o
5.085	4.639	1.771	41.777	.1216	8.225	.618	iml o
5.085	4.878	1.937	48.047	.1186	8.434	.603	iml o
5.085	5.171	2.118	55.692	.1161	8.613	.590	iml o
5.085	5.346	2.221	60.377	.1150	8.699	.585	iml o
5.085	5.487	2.347	65.485	.1125	8.886	.572	iml o
5.085	5.577	2.369	67.183	.1131	8.840	.575	iml o
5.085	6.003	2.577	78.664	.1122	8.910	.571	iml o
5.085	6.880	3.039	106.319	.1098	9.108	.558	iml o
5.085	6.677	3.135	106.441	.1043	9.586	.530	iml o
5.085	7.003	3.196	113.810	.1069	9.354	.544	iml o
5.085	7.306	3.425	127.242	.1045	9.573	.531	iml o



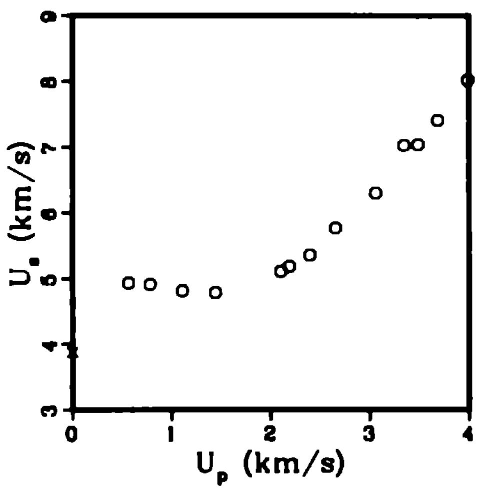
GLASS. Pyrex

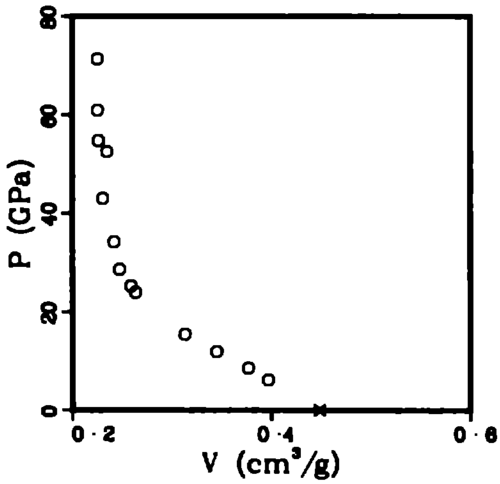
Average ρ_0 = 2.230 g/cm^3.

Sound velocities longitudinal 5.56 km/s.
shear 3.45 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.230	3.879	0.000	0.000	.4484	2.230	1.000	ssp ×
2.230	4.931	.565	6.213	.3970	2.519	.885	iml o
2.230	4.913	.784	8.589	.3769	2.653	.840	iml o
2.230	4.817	1.110	11.924	.3451	2.898	.770	iml o
2.230	4.790	1.444	15.424	.3132	3.192	.699	iml o
2.230	5.110	2.104	23.976	.2638	3.791	.588	iml o
2.230	5.181	2.189	25.291	.2590	3.862	.577	iml o
2.230	5.353	2.397	28.613	.2476	4.038	.552	iml o
2.230	5.767	2.655	34.144	.2420	4.133	.540	iml o
2.230	6.299	3.060	42.983	.2306	4.337	.514	iml o
2.230	7.032	3.348	52.501	.2349	4.257	.524	iml o
2.230	7.044	3.489	54.806	.2263	4.419	.505	iml o
2.230	7.412	3.686	60.925	.2254	4.436	.503	iml o
2.230	8.022	3.991	71.395	.2253	4.438	.502	iml o





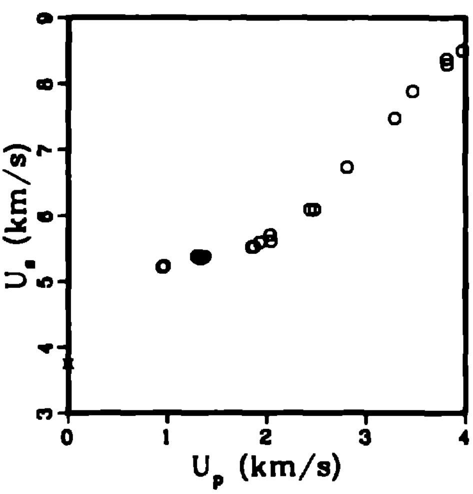
GRANITE, Westerly, Rhode Island

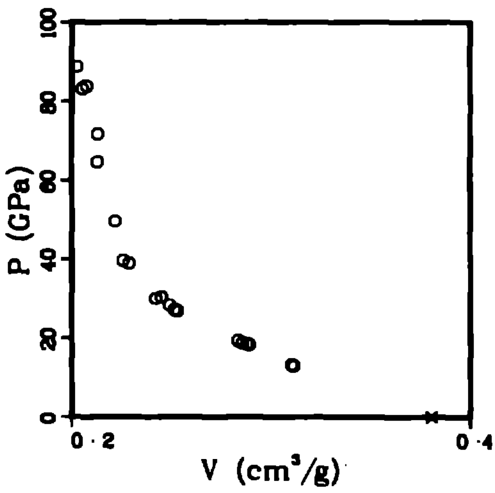
Average ρ_0 = 2.627 g/cm^3.

Sound velocities longitudinal 5.33 km/s.
shear 3.28 km/s.

References 6, 30, 32, 42

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.628	3.750	0.000	0.000	.3805	2.628	1.000	ssp ×
2.628	5.214	.945	12.949	.3116	3.210	.819	iml o
2.627	5.231	.964	13.247	.3105	3.220	.816	iml o
2.627	5.377	1.294	18.278	.2891	3.460	.759	iml o
2.628	5.386	1.311	18.556	.2879	3.473	.757	iml o
2.627	5.342	1.335	18.735	.2855	3.502	.750	iml o
2.628	5.375	1.373	19.394	.2833	3.530	.745	iml o
2.628	5.522	1.848	26.818	.2532	3.950	.665	iml o
2.628	5.527	1.870	27.162	.2518	3.972	.662	iml o
2.628	5.593	1.931	28.383	.2491	4.014	.655	iml o
2.624	5.702	2.034	30.433	.2452	4.079	.643	iml o
2.623	5.607	2.044	30.061	.2423	4.128	.635	iml o
2.628	6.097	2.431	38.952	.2288	4.371	.601	iml o
2.628	6.095	2.478	39.692	.2258	4.428	.593	iml o
2.628	6.729	2.810	49.692	.2216	4.512	.582	iml o
2.628	7.475	3.290	64.630	.2130	4.694	.560	iml o
2.628	7.880	3.467	71.797	.2131	4.693	.560	iml o
2.625	8.372	3.812	83.774	.2075	4.819	.545	iml o
2.628	8.286	3.816	83.096	.2053	4.872	.539	iml o
2.628	8.499	3.972	88.716	.2027	4.934	.533	iml o





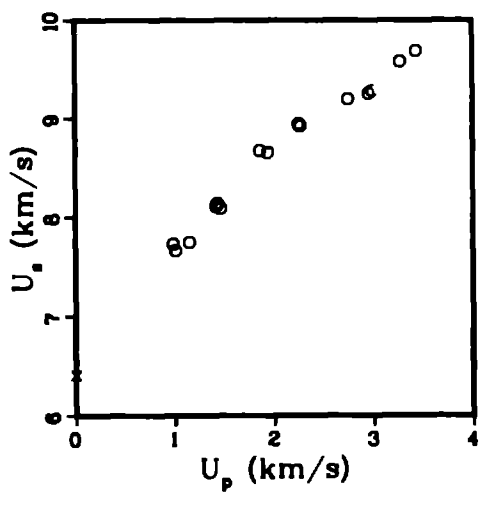
JADEITE, Burma

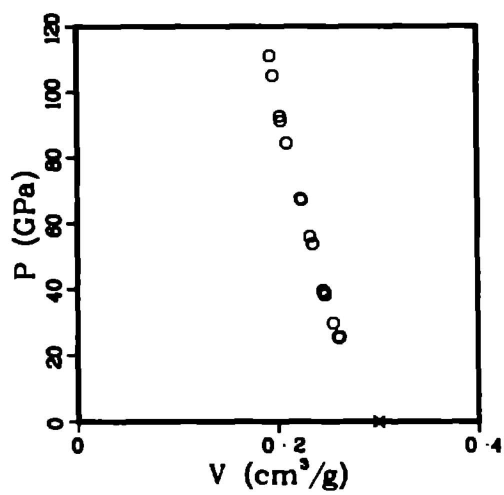
Average ρ_0 = 3.335 g/cm^3.

Sound velocities longitudinal 8.67 km/s.
shear 5.06 km/s.

References 6, 32, 42

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.330	6.406	0.000	0.000	.3003	3.330	1.000	ssp ×
3.332	7.731	.986	25.399	.2618	3.819	.872	iml o
3.334	7.664	1.005	25.680	.2606	3.837	.869	iml o
3.335	7.749	1.151	29.745	.2553	3.917	.851	iml o
3.335	8.107	1.414	38.230	.2476	4.040	.826	iml o
3.334	8.135	1.430	38.785	.2472	4.045	.824	iml o
3.335	8.087	1.462	39.430	.2456	4.071	.819	iml o
3.335	8.676	1.858	53.760	.2356	4.244	.786	iml o
3.333	8.655	1.940	55.963	.2328	4.296	.776	iml o
3.334	8.944	2.253	67.183	.2244	4.457	.748	iml o
3.335	8.921	2.269	67.506	.2236	4.473	.746	iml o
3.336	9.199	2.748	84.330	.2102	4.757	.701	iml o
3.333	9.254	2.955	91.143	.2042	4.897	.681	iml o
3.335	9.284	2.991	92.608	.2032	4.920	.678	iml o
3.347	9.579	3.275	104.999	.1966	5.086	.658	iml o
3.337	9.685	3.434	110.983	.1934	5.170	.645	iml o





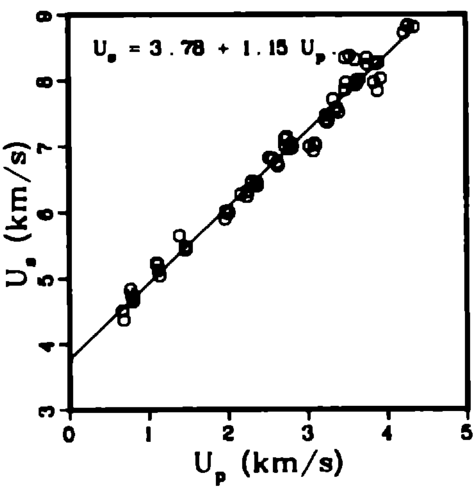
OIL SHALE, Green River, Rifle, Colorado

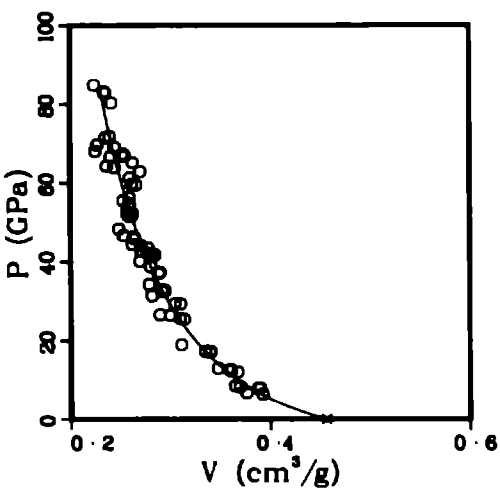
Average ρ_s = 2.192 g/cm^3.

References 48, 49

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.268	4.509	.663	6.780	.3761	2.659	.853	iml o
2.150	4.368	.684	6.424	.3923	2.549	.843	iml o
2.307	4.838	.769	8.583	.3646	2.743	.841	iml o
2.264	4.763	.779	8.400	.3695	2.707	.836	iml o
2.132	4.714	.799	8.030	.3895	2.567	.831	iml o
2.134	4.656	.802	7.969	.3879	2.578	.828	iml o
2.275	5.227	1.094	13.009	.3476	2.877	.791	iml o
2.188	5.213	1.110	12.661	.3597	2.780	.787	iml o
2.166	5.122	1.122	12.448	.3605	2.774	.781	iml o
2.107	5.039	1.139	12.093	.3673	2.722	.774	iml o
2.425	5.643	1.387	18.980	.3110	3.215	.754	iml o
2.182	5.433	1.462	17.332	.3350	2.985	.731	iml o
2.151	5.475	1.465	17.253	.3405	2.937	.732	iml o
2.153	5.444	1.468	17.206	.3392	2.948	.730	iml o
2.304	5.899	1.963	26.680	.2896	3.453	.667	iml o
2.241	6.013	1.969	26.533	.3001	3.332	.673	iml o
2.149	5.986	2.002	25.754	.3097	3.229	.666	iml o
2.118	6.002	2.010	25.552	.3140	3.184	.665	iml o
2.324	6.269	2.162	31.499	.2819	3.547	.655	iml o
2.105	6.239	2.242	29.444	.3043	3.286	.641	iml o
2.079	6.316	2.242	29.440	.3103	3.223	.645	iml o

(Continued)





OIL SHALE, Green River, Rifle, Colorado
(Continued)

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
2.309	6.465	2.301	34.349	.2789	3.585	.644	iml o
2.176	6.439	2.353	32.969	.2916	3.429	.635	iml o
2.150	6.447	2.362	32.740	.2947	3.393	.634	iml o
2.154	6.396	2.367	32.610	.2924	3.419	.630	iml o
2.339	6.822	2.518	40.179	.2697	3.707	.631	iml o
2.222	6.806	2.567	38.821	.2803	3.568	.623	iml o
2.111	6.746	2.621	37.325	.2897	3.452	.611	iml o
2.108	6.698	2.629	37.120	.2882	3.470	.607	iml o
2.282	7.112	2.718	44.112	.2707	3.694	.618	iml o
2.331	6.999	2.720	44.376	.2623	3.813	.611	iml o
2.220	7.149	2.740	43.486	.2778	3.600	.617	iml o
2.219	6.961	2.773	42.833	.2711	3.688	.602	iml o
2.157	6.979	2.798	42.120	.2777	3.601	.599	iml o
2.126	7.019	2.799	41.768	.2828	3.536	.601	iml o
2.114	7.037	2.802	41.683	.2847	3.513	.602	iml o
2.126	6.976	2.812	41.705	.2808	3.562	.597	iml o
2.285	7.000	3.024	48.369	.2486	4.023	.568	iml o
2.192	6.923	3.079	46.724	.2533	3.948	.555	iml o
2.130	7.043	3.091	46.370	.2634	3.796	.561	iml o
2.105	7.012	3.108	45.875	.2645	3.781	.557	iml o
2.191	7.394	3.232	52.359	.2569	3.892	.563	iml o
2.161	7.469	3.236	52.231	.2623	3.813	.567	iml o
2.158	7.368	3.253	51.723	.2588	3.864	.558	iml o
2.142	7.389	3.258	51.565	.2610	3.831	.559	iml o
2.195	7.713	3.325	56.292	.2592	3.858	.569	iml o
2.199	7.548	3.347	55.554	.2531	3.951	.557	iml o
2.145	7.581	3.371	54.817	.2589	3.863	.555	iml o
2.113	7.514	3.398	53.950	.2592	3.857	.548	iml o
2.312	8.349	3.479	67.155	.2523	3.964	.583	iml o
2.353	7.853	3.479	64.285	.2367	4.225	.557	iml o
2.301	7.964	3.489	63.936	.2442	4.095	.562	iml o
2.201	8.380	3.536	65.219	.2626	3.808	.578	iml o
2.096	8.315	3.606	62.846	.2702	3.701	.566	iml o
2.079	7.932	3.618	59.663	.2616	3.823	.544	iml o
2.054	7.992	3.624	59.490	.2661	3.758	.547	iml o
2.094	8.006	3.654	61.258	.2596	3.852	.544	iml o
2.298	8.347	3.748	71.892	.2398	4.171	.551	iml o
2.311	8.240	3.758	71.562	.2354	4.249	.544	iml o
2.279	7.969	3.842	69.776	.2272	4.401	.518	iml o
2.173	8.244	3.860	69.149	.2447	4.086	.532	iml o
2.103	8.274	3.876	67.443	.2528	3.956	.532	iml o
2.238	7.639	3.887	68.192	.2253	4.439	.504	iml o
2.077	8.265	3.894	66.846	.2546	3.927	.529	iml o

(Continued)

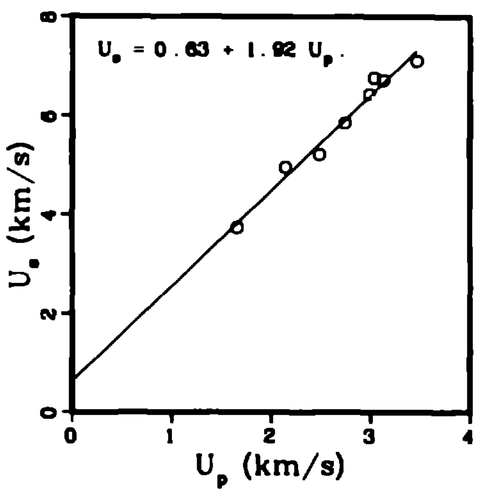
OIL SHALE, Green River, Rifle, Colorado
(Continued)

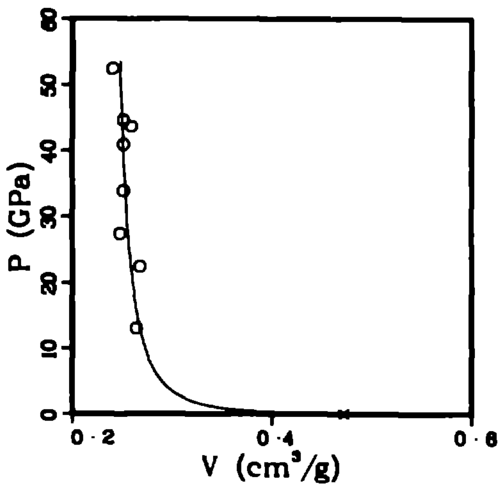
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.121	8.024	3.927	66.833	.2407	4.154	.511	iml o
2.304	8.729	4.221	84.891	.2241	4.461	.516	iml o
2.208	8.830	4.267	83.192	.2340	4.273	.517	iml o
2.194	8.829	4.276	82.830	.2350	4.255	.516	iml o
2.100	8.810	4.343	80.350	.2414	4.142	.507	iml o

PERICLASE MIXTURE
50/50 mol% MgO/Al_2O_3
Average ρ_0 = 2.118 g/cm^3.

Reference 30

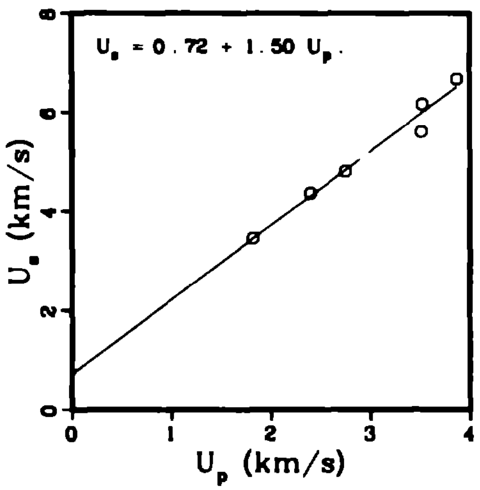
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.103	3.740	1.661	13.064	.2643	3.783	.556	iml o
2.116	4.953	2.145	22.481	.2679	3.732	.567	iml o
2.110	5.219	2.489	27.409	.2479	4.034	.523	iml o
2.116	5.851	2.741	33.936	.2512	3.981	.532	iml o
2.126	6.432	2.992	40.914	.2516	3.975	.535	iml o
2.124	6.764	3.040	43.675	.2592	3.858	.551	iml o
2.124	6.711	3.133	44.658	.2510	3.984	.533	iml o
2.129	7.098	3.465	52.362	.2404	4.160	.512	iml o

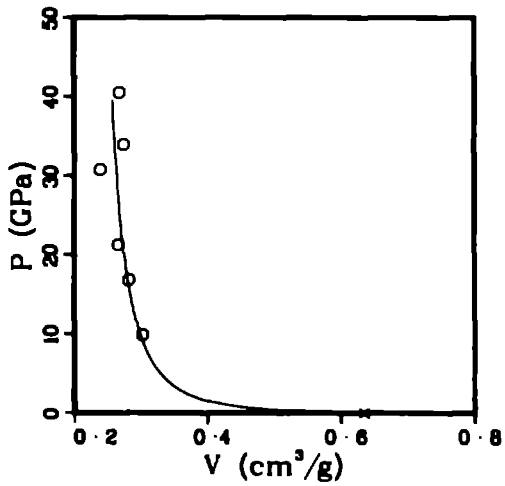




PERICLASE MIXTURE
50/50 mol% MgO/fused SiO_2
Average ρ_0 = 1.577 g/cm^3.

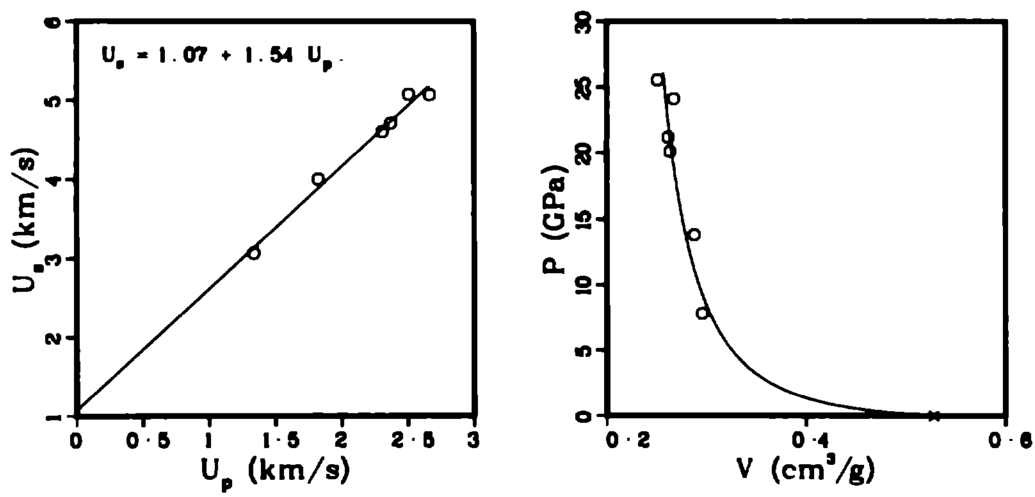
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.561	3.455	1.825	9.843	.3022	3.309	.472	iml o
1.602	4.375	2.399	16.814	.2819	3.547	.452	iml o
1.608	4.811	2.748	21.259	.2667	3.750	.429	iml o
1.562	5.608	3.515	30.790	.2389	4.185	.373	iml o
1.560	6.164	3.523	33.877	.2747	3.641	.428	iml o
1.570	6.675	3.868	40.536	.2678	3.733	.421	iml o





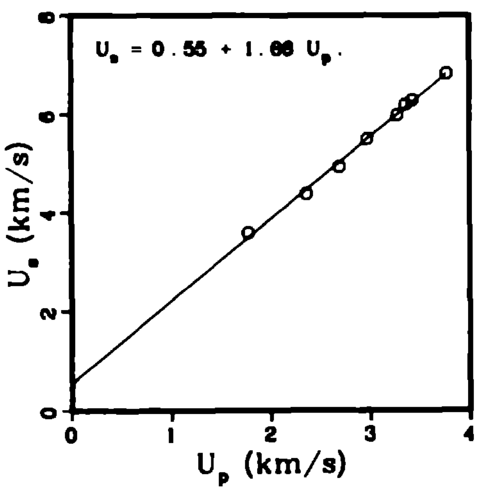
PERICLASE MIXTURE. ρ_0 = 1.89 g/cm^3.
67/33 mol% MgO/fused SiO_2
Average ρ_0 = 1.894 g/cm^3.

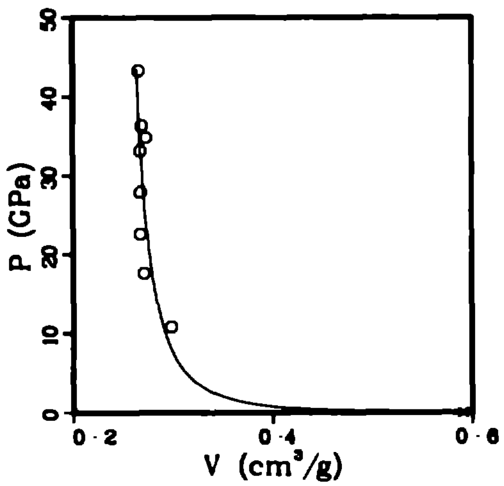
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.904	3.067	1.339	7.819	.2959	3.379	.563	iml o
1.890	4.003	1.825	13.807	.2879	3.474	.544	iml o
1.891	4.604	2.309	20.103	.2636	3.794	.498	iml o
1.897	4.711	2.372	21.198	.2617	3.821	.496	iml o
1.893	5.078	2.508	24.109	.2674	3.740	.506	iml o
1.889	5.071	2.666	25.538	.2511	3.983	.474	iml o



PERICLASE MIXTURE, ρ_0 = 1.69 g/cm^3.
67/33 mol% MgO/fused SiO_2
Average ρ_0 = 1.693 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.699	3.596	1.773	10.832	.2984	3.351	.507	iml	o
1.702	4.389	2.361	17.637	.2715	3.683	.462	iml	o
1.700	4.937	2.691	22.585	.2676	3.737	.455	iml	o
1.710	5.493	2.976	27.954	.2680	3.732	.458	iml	o
1.689	5.988	3.278	33.153	.2680	3.732	.453	iml	o
1.674	6.198	3.358	34.841	.2737	3.653	.458	iml	o
1.688	6.288	3.429	36.396	.2694	3.713	.455	iml	o
1.682	6.821	3.771	43.264	.2658	3.762	.447	iml	o



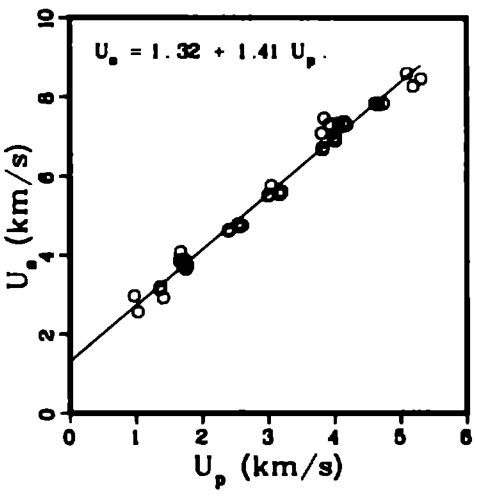


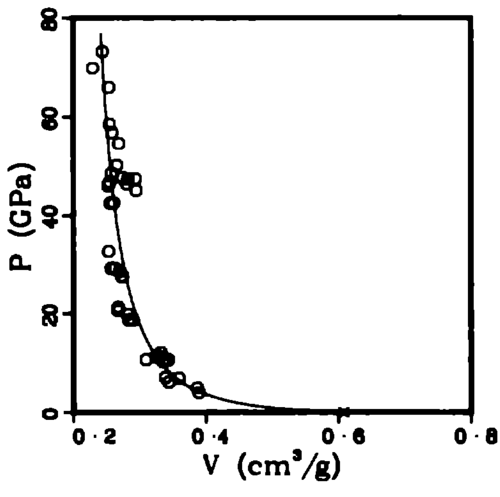
TUFF, Nevada Test Site, ρ_0 = 1.7 g/cm^3.

Average ρ_0 = 1.646 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.743	2.974	.969	5.023	.3868	2.585	.674	iml o
1.540	2.563	1.026	4.050	.3894	2.568	.600	iml o
1.679	3.147	1.356	7.165	.3390	2.950	.569	iml o
1.600	3.209	1.365	7.008	.3591	2.784	.575	iml o
1.506	2.926	1.410	6.213	.3440	2.907	.518	iml o
1.683	3.855	1.661	10.777	.3382	2.957	.569	iml o
1.659	3.868	1.666	10.691	.3432	2.914	.569	iml o
1.781	4.085	1.669	12.143	.3321	3.011	.591	iml o
1.687	3.888	1.724	11.308	.3299	3.031	.557	iml o
1.698	3.841	1.726	11.257	.3243	3.084	.551	iml o
1.599	3.795	1.748	10.607	.3373	2.964	.539	iml o
1.680	3.650	1.752	10.743	.3095	3.231	.520	iml o
1.566	3.735	1.772	10.364	.3356	2.980	.526	iml o
1.692	4.614	2.400	18.737	.2836	3.526	.480	iml o
1.673	4.655	2.401	18.699	.2894	3.455	.484	iml o
1.758	4.795	2.538	21.394	.2677	3.735	.471	iml o
1.722	4.738	2.560	20.887	.2669	3.746	.460	iml o
1.707	4.729	2.567	20.722	.2678	3.734	.457	iml o
1.605	4.759	2.604	19.890	.2821	3.544	.453	iml o
1.672	5.525	3.000	27.713	.2733	3.659	.457	iml o
1.665	5.527	3.003	27.635	.2743	3.646	.457	iml o
1.866	5.766	3.041	32.719	.2533	3.948	.473	iml o

(Continued)





TUFF, Nevada Test Site, ρ_0 = 1.7 g/cm^3.
(Continued)

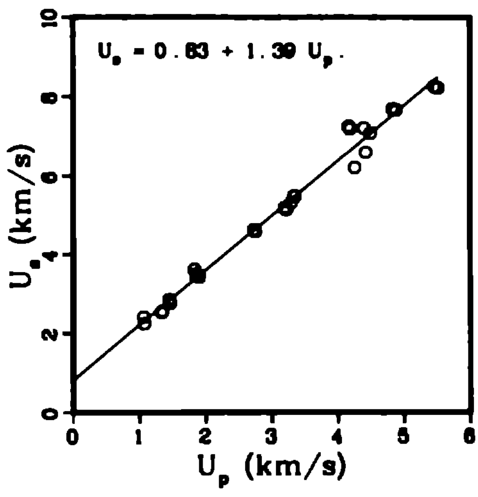
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.663	5.545	3.175	29.278	.2570	3.891	.427	iml o
1.647	5.599	3.175	29.278	.2629	3.804	.433	iml o
1.594	5.616	3.201	28.655	.2698	3.707	.430	iml o
1.800	7.098	3.806	48.627	.2577	3.881	.464	iml o
1.657	6.730	3.820	42.599	.2609	3.832	.432	iml o
1.670	6.674	3.821	42.587	.2560	3.907	.427	iml o
1.654	7.472	3.843	47.494	.2936	3.406	.486	iml o
1.572	7.316	3.924	45.129	.2949	3.391	.464	iml o
1.681	6.981	3.989	46.811	.2550	3.922	.429	iml o
1.662	6.909	4.013	46.080	.2522	3.965	.419	iml o
1.685	7.343	4.057	50.197	.2656	3.765	.448	iml o
1.579	7.297	4.140	47.701	.2740	3.650	.433	iml o
1.550	7.384	4.148	47.475	.2827	3.537	.438	iml o
1.522	7.300	4.182	46.465	.2806	3.563	.427	iml o
1.617	7.845	4.614	58.530	.2547	3.926	.412	iml o
1.559	7.814	4.667	56.854	.2583	3.871	.403	iml o
1.471	7.838	4.739	54.639	.2688	3.720	.395	iml o
1.671	8.605	5.093	73.232	.2442	4.094	.408	iml o
1.626	8.279	5.190	69.866	.2295	4.358	.373	iml o
1.468	8.459	5.308	65.914	.2537	3.941	.373	iml o

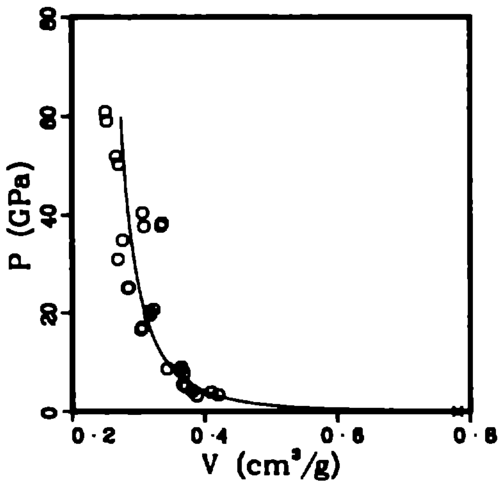
TUFF. Nevada Test Site. ρ_0 = 1.3 g/cm³.

Average ρ_0 = 1.281 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.332	2.417	1.064	3.425	.4203	2.379	.560	iml o
1.340	2.240	1.076	3.230	.3878	2.579	.520	iml o
1.238	2.530	1.336	4.185	.3812	2.623	.472	iml o
1.154	2.556	1.349	3.979	.4092	2.444	.472	iml o
1.345	2.857	1.447	5.560	.3669	2.725	.494	iml o
1.263	2.770	1.471	5.146	.3713	2.693	.469	iml o
1.356	3.623	1.832	9.000	.3646	2.743	.494	iml o
1.354	3.473	1.858	8.737	.3434	2.912	.465	iml o
1.290	3.504	1.864	8.426	.3628	2.756	.468	iml o
1.207	3.429	1.905	7.884	.3682	2.716	.444	iml o
1.346	4.645	2.733	17.087	.3058	3.270	.412	iml o
1.312	4.584	2.757	16.581	.3038	3.292	.399	iml o
1.213	5.197	3.199	20.166	.3169	3.155	.384	iml o
1.176	5.151	3.227	19.548	.3176	3.148	.374	iml o
1.179	5.326	3.298	20.709	.3230	3.096	.381	iml o
1.370	5.492	3.344	25.160	.2855	3.503	.391	iml o
1.371	5.476	3.346	25.120	.2837	3.525	.389	iml o
1.269	7.258	4.165	38.361	.3358	2.978	.426	iml o
1.253	7.200	4.187	37.773	.3340	2.994	.418	iml o
1.170	6.213	4.257	30.945	.2691	3.716	.315	iml o
1.276	7.215	4.395	40.462	.3063	3.265	.391	iml o
1.193	6.597	4.423	34.810	.2762	3.620	.330	iml o

(Continued)





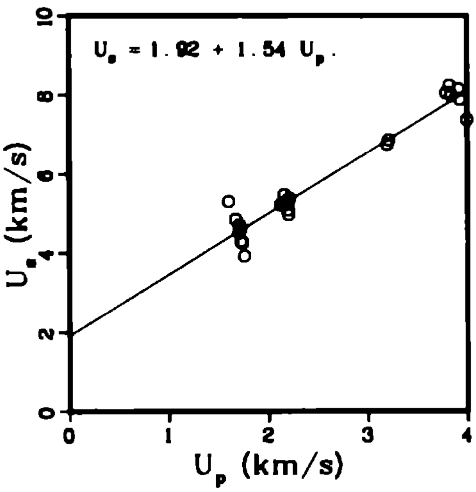
TUFF, Nevada Test Site, ρ_0 = 1.3 g/cm^3.
(Continued)

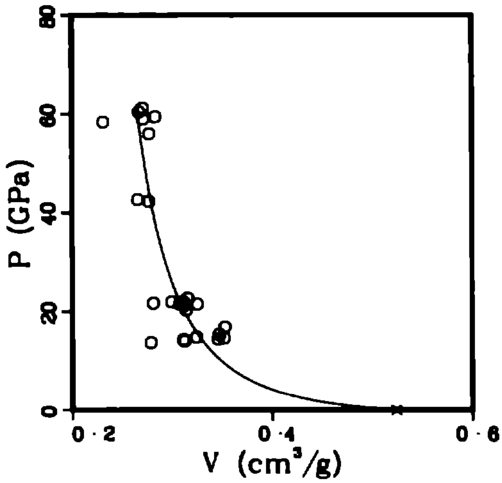
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.184	7.084	4.496	37.710	.3086	3.241	.365	iml o
1.398	7.691	4.828	51.911	.2663	3.756	.372	iml o
1.344	7.664	4.882	50.287	.2701	3.703	.363	iml o
1.352	8.250	5.461	60.912	.2500	3.999	.338	iml o
1.302	8.217	5.520	59.056	.2521	3.967	.328	iml o

TUFF, Nevada Test Site, water-saturated, ρ_0 = 1.9 g/cm^3.
Average ρ_0 = 1.908 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.980	5.307	1.602	16.834	.3526	2.836	.698	iml	o
1.890	4.854	1.672	15.339	.3468	2.883	.656	iml	o
1.920	4.515	1.704	14.772	.3243	3.084	.623	iml	o
1.810	4.708	1.709	14.563	.3519	2.841	.637	iml	o
1.810	4.607	1.723	14.368	.3459	2.891	.626	iml	o
1.920	4.289	1.726	14.213	.3112	3.213	.598	iml	o
1.890	4.253	1.741	13.994	.3125	3.200	.591	iml	o
1.980	3.923	1.758	13.655	.2787	3.588	.552	iml	o
1.980	5.224	2.126	21.990	.2995	3.339	.593	iml	o
1.920	5.236	2.145	21.564	.3075	3.252	.590	iml	o
1.890	5.265	2.151	21.404	.3129	3.196	.591	iml	o
1.920	5.480	2.160	22.727	.3155	3.169	.606	iml	o
1.890	5.308	2.191	21.980	.3107	3.219	.587	iml	o
1.810	5.095	2.200	20.288	.3139	3.185	.568	iml	o
1.980	4.974	2.204	21.706	.2813	3.555	.557	iml	o
1.810	5.377	2.212	21.528	.3252	3.075	.589	iml	o
1.980	6.744	3.197	42.690	.2656	3.765	.526	iml	o
1.920	6.861	3.210	42.286	.2772	3.608	.532	iml	o
1.980	8.049	3.791	60.417	.2672	3.743	.529	iml	o
1.890	8.233	3.821	59.456	.2835	3.527	.536	iml	o
1.920	8.007	3.836	58.973	.2713	3.686	.521	iml	o
1.920	8.149	3.911	61.192	.2709	3.692	.520	iml	o

(Continued)





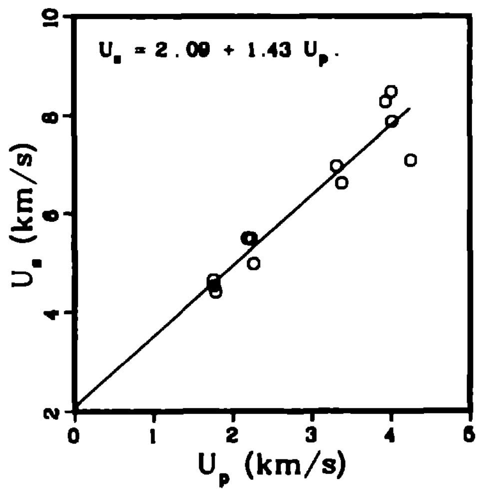
TUFF, Nevada Test Site, water-saturated, ρ_0 = 1.9 g/cm^3.
(Continued)

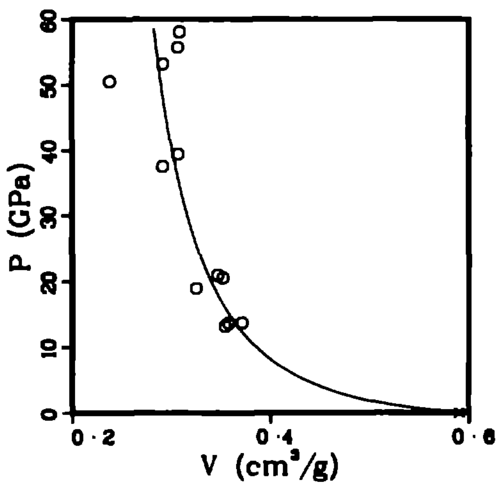
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.810	7.883	3.927	56.031	.2773	3.607	.502	iml o
1.980	7.376	3.998	58.389	.2313	4.323	.458	iml o

TUFF, Nevada Test Site, water-saturated, ρ_0 = 1.7 g/cm^3.

Average ρ_0 = 1.695 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.680	4.655	1.751	13.694	.3713	2.693	.624	iml o
1.710	4.534	1.759	13.638	.3579	2.794	.612	iml o
1.680	4.402	1.782	13.179	.3543	2.823	.595	iml o
1.710	5.496	2.188	20.563	.3520	2.841	.602	iml o
1.710	5.490	2.235	20.982	.3467	2.884	.593	iml o
1.680	4.983	2.261	18.928	.3252	3.075	.546	iml o
1.710	6.965	3.312	39.446	.3067	3.260	.524	iml o
1.680	6.619	3.379	37.574	.2914	3.432	.489	iml o
1.710	8.277	3.937	55.723	.3066	3.261	.524	iml o
1.710	8.477	4.007	58.084	.3084	3.243	.527	iml o
1.680	7.880	4.018	53.192	.2917	3.428	.490	iml o
1.680	7.081	4.249	50.546	.2381	4.201	.400	iml o

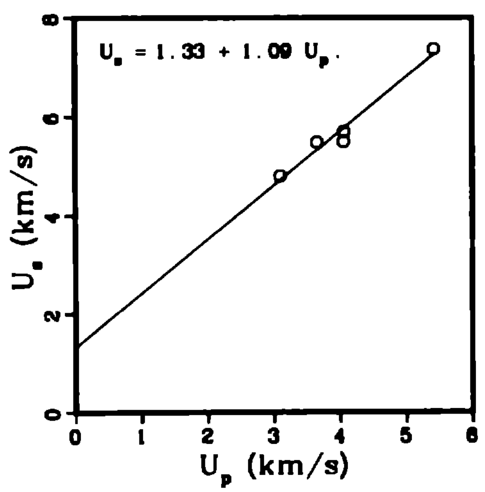


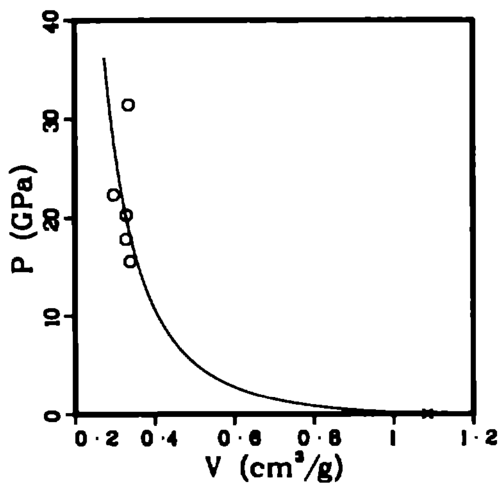


TUFF, unpressed powder

Average ρ_0 = 0.922 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.046	4.799	3.098	15.551	.3389	2.951	.354	iml o
1.014	5.484	3.653	20.314	.3293	3.037	.334	iml o
.799	5.499	4.057	17.825	.3282	3.047	.262	iml o
.966	5.697	4.061	22.349	.2973	3.364	.287	iml o
.787	7.368	5.424	31.452	.3353	2.983	.264	iml o





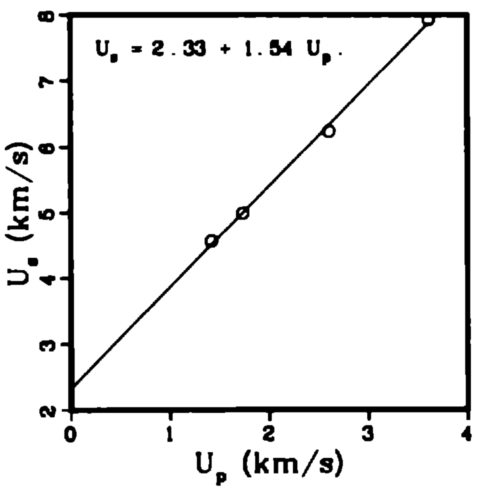
PLASTICS

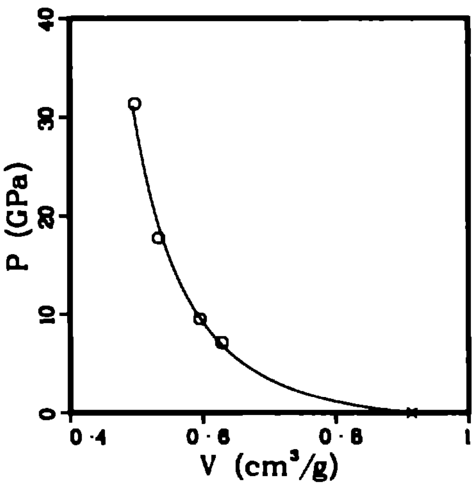
ADIPRENE

Average ρ_0 = 1.094 g/cm^3.

References 6, 13, 50

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.096	4.564	1.420	7.103	.6285	1.591	.689	iml o
1.095	4.990	1.736	9.486	.5955	1.679	.652	iml o
1.091	6.237	2.607	17.740	.5335	1.875	.582	iml o
1.094	7.933	3.612	31.347	.4979	2.008	.545	iml o





CELLULOSE ACETATE

Average ρ_0 = 1.261 g/cm^3.

Sound velocities	longitudinal	2.45 km/s.
	shear	1.15 km/s.
Reference 51		

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.255	2.059	0.000	0.000	.7968	1.255	1.000	ssp	×
1.260	3.339	.671	2.823	.6342	1.577	.799	iml	o
1.270	3.427	.727	3.164	.6204	1.612	.788	iml	o
1.255	3.347	.740	3.108	.6206	1.611	.779	iml	o
1.271	3.813	.954	4.623	.5899	1.695	.750	iml	o
1.260	3.799	.994	4.758	.5860	1.707	.738	iml	o
1.260	4.458	1.375	7.723	.5489	1.822	.692	iml	o
1.255	4.541	1.385	7.893	.5538	1.806	.695	iml	o
1.255	5.108	1.736	11.129	.5260	1.901	.660	iml	o
1.260	5.050	1.781	11.333	.5138	1.946	.647	iml	o
1.255	6.071	2.372	18.073	.4855	2.060	.609	iml	o
1.260	6.013	2.406	18.229	.4761	2.100	.600	iml	o
1.260	6.050	2.412	18.387	.4772	2.095	.601	iml	o
1.255	6.396	2.569	20.621	.4768	2.097	.598	iml	o
1.260	6.322	2.593	20.655	.4681	2.136	.590	iml	o
1.272	6.328	2.596	20.896	.4636	2.157	.590	iml	o
1.255	6.498	2.699	22.010	.4658	2.147	.585	iml	o
1.272	6.454	2.800	22.987	.4451	2.247	.566	iml	o
1.260	6.484	2.856	23.333	.4441	2.252	.560	iml	o

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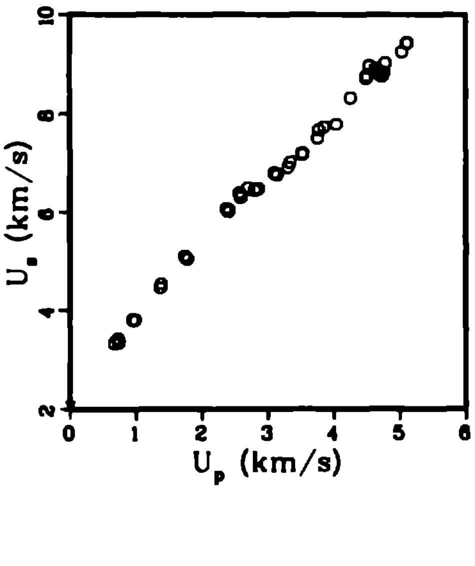

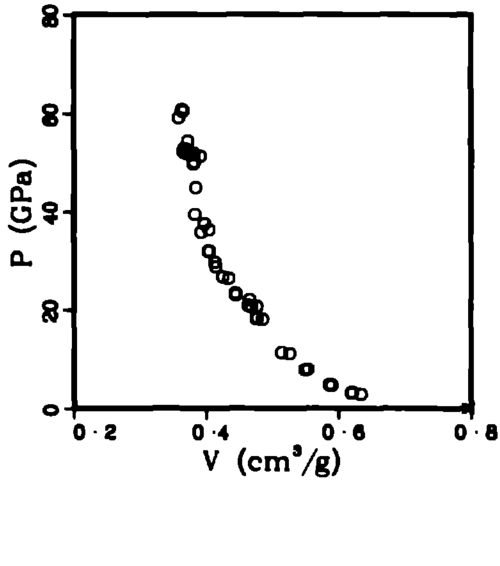

CELLULOSE ACETATE
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.255	6.802	3.096	26.429	.4341	2.303	.545	iml o
1.260	6.767	3.141	26.781	.4253	2.351	.536	iml o
1.260	6.918	3.306	28.817	.4144	2.413	.522	iml o
1.270	7.020	3.337	29.751	.4131	2.421	.525	iml o
1.268	7.178	3.512	31.965	.4028	2.483	.511	iml o
1.260	7.198	3.531	32.024	.4043	2.473	.509	iml o
1.270	7.505	3.761	35.847	.3928	2.546	.499	iml o
1.255	7.669	3.774	36.323	.4047	2.471	.508	iml o
1.260	7.730	3.855	37.547	.3979	2.513	.501	iml o
1.255	7.784	4.040	39.466	.3833	2.609	.481	iml o
1.271	8.317	4.254	44.969	.3844	2.602	.489	iml o
1.271	8.704	4.496	49.738	.3804	2.629	.483	iml o
1.271	8.750	4.506	50.112	.3816	2.620	.485	iml o
1.260	8.956	4.546	51.300	.3908	2.559	.492	iml o
1.260	8.833	4.638	51.619	.3769	2.653	.475	iml o
1.255	8.904	4.644	51.894	.3812	2.623	.478	iml o
1.270	8.841	4.683	52.581	.3703	2.700	.470	iml o
1.255	8.792	4.701	51.871	.3708	2.697	.465	iml o
1.255	8.757	4.741	52.104	.3654	2.737	.459	iml o
1.255	8.827	4.764	52.775	.3668	2.727	.460	iml o
1.260	9.016	4.784	54.347	.3725	2.684	.469	iml o
1.270	9.245	5.037	59.140	.3584	2.790	.455	iml o
1.255	9.429	5.109	60.457	.3651	2.739	.458	iml o
1.260	9.425	5.117	60.767	.3628	2.757	.457	iml o

EPOXY , Epon 828

Average ρ_0 = 1.185 g/cm^3.

Sound velocities longitudinal 2.63 km/s.
shear 1.16 km/s.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.192	2.263	0.000	0.000	.8389	1.192	1.000	ssp	×
1.184	3.265	.370	1.430	.7489	1.335	.887	iml	o
1.184	3.355	.411	1.633	.7411	1.349	.877	iml	o
1.184	3.421	.494	2.001	.7226	1.384	.856	iml	o
1.184	3.805	.639	2.879	.7028	1.423	.832	iml	o
1.184	3.709	.699	3.070	.6854	1.459	.812	iml	o
1.184	3.798	.716	3.220	.6854	1.459	.811	iml	o
1.184	3.703	.742	3.253	.6754	1.481	.800	iml	o
1.184	3.717	.779	3.428	.6676	1.498	.790	iml	o
1.184	4.312	.923	4.712	.6638	1.506	.786	iml	o
1.184	4.168	.926	4.570	.6570	1.522	.778	iml	o
1.184	4.225	.960	4.802	.6527	1.532	.773	iml	o
1.184	4.190	.961	4.767	.6509	1.536	.771	iml	o
1.184	4.086	.989	4.785	.6402	1.562	.758	iml	o
1.180	4.129	.998	4.862	.6426	1.556	.758	iml	o
1.184	4.480	1.151	6.105	.6276	1.593	.743	iml	o
1.184	4.558	1.195	6.449	.6232	1.605	.738	iml	o
1.184	4.575	1.195	6.473	.6240	1.603	.739	iml	o
1.198	4.543	1.215	6.613	.6115	1.635	.733	iml	o

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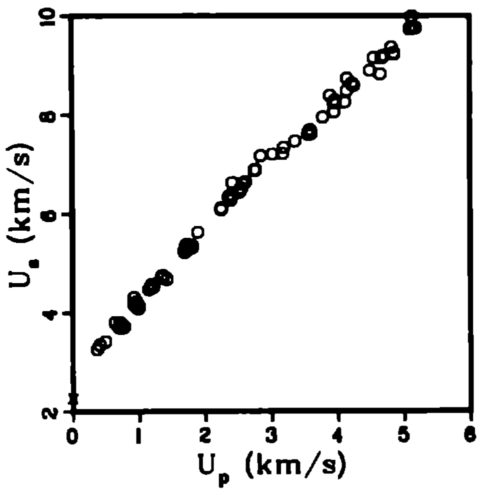
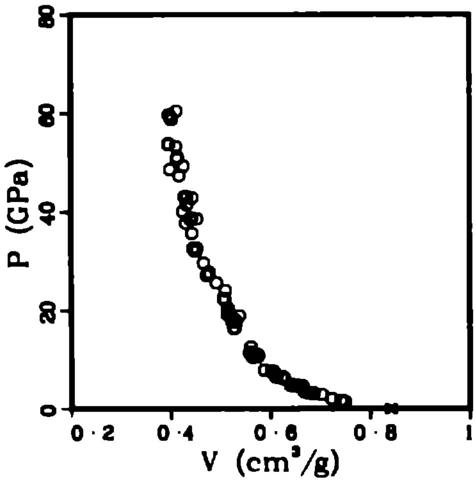




EPOXY, Epon 828
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.198	4.530	1.216	6.599	.6107	1.638	.732	iml o
1.184	4.742	1.345	7.552	.6050	1.653	.716	iml o
1.180	4.718	1.349	7.510	.6051	1.652	.714	iml o
1.184	4.742	1.365	7.664	.6015	1.663	.712	iml o
1.184	4.681	1.425	7.898	.5875	1.702	.696	iml o
1.198	5.237	1.696	10.641	.5644	1.772	.676	iml o
1.198	5.241	1.696	10.649	.5646	1.771	.676	iml o
1.198	5.245	1.696	10.657	.5648	1.771	.677	iml o
1.184	5.305	1.701	10.684	.5738	1.743	.679	iml o
1.184	5.370	1.717	10.917	.5745	1.741	.680	iml o
1.184	5.365	1.734	11.015	.5716	1.749	.677	iml o
1.184	5.327	1.746	11.012	.5678	1.761	.672	iml o
1.180	5.311	1.787	11.199	.5623	1.778	.664	iml o
1.184	5.349	1.798	11.387	.5607	1.784	.664	iml o
1.184	5.330	1.811	11.429	.5576	1.793	.660	iml o
1.184	5.626	1.893	12.610	.5604	1.784	.664	iml o
1.198	6.118	2.246	16.462	.5283	1.893	.633	iml o
1.198	6.089	2.249	16.406	.5264	1.900	.631	iml o
1.184	6.343	2.358	17.709	.5306	1.885	.628	iml o
1.184	6.281	2.393	17.796	.5228	1.913	.619	iml o
1.184	6.380	2.400	18.129	.5269	1.898	.624	iml o
1.184	6.628	2.410	18.913	.5375	1.860	.636	iml o
1.184	6.433	2.520	19.194	.5137	1.947	.608	iml o
1.180	6.509	2.552	19.601	.5152	1.941	.608	iml o
1.184	6.603	2.576	20.139	.5151	1.941	.610	iml o
1.180	6.641	2.610	20.453	.5144	1.944	.607	iml o
1.180	6.881	2.753	22.353	.5084	1.967	.600	iml o
1.184	6.880	2.761	22.491	.5057	1.978	.599	iml o
1.184	7.166	2.843	24.122	.5095	1.963	.603	iml o
1.180	7.201	3.023	25.687	.4917	2.034	.580	iml o
1.184	7.214	3.178	27.144	.4725	2.116	.559	iml o
1.184	7.343	3.190	27.734	.4777	2.093	.566	iml o
1.180	7.471	3.361	29.630	.4662	2.145	.550	iml o
1.184	7.612	3.559	32.076	.4497	2.224	.532	iml o
1.184	7.652	3.577	32.408	.4498	2.223	.533	iml o
1.180	7.697	3.590	32.606	.4522	2.211	.534	iml o
1.184	7.624	3.608	32.569	.4449	2.248	.527	iml o
1.184	7.954	3.784	35.636	.4428	2.258	.524	iml o
1.184	8.388	3.891	38.643	.4528	2.208	.536	iml o
1.184	8.244	3.950	38.556	.4399	2.273	.521	iml o
1.184	8.063	3.954	37.747	.4304	2.323	.510	iml o
1.180	8.286	3.968	38.797	.4416	2.264	.521	iml o
1.181	8.257	4.117	40.147	.4245	2.355	.501	iml o

(Continued)

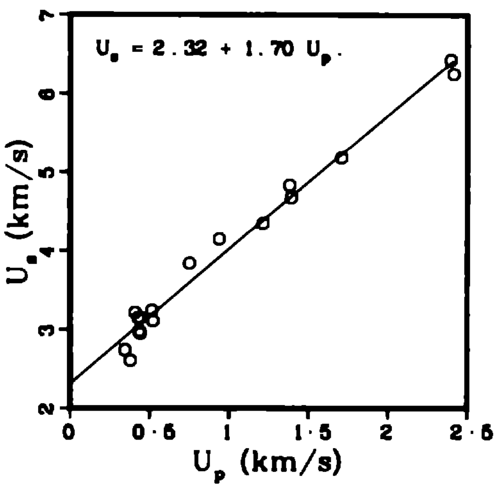
EPOXY , Epon 828
(Continued)

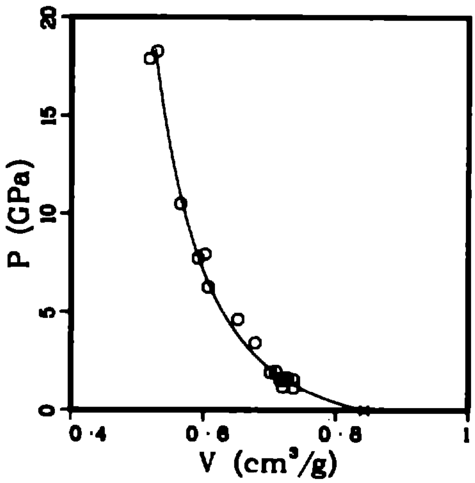
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.181	8.483	4.144	41.516	.4331	2.309	.511	iml o
1.184	8.732	4.149	42.895	.4433	2.256	.525	iml o
1.180	8.627	4.220	42.959	.4329	2.310	.511	iml o
1.180	8.592	4.254	43.129	.4279	2.337	.505	iml o
1.184	8.896	4.495	47.345	.4178	2.393	.495	iml o
1.180	9.159	4.556	49.240	.4259	2.348	.503	iml o
1.184	8.821	4.652	48.586	.3992	2.505	.473	iml o
1.184	9.158	4.678	50.724	.4132	2.420	.489	iml o
1.180	9.201	4.703	51.061	.4143	2.414	.489	iml o
1.180	9.369	4.823	53.320	.4112	2.432	.485	iml o
1.198	9.252	4.856	53.823	.3966	2.521	.475	iml o
1.198	9.230	4.859	53.729	.3953	2.530	.474	iml o
1.184	9.739	5.098	58.785	.4025	2.485	.477	iml o
1.184	9.756	5.128	59.234	.4007	2.496	.474	iml o
1.180	9.989	5.131	60.479	.4121	2.426	.486	iml o
1.180	9.757	5.189	59.742	.3968	2.520	.468	iml o

ESTANE

Average ρ_0 = 1.186 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.186	2.742	.346	1.125	.7368	1.357	.874	iml o
1.186	2.609	.380	1.176	.7204	1.388	.854	iml o
1.186	3.221	.410	1.566	.7358	1.359	.873	iml o
1.186	3.147	.432	1.612	.7274	1.375	.863	iml o
1.186	2.979	.436	1.540	.7198	1.389	.854	iml o
1.186	3.151	.438	1.637	.7260	1.377	.861	iml o
1.186	2.952	.443	1.551	.7166	1.395	.850	iml o
1.186	3.250	.515	1.985	.7096	1.409	.842	iml o
1.186	3.110	.522	1.925	.7016	1.425	.832	iml o
1.186	3.841	.752	3.426	.6781	1.475	.804	iml o
1.186	4.146	.939	4.617	.6522	1.533	.774	iml o
1.186	4.348	1.215	6.265	.6076	1.646	.721	iml o
1.186	4.833	1.381	7.916	.6022	1.660	.714	iml o
1.186	4.673	1.392	7.715	.5920	1.689	.702	iml o
1.186	5.182	1.708	10.497	.5653	1.769	.670	iml o
1.186	6.438	2.395	18.287	.5295	1.889	.628	iml o
1.186	6.256	2.413	17.904	.5180	1.931	.614	iml o



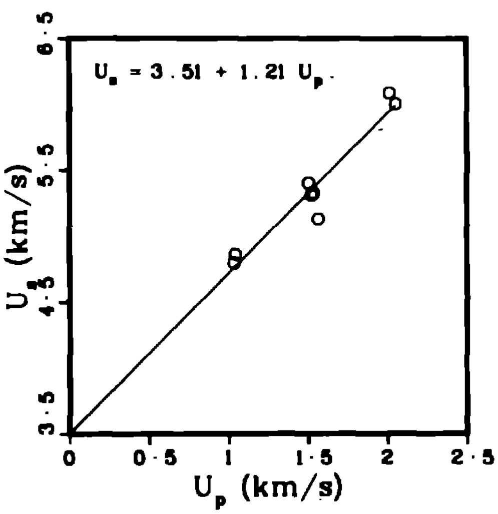


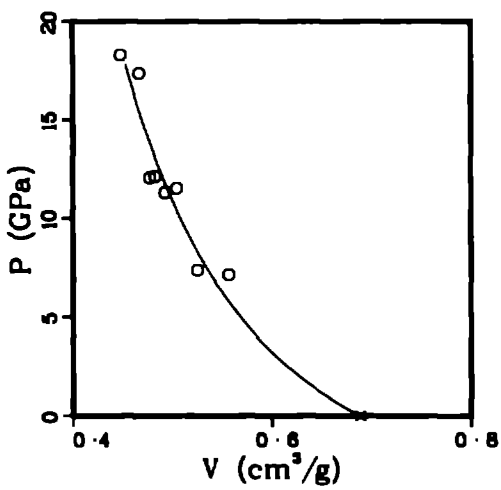
MELMAC

Average ρ_0 = 1.453 g/cm^3.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.494	4.797	1.034	7.410	.5251	1.905	.784	iml o
1.411	4.862	1.044	7.162	.5565	1.797	.785	iml o
1.494	5.404	1.505	12.151	.4829	2.071	.722	iml o
1.494	5.313	1.523	12.089	.4775	2.094	.713	iml o
1.411	5.328	1.536	11.547	.5044	1.983	.712	iml o
1.411	5.133	1.564	11.328	.4928	2.029	.695	iml o
1.494	6.087	2.012	18.297	.4481	2.232	.669	iml o
1.411	6.004	2.051	17.375	.4666	2.143	.658	iml o





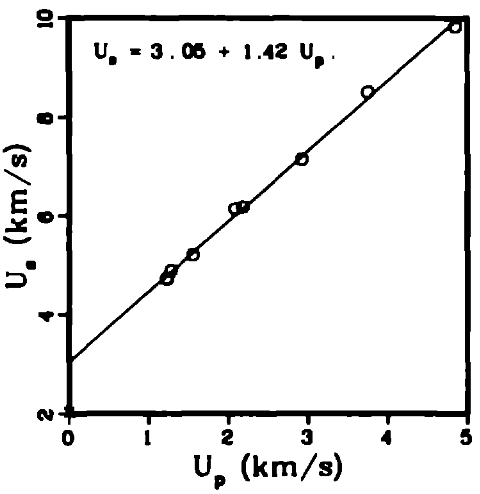
MICARTA

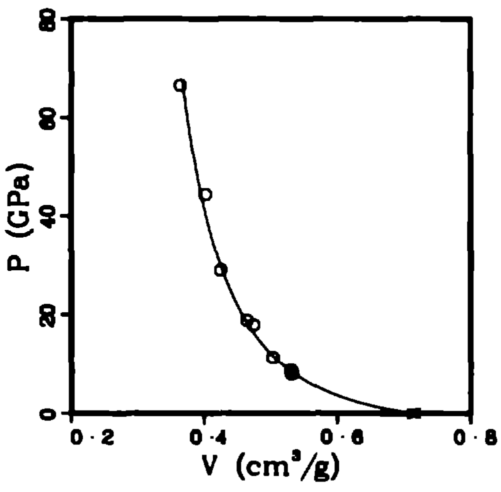
Average ρ_0 = 1.395 g/cm^3.

Sound velocities longitudinal 2.67 km/s.
shear 1.50 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.404	2.032	0.000	0.000	.7123	1.404	1.000	ssp	×
1.394	4.732	1.225	8.081	.5317	1.881	.741	iml	o
1.394	4.721	1.226	8.068	.5311	1.883	.740	iml	o
1.394	4.897	1.276	8.711	.5304	1.885	.739	iml	o
1.394	5.204	1.550	11.244	.5037	1.985	.702	iml	o
1.394	6.147	2.083	17.849	.4743	2.108	.661	iml	o
1.394	6.184	2.183	18.819	.4641	2.155	.647	iml	o
1.394	7.146	2.919	29.078	.4243	2.357	.592	iml	o
1.394	8.514	3.746	44.459	.4017	2.489	.560	iml	o
1.394	9.840	4.850	66.527	.3638	2.749	.507	iml	o



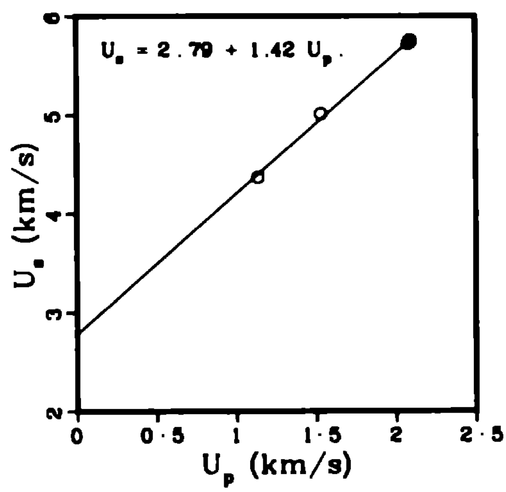


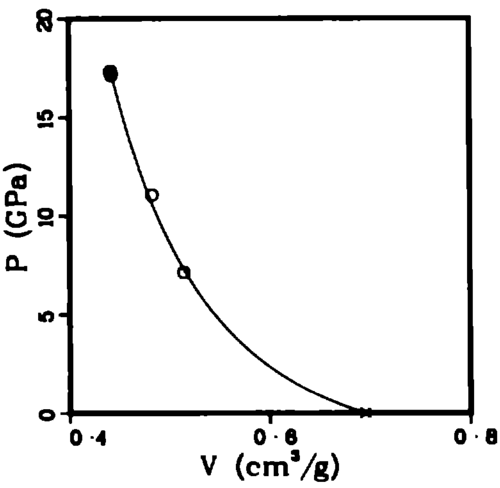
NEOPRENE

Average ρ_0 = 1.439 g/cm^3.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.439	4.366	1.136	7.137	.5141	1.945	.740	iml o
1.438	5.013	1.532	11.044	.4829	2.071	.694	iml o
1.439	5.725	2.079	17.127	.4426	2.260	.637	iml o
1.440	5.758	2.091	17.338	.4423	2.261	.637	iml o
1.439	5.744	2.097	17.333	.4412	2.266	.635	iml o





PARAFFIN

Average ρ_0 = 0.917 g/cm^3.

Sound velocities longitudinal 2.18 km/s. shear .83 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.919	1.958	0.000	0.000	1.0881	.919	1.000	ssp ×
.919	4.471	1.058	4.347	.8306	1.204	.763	iml o
.904	5.004	1.324	5.989	.8135	1.229	.735	iml o
.918	5.149	1.393	6.584	.7946	1.258	.729	iml o
.918	4.970	1.408	6.424	.7807	1.281	.717	iml o
.919	5.411	1.460	7.260	.7945	1.259	.730	iml o
.919	5.883	1.810	9.786	.7534	1.327	.692	iml o
.918	5.752	1.810	9.557	.7465	1.340	.685	iml o
.904	6.489	2.428	14.243	.6923	1.444	.626	iml o
.918	6.748	2.471	15.307	.6904	1.448	.634	iml o
.919	6.669	2.508	15.371	.6789	1.473	.624	iml o
.919	7.048	2.527	16.368	.6980	1.433	.641	iml o
.918	7.254	2.902	19.325	.6535	1.530	.600	iml o
.918	7.813	3.180	22.808	.6460	1.548	.593	iml o
.918	8.135	3.314	24.749	.6456	1.549	.593	iml o
.919	8.547	3.684	28.937	.6191	1.615	.569	iml o
.918	8.582	3.704	29.181	.6192	1.615	.568	iml o
.919	9.018	3.856	31.957	.6229	1.605	.572	iml o
.916	8.847	3.947	31.986	.6047	1.654	.554	iml o

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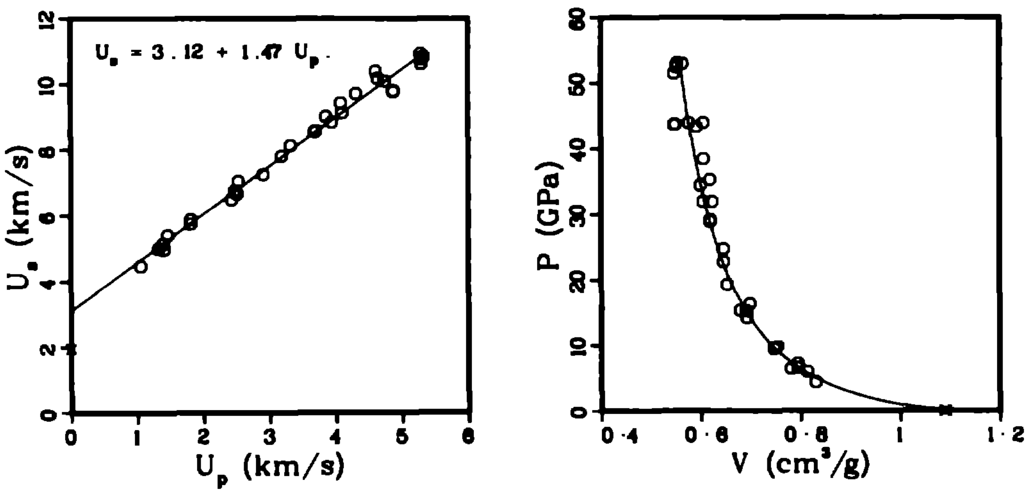


PARAFFIN
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.918	9.431	4.078	35.306	.6183	1.617	.568	iml	o
.919	9.131	4.104	34.438	.5991	1.669	.551	iml	o
.919	9.712	4.309	38.459	.6054	1.652	.556	iml	o
.919	10.394	4.605	43.987	.6060	1.650	.557	iml	o
.919	10.174	4.635	43.337	.5924	1.688	.544	iml	o
.919	10.092	4.742	43.980	.5768	1.734	.530	iml	o
.916	9.780	4.872	43.646	.5479	1.825	.502	iml	o
.916	9.805	4.873	43.766	.5491	1.821	.503	iml	o
.918	10.935	5.276	52.982	.5637	1.774	.518	iml	o
.916	10.612	5.295	51.471	.5470	1.828	.501	iml	o
.919	10.756	5.304	52.429	.5516	1.813	.507	iml	o
.919	10.832	5.329	53.048	.5528	1.809	.508	iml	o

PHENOLIC, Durite HR 300

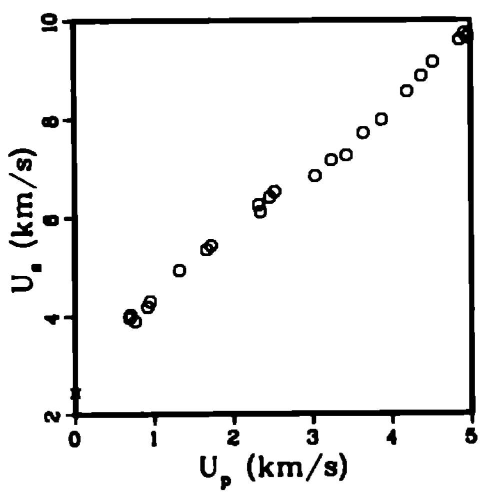
Average ρ_0 = 1.385 g/cm^3.

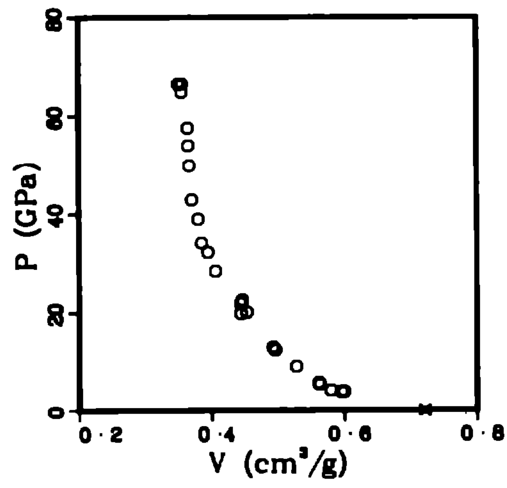
Sound velocities longitudinal 3.06 km/s.
shear 1.59 km/s.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.388	2.448	0.000	0.000	.7205	1.388	1.000	ssp ×
1.388	3.973	.689	3.800	.5955	1.679	.827	iml o
1.379	4.032	.699	3.887	.5994	1.668	.827	iml o
1.388	3.895	.760	4.109	.5799	1.724	.805	iml o
1.389	4.188	.916	5.328	.5625	1.778	.781	iml o
1.388	4.299	.950	5.669	.5613	1.782	.779	iml o
1.388	4.923	1.319	9.013	.5274	1.896	.732	iml o
1.388	5.339	1.664	12.331	.4959	2.016	.688	iml o
1.388	5.424	1.719	12.942	.4921	2.032	.683	iml o
1.388	6.252	2.321	20.141	.4530	2.208	.629	iml o
1.388	6.109	2.344	19.875	.4440	2.252	.616	iml o
1.388	6.406	2.460	21.873	.4438	2.253	.616	iml o
1.374	6.518	2.522	22.586	.4462	2.241	.613	iml o
1.369	6.835	3.035	28.399	.4061	2.462	.556	iml o
1.387	7.160	3.241	32.186	.3946	2.534	.547	iml o
1.370	7.261	3.430	34.120	.3851	2.597	.528	iml o
1.388	7.713	3.644	39.011	.3801	2.631	.528	iml o
1.388	7.979	3.876	42.926	.3705	2.699	.514	iml o
1.388	8.555	4.199	49.860	.3668	2.726	.509	iml o

(Continued)





PHENOLIC , Durite HR 300
(Continued)

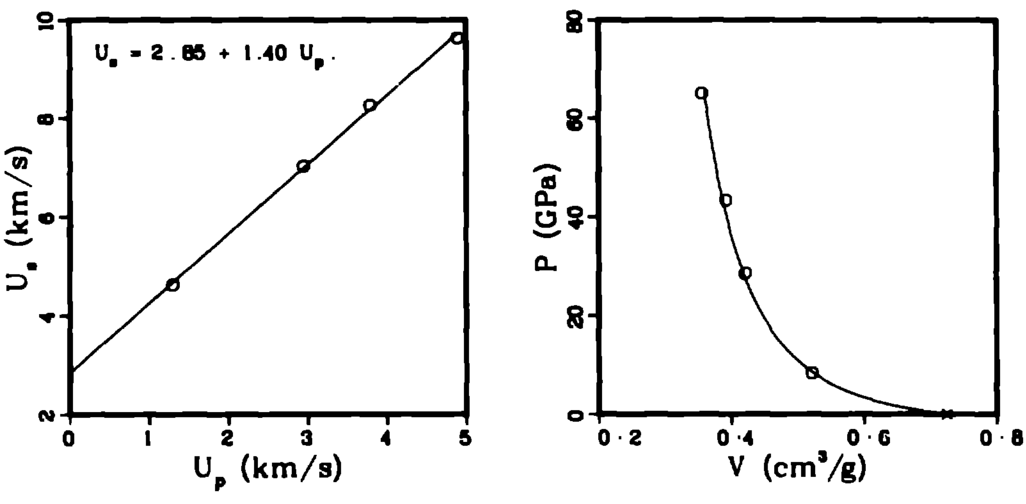
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.388	8.880	4.378	53.961	.3653	2.738	.507	iml o
1.388	9.162	4.523	57.518	.3648	2.741	.506	iml o
1.388	9.607	4.862	64.832	.3558	2.810	.494	iml o
1.388	9.740	4.922	66.541	.3564	2.806	.495	iml o
1.388	9.666	4.960	66.545	.3508	2.851	.487	iml o

PHENOLIC , furfural-filled

Average ρ_0 = 1.380 g/cm^3 .

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.379	4.619	1.299	8.274	.5212	1.919	.719	iml o
1.378	7.019	2.944	28.475	.4213	2.374	.581	iml o
1.382	8.268	3.787	43.272	.3922	2.550	.542	iml o
1.382	9.629	4.892	65.099	.3560	2.809	.492	iml o

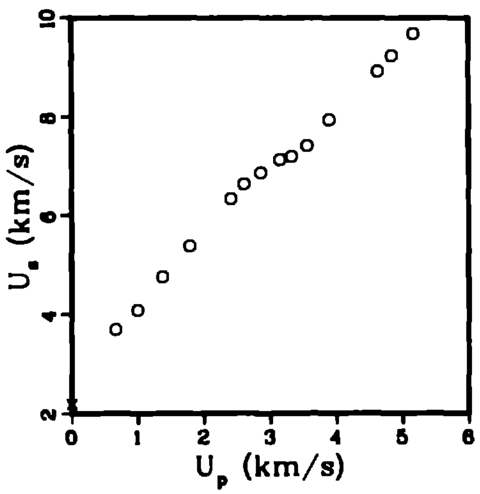


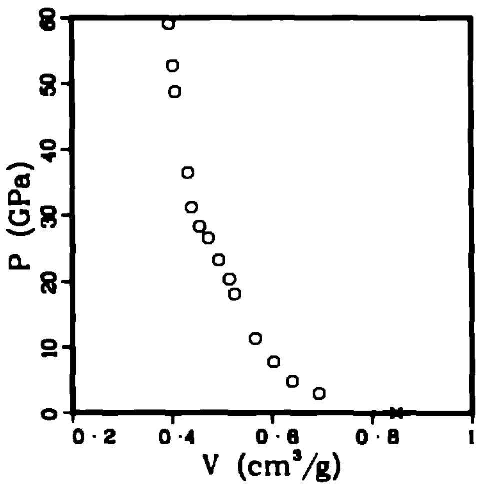
PHENOXY . PRDA 8060

Average ρ_0 = 1.181 g/cm^3.

Sound velocities longitudinal 2.51 km/s.
shear 1.07 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.178	2.185	0.000	0.000	.8489	1.178	1.000	ssp	×
1.181	3.699	.666	2.909	.6943	1.440	.820	iml	o
1.181	4.088	.993	4.794	.6411	1.560	.757	iml	o
1.181	4.769	1.374	7.739	.6028	1.659	.712	iml	o
1.181	5.385	1.781	11.327	.5667	1.765	.669	iml	o
1.181	6.344	2.413	18.079	.5247	1.906	.620	iml	o
1.181	6.642	2.603	20.418	.5149	1.942	.608	iml	o
1.181	6.870	2.861	23.213	.4941	2.024	.584	iml	o
1.181	7.133	3.151	26.544	.4727	2.116	.558	iml	o
1.181	7.199	3.328	28.295	.4553	2.196	.538	iml	o
1.181	7.415	3.563	31.202	.4399	2.273	.519	iml	o
1.181	7.946	3.893	36.533	.4319	2.315	.510	iml	o
1.181	8.920	4.631	48.785	.4071	2.456	.481	iml	o
1.181	9.236	4.836	52.750	.4034	2.479	.476	iml	o
1.181	9.684	5.169	59.117	.3948	2.533	.466	iml	o





POLYAMIDE, Nylon

Average ρ_0 = 1.146 g/cm^3.

Sound velocities longitudinal 2.53 km/s.
shear 1.08 km/s.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.140	2.201	0.000	0.000	.8772	1.140	1.000	ssp ×
1.140	3.938	.763	3.425	.7072	1.414	.806	iml o
1.139	4.334	1.018	5.025	.6717	1.489	.765	iml o
1.140	4.944	1.348	7.598	.6380	1.567	.727	iml o
1.150	5.124	1.374	8.096	.6364	1.571	.732	iml o
1.150	5.689	1.727	11.299	.6056	1.651	.696	iml o
1.150	5.642	1.738	11.277	.6017	1.662	.692	iml o
1.140	5.540	1.749	11.046	.6003	1.666	.684	iml o
1.140	5.678	1.799	11.645	.5993	1.669	.683	iml o
1.150	6.691	2.366	18.206	.5621	1.779	.646	iml o
1.150	6.805	2.385	18.664	.5648	1.771	.650	iml o
1.150	6.870	2.555	20.186	.5462	1.831	.628	iml o
1.150	7.022	2.565	20.713	.5519	1.812	.635	iml o
1.150	7.147	2.694	22.142	.5418	1.846	.623	iml o
1.150	7.140	2.778	22.810	.5312	1.882	.611	iml o
1.140	7.134	2.808	22.837	.5319	1.880	.606	iml o
1.140	7.331	2.926	24.454	.5271	1.897	.601	iml o
1.150	7.548	2.976	25.832	.5267	1.899	.606	iml o
1.150	7.545	3.083	26.750	.5142	1.945	.591	iml o

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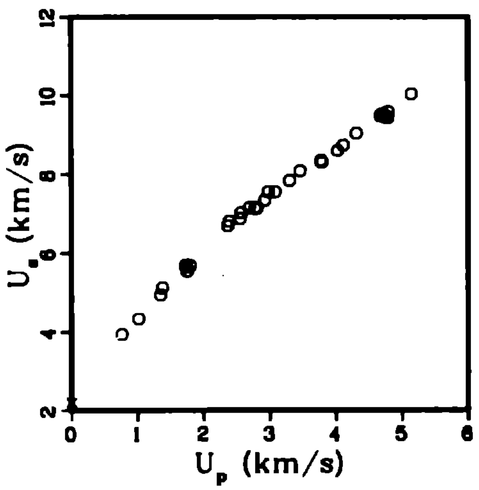
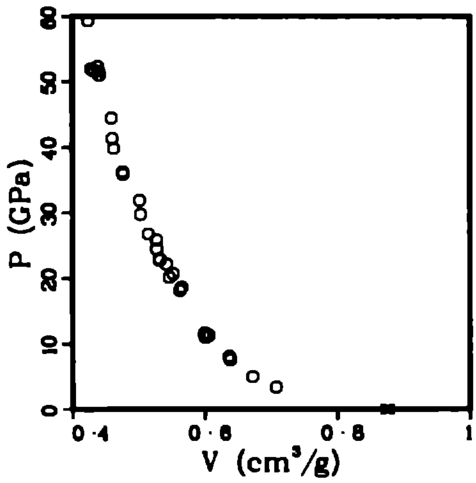




POLYAMIDE, Nylon
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.150	7.831	3.302	29.737	.5029	1.988	.578	iml o
1.140	8.078	3.462	31.881	.5013	1.995	.571	iml o
1.150	8.341	3.777	36.230	.4758	2.102	.547	iml o
1.140	8.297	3.789	35.839	.4766	2.098	.543	iml o
1.150	8.599	4.027	39.822	.4623	2.163	.532	iml o
1.150	8.739	4.114	41.345	.4602	2.173	.529	iml o
1.140	9.041	4.312	44.443	.4588	2.179	.523	iml o
1.150	9.481	4.675	50.972	.4408	2.269	.507	iml o
1.150	9.528	4.709	51.597	.4398	2.274	.506	iml o
1.150	9.453	4.755	51.691	.4322	2.314	.497	iml o
1.150	9.436	4.790	51.978	.4281	2.336	.492	iml o
1.140	9.580	4.794	52.356	.4382	2.282	.500	iml o
1.150	10.032	5.144	59.345	.4237	2.360	.487	iml o

POLYCARBONATE, Lexan and Merlon

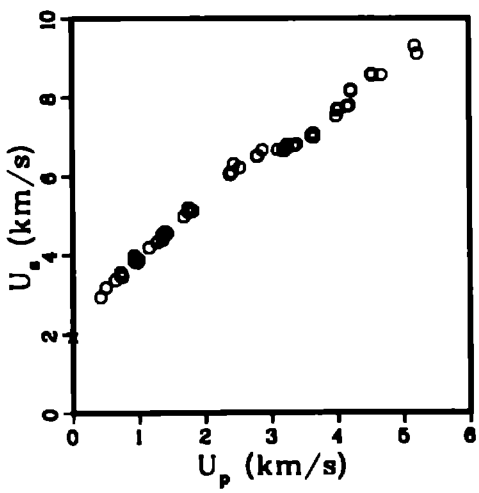
Average ρ_0 = 1.193 g/cm³.

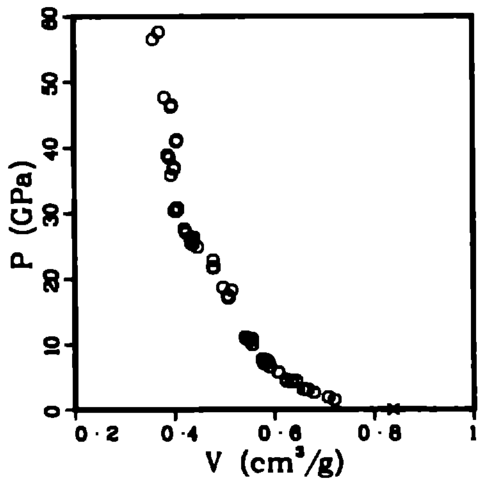
Sound velocities longitudinal 2.18 km/s.
shear .88 km/s.

Reference 51

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp	
1.194	1.929	0.000	0.000	.8375	1.194	1.000	ssp	×
1.191	2.949	.421	1.479	.7198	1.389	.857	iml	o
1.191	3.189	.501	1.903	.7077	1.413	.843	iml	o
1.191	3.380	.647	2.605	.6789	1.473	.809	iml	o
1.196	3.566	.724	3.088	.6664	1.501	.797	iml	o
1.191	3.506	.727	3.036	.6655	1.503	.793	iml	o
1.191	3.465	.751	3.099	.6577	1.521	.783	iml	o
1.191	3.987	.931	4.421	.6436	1.554	.766	iml	o
1.196	3.891	.938	4.365	.6346	1.576	.759	iml	o
1.191	3.861	.940	4.323	.6352	1.574	.757	iml	o
1.191	3.815	.976	4.435	.6248	1.600	.744	iml	o
1.191	3.880	.999	4.616	.6234	1.604	.743	iml	o
1.191	4.191	1.159	5.785	.6074	1.646	.723	iml	o
1.191	4.321	1.279	6.582	.5911	1.692	.704	iml	o
1.196	4.517	1.357	7.331	.5849	1.710	.700	iml	o
1.191	4.522	1.358	7.314	.5875	1.702	.700	iml	o
1.191	4.378	1.359	7.086	.5790	1.727	.690	iml	o
1.191	4.529	1.378	7.433	.5842	1.712	.696	iml	o
1.196	4.599	1.397	7.684	.5821	1.718	.696	iml	o

(Continued)





POLYCARBONATE. Lexan and Merlon
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.191	4.541	1.429	7.729	.5754	1.738	.685	iml o
1.191	4.979	1.684	9.986	.5557	1.800	.662	iml o
1.196	5.194	1.749	10.865	.5546	1.803	.663	iml o
1.196	5.115	1.750	10.706	.5501	1.818	.658	iml o
1.191	5.113	1.752	10.669	.5519	1.812	.657	iml o
1.191	5.133	1.760	10.760	.5517	1.812	.657	iml o
1.196	5.112	1.781	10.889	.5448	1.835	.652	iml o
1.191	5.123	1.819	11.099	.5415	1.847	.645	iml o
1.196	6.069	2.379	17.268	.5084	1.967	.608	iml o
1.191	6.040	2.384	17.150	.5082	1.968	.605	iml o
1.191	6.092	2.408	17.471	.5077	1.969	.605	iml o
1.191	6.305	2.437	18.300	.5151	1.941	.613	iml o
1.191	6.215	2.530	18.727	.4978	2.009	.593	iml o
1.196	6.515	2.793	21.763	.4777	2.093	.571	iml o
1.191	6.512	2.796	21.685	.4791	2.087	.571	iml o
1.191	6.666	2.871	22.793	.4780	2.092	.569	iml o
1.196	6.671	3.105	24.773	.4470	2.237	.535	iml o
1.191	6.652	3.186	25.241	.4375	2.286	.521	iml o
1.191	6.649	3.213	25.444	.4339	2.305	.517	iml o
1.191	6.811	3.247	26.339	.4394	2.276	.523	iml o
1.196	6.750	3.251	26.245	.4334	2.307	.518	iml o
1.196	6.766	3.337	27.003	.4237	2.360	.507	iml o
1.196	6.815	3.387	27.607	.4206	2.378	.503	iml o
1.196	7.023	3.615	30.364	.4057	2.465	.485	iml o
1.196	7.072	3.640	30.788	.4058	2.464	.485	iml o
1.191	7.082	3.643	30.727	.4077	2.453	.486	iml o
1.191	6.989	3.651	30.391	.4010	2.494	.478	iml o
1.191	7.527	3.992	35.787	.3943	2.536	.470	iml o
1.196	7.705	4.009	36.944	.4011	2.493	.480	iml o
1.191	7.673	4.018	36.719	.4000	2.500	.476	iml o
1.192	7.769	4.150	38.432	.3908	2.559	.466	iml o
1.192	7.788	4.192	38.916	.3874	2.582	.462	iml o
1.196	8.187	4.209	41.213	.4063	2.461	.486	iml o
1.191	8.152	4.218	40.953	.4052	2.468	.483	iml o
1.196	8.592	4.524	46.489	.3959	2.526	.473	iml o
1.191	8.550	4.535	46.180	.3943	2.536	.470	iml o
1.191	8.562	4.671	47.632	.3816	2.621	.454	iml o
1.196	9.305	5.179	57.636	.3708	2.697	.443	iml o
1.191	9.108	5.214	56.560	.3590	2.786	.428	iml o

POLYCHLOROTRIFLUOROETHYLENE, Kel F

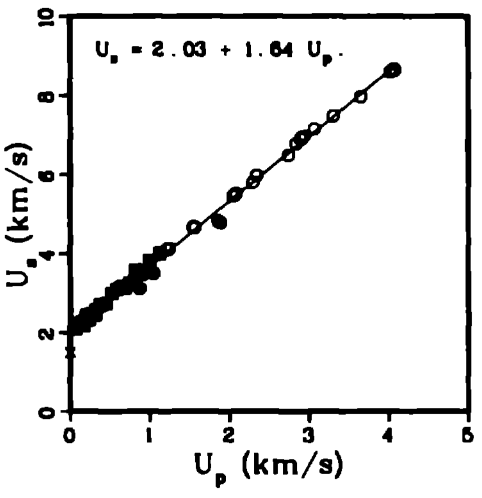
Average ρ_0 = 2.122 g/cm^3.

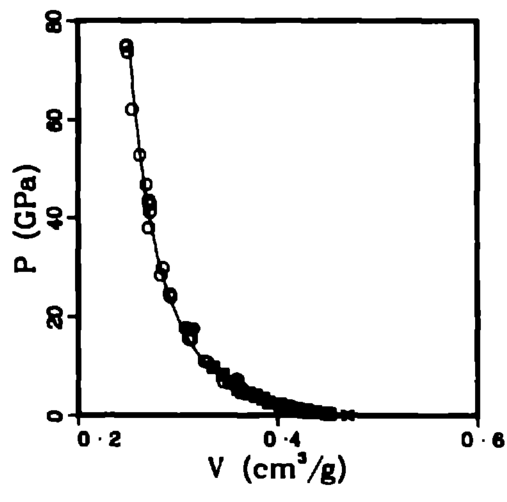
Sound velocities longitudinal 1.74 km/s.
shear .77 km/s.

References 51, 52

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.133	1.496	0.000	0.000	.4688	2.133	1.000	ssp ×
2.140	2.087	.068	.304	.4521	2.212	.967	sp2 ■
2.140	2.206	.089	.420	.4484	2.230	.960	sp2 ■
2.140	2.260	.143	.692	.4377	2.285	.937	sp2 ■
2.140	2.170	.173	.803	.4300	2.325	.920	sp2 ■
2.140	2.348	.193	.970	.4289	2.332	.918	sp2 ■
2.140	2.430	.205	1.066	.4279	2.337	.916	sp2 ■
2.140	2.310	.233	1.152	.4202	2.380	.899	sp2 ■
2.140	2.462	.253	1.333	.4193	2.385	.897	sp2 ■
2.140	2.448	.294	1.540	.4112	2.432	.880	sp2 ■
2.140	2.460	.312	1.642	.4080	2.451	.873	sp2 ■
2.140	2.560	.321	1.759	.4087	2.447	.875	sp2 ■
2.140	2.690	.375	2.159	.4021	2.487	.861	sp2 ■
2.140	2.729	.446	2.605	.3909	2.558	.837	sp2 ■
2.140	2.990	.524	3.353	.3854	2.595	.825	sp2 ■
2.140	3.100	.591	3.921	.3782	2.644	.809	sp2 ■
2.131	3.132	.604	4.031	.3788	2.640	.807	iml o
2.140	3.170	.653	4.430	.3710	2.695	.794	sp2 ■
2.131	3.152	.690	4.635	.3665	2.728	.781	iml o

(Continued)





POLYCHLOROTRIFLUOROETHYLENE , Kel F
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.140	3.130	.690	4.622	.3643	2.745	.780	sp2 ■
2.140	3.260	.747	5.211	.3602	2.776	.771	sp2 ■
2.140	3.560	.822	6.262	.3594	2.782	.769	sp2 ■
2.140	3.580	.830	6.359	.3590	2.786	.768	sp2 ■
2.133	3.485	.869	6.460	.3519	2.842	.751	iml o
1.975	3.108	.875	5.371	.3638	2.749	.718	sf1 ●
2.133	3.465	.905	6.689	.3464	2.887	.739	iml o
2.140	3.816	1.000	8.166	.3448	2.900	.738	sp2 ■
1.948	3.500	1.050	7.159	.3593	2.783	.700	sf1 ●
2.140	4.000	1.130	9.673	.3353	2.983	.717	sp2 ■
2.134	4.113	1.221	10.717	.3295	3.035	.703	iml o
2.132	4.113	1.247	10.935	.3268	3.060	.697	iml o
2.134	4.669	1.546	15.404	.3134	3.190	.669	iml o
2.134	4.658	1.565	15.556	.3112	3.214	.664	iml o
1.948	4.814	1.860	17.442	.3150	3.175	.614	sf1 ●
1.965	4.779	1.890	17.748	.3076	3.251	.605	sf1 ●
2.131	5.462	2.052	23.884	.2930	3.413	.624	iml o
2.133	5.517	2.088	24.571	.2914	3.432	.622	iml o
2.134	5.796	2.295	28.386	.2831	3.533	.604	iml o
2.132	5.974	2.343	29.842	.2851	3.508	.608	iml o
2.132	6.483	2.745	37.941	.2704	3.698	.577	iml o
2.134	6.779	2.842	41.113	.2721	3.674	.581	iml o
2.133	6.913	2.900	42.762	.2722	3.674	.581	iml o
2.132	6.907	2.912	42.881	.2713	3.686	.578	iml o
2.134	6.959	2.934	43.571	.2710	3.690	.578	iml o
2.133	7.156	3.065	46.783	.2680	3.731	.572	iml o
2.134	7.484	3.304	52.768	.2617	3.821	.559	iml o
2.132	7.971	3.653	62.080	.2541	3.936	.542	iml o
2.132	8.590	4.017	73.567	.2497	4.005	.532	iml o
2.132	8.658	4.064	75.017	.2489	4.018	.531	iml o
2.132	8.631	4.068	74.856	.2480	4.033	.529	iml o

POLYESTER, Clear Cast, Selectron

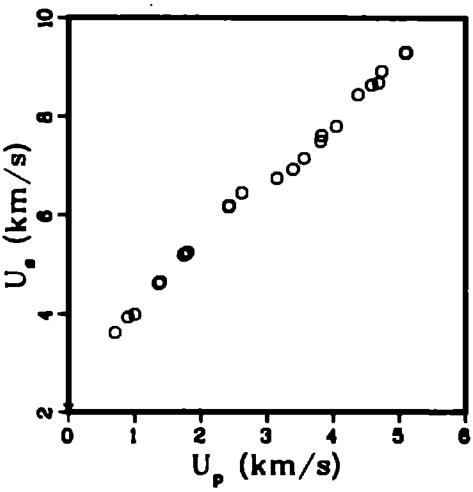
Average ρ_0 = 1.210 g/cm^3.

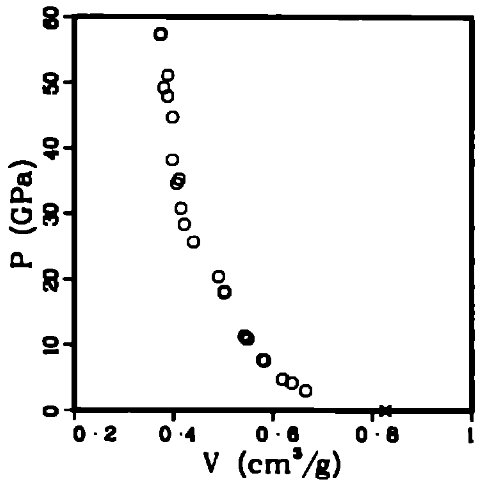
Sound velocities longitudinal 2.53 km/s.
shear 1.26 km/s.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.210	2.070	0.000	0.000	.8264	1.210	1.000	ssp ×
1.210	3.610	.701	3.062	.6660	1.502	.806	iml o
1.210	3.928	.895	4.254	.6381	1.567	.772	iml o
1.210	3.984	.999	4.816	.6192	1.615	.749	iml o
1.210	4.611	1.359	7.582	.5829	1.716	.705	iml o
1.210	4.638	1.386	7.778	.5795	1.726	.701	iml o
1.210	5.182	1.737	10.891	.5494	1.820	.665	iml o
1.210	5.200	1.768	11.124	.5455	1.833	.660	iml o
1.210	5.234	1.798	11.387	.5425	1.843	.656	iml o
1.210	6.159	2.417	18.012	.5021	1.992	.608	iml o
1.210	6.186	2.425	18.151	.5025	1.990	.608	iml o
1.210	6.443	2.617	20.402	.4908	2.038	.594	iml o
1.210	6.735	3.147	25.646	.4403	2.271	.533	iml o
1.210	6.920	3.391	28.394	.4215	2.373	.510	iml o
1.210	7.148	3.559	30.782	.4150	2.410	.502	iml o
1.210	7.497	3.810	34.562	.4064	2.460	.492	iml o
1.210	7.612	3.823	35.212	.4114	2.431	.498	iml o
1.210	7.800	4.046	38.186	.3978	2.514	.481	iml o
1.210	8.439	4.376	44.684	.3979	2.513	.481	iml o

(Continued)





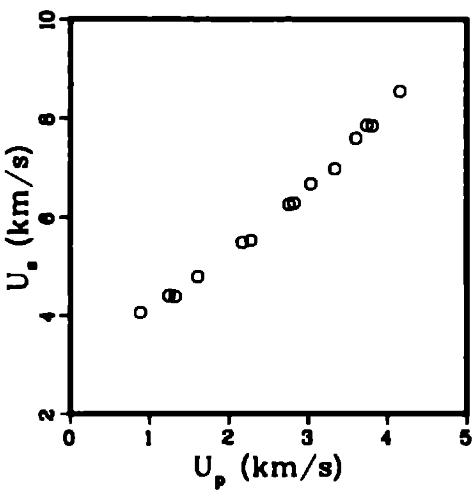
POLYESTER, Clear Cast, Selectron
(Continued)

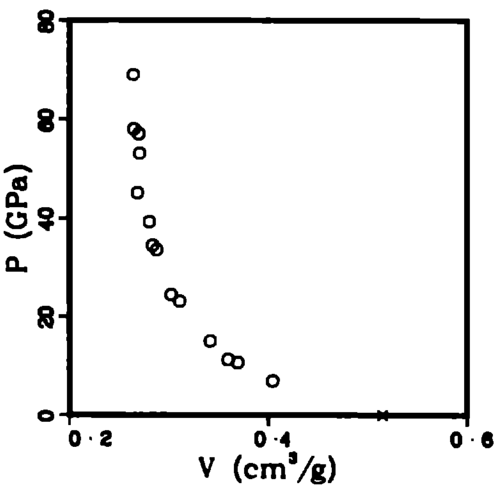
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.210	8.636	4.580	47.859	.3882	2.576	.470	iml o
1.210	8.678	4.685	49.194	.3803	2.630	.460	iml o
1.210	8.925	4.732	51.102	.3883	2.576	.470	iml o
1.210	9.296	5.095	57.309	.3735	2.677	.452	iml o
1.210	9.311	5.099	57.447	.3739	2.675	.452	iml o

POLYESTER, fiber-glass reinforced. Doron

Average ρ_0 = 1.942 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.934	4.058	.885	6.946	.4043	2.473	.782	iml o
1.943	4.402	1.243	10.631	.3693	2.708	.718	iml o
1.943	4.385	1.322	11.264	.3595	2.782	.699	iml o
1.943	4.786	1.609	14.962	.3416	2.927	.664	iml o
1.943	5.484	2.170	23.122	.3110	3.215	.604	iml o
1.943	5.526	2.279	24.470	.3024	3.307	.588	iml o
1.943	6.259	2.758	33.541	.2879	3.474	.559	iml o
1.943	6.283	2.821	34.438	.2836	3.526	.551	iml o
1.943	6.670	3.034	39.320	.2806	3.564	.545	iml o
1.943	6.971	3.334	45.158	.2685	3.724	.522	iml o
1.943	7.596	3.601	53.147	.2707	3.694	.526	iml o
1.943	7.858	3.738	57.072	.2698	3.706	.524	iml o
1.943	7.844	3.808	58.037	.2648	3.776	.515	iml o
1.943	8.541	4.157	68.986	.2642	3.785	.513	iml o





POLYETHYLENE

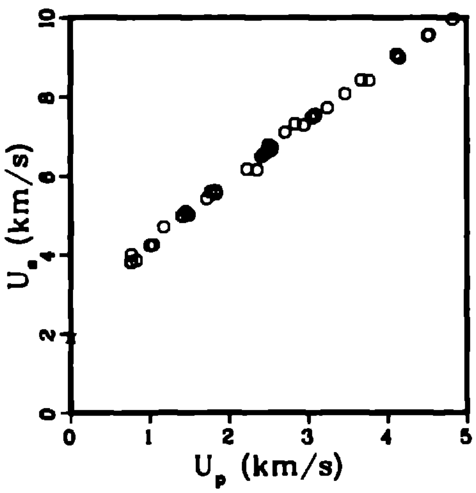
Average ρ_0 = 0.916 g/cm^3.

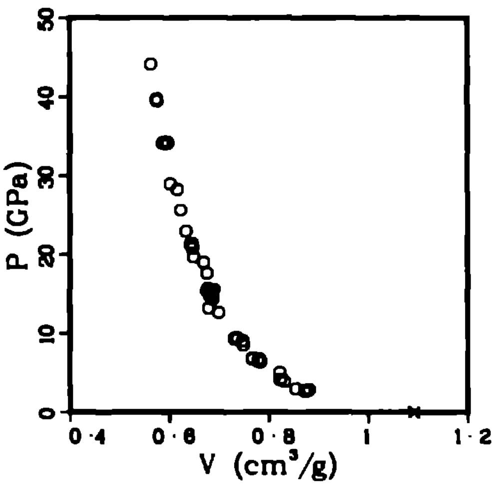
Sound velocities longitudinal 2.04 km/s.
shear .66 km/s.

References 13, 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.916	1.892	0.000	0.000	1.0917	.916	1.000	ssp	×
.916	3.817	.759	2.654	.8746	1.143	.801	iml	o
.918	4.001	.764	2.806	.8813	1.135	.809	iml	o
.916	3.813	.766	2.675	.8724	1.146	.799	iml	o
.918	3.853	.831	2.939	.8544	1.170	.784	iml	o
.918	4.229	1.001	3.886	.8315	1.203	.763	iml	o
.916	4.246	1.044	4.060	.8233	1.215	.754	iml	o
.913	4.699	1.170	5.020	.8226	1.216	.751	iml	o
.916	4.980	1.402	6.395	.7844	1.275	.718	iml	o
.918	4.986	1.419	6.495	.7793	1.283	.715	iml	o
.916	5.100	1.448	6.764	.7817	1.279	.716	iml	o
.916	5.014	1.485	6.820	.7684	1.301	.704	iml	o
.916	5.009	1.486	6.818	.7678	1.302	.703	iml	o
.913	5.430	1.718	8.517	.7488	1.336	.684	iml	o
.916	5.602	1.766	9.062	.7475	1.338	.685	iml	o
.916	5.627	1.830	9.432	.7367	1.357	.675	iml	o
.916	5.546	1.831	9.302	.7313	1.367	.670	iml	o
.916	5.568	1.834	9.354	.7321	1.366	.671	iml	o
.913	6.174	2.229	12.565	.6999	1.429	.639	iml	o

(Continued)





$Us = 2.7555 + 1.538 Up$

POLYETHYLENE
(Continued)

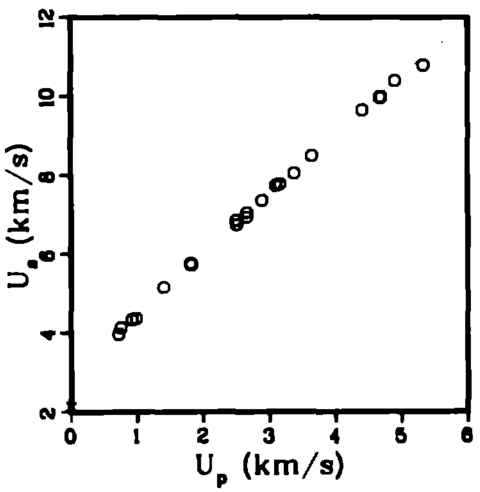
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.908	6.149	2.355	13.149	.6795	1.472	.617	iml	o
.913	6.492	2.410	14.285	.6887	1.452	.629	iml	o
.916	6.540	2.441	14.623	.6842	1.461	.627	iml	o
.916	6.579	2.465	14.855	.6827	1.465	.625	iml	o
.916	6.583	2.465	14.864	.6829	1.464	.626	iml	o
.916	6.777	2.493	15.476	.6901	1.449	.632	iml	o
.916	6.669	2.494	15.235	.6834	1.463	.626	iml	o
.916	6.639	2.496	15.179	.6813	1.468	.624	iml	o
.916	6.632	2.525	15.339	.6761	1.479	.619	iml	o
.918	6.713	2.541	15.659	.6770	1.477	.621	iml	o
.916	7.102	2.706	17.604	.6757	1.480	.619	iml	o
.916	7.321	2.833	18.998	.6692	1.494	.613	iml	o
.918	7.285	2.945	19.695	.6490	1.541	.596	iml	o
.916	7.473	3.042	20.823	.6473	1.545	.593	iml	o
.916	7.564	3.084	21.368	.6466	1.547	.592	iml	o
.916	7.512	3.089	21.255	.6428	1.556	.589	iml	o
.916	7.728	3.243	22.957	.6336	1.578	.580	iml	o
.916	8.077	3.468	25.658	.6230	1.605	.571	iml	o
.916	8.421	3.665	28.270	.6166	1.622	.565	iml	o
.916	8.406	3.766	28.998	.6026	1.659	.552	iml	o
.916	9.071	4.113	34.175	.5967	1.676	.547	iml	o
.916	9.045	4.116	34.102	.5949	1.681	.545	iml	o
.916	9.029	4.138	34.224	.5914	1.691	.542	iml	o
.916	8.978	4.153	34.154	.5867	1.704	.537	iml	o
.916	9.548	4.510	39.444	.5760	1.736	.528	iml	o
.916	9.574	4.528	39.710	.5754	1.738	.527	iml	o
.916	9.969	4.827	44.078	.5631	1.776	.516	iml	o

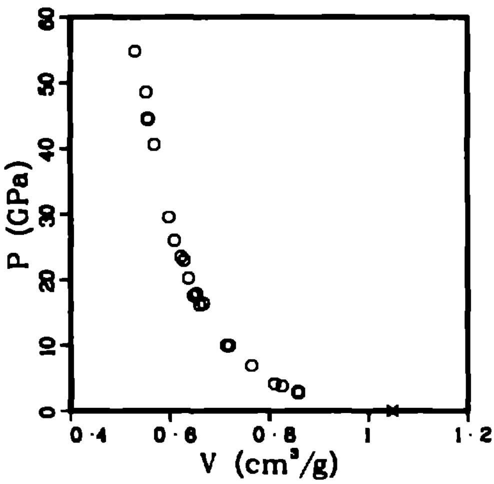
POLYETHYLENE, high-density, Marlex EMN 6065

Average ρ_0 = 0.954 g/cm^3.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.954	2.130	0.000	0.000	1.0482	.954	1.000	ssp ×
.954	3.968	.721	2.729	.8578	1.166	.818	iml o
.954	4.131	.754	2.971	.8569	1.167	.817	iml o
.954	4.332	.922	3.810	.8251	1.212	.787	iml o
.955	4.361	.987	4.111	.8101	1.234	.774	iml o
.954	5.157	1.398	6.878	.7641	1.309	.729	iml o
.954	5.764	1.807	9.936	.7196	1.390	.687	iml o
.954	5.734	1.827	9.994	.7142	1.400	.681	iml o
.954	6.862	2.494	16.327	.6672	1.499	.637	iml o
.954	6.753	2.504	16.132	.6595	1.516	.629	iml o
.954	6.939	2.653	17.562	.6475	1.545	.618	iml o
.954	7.061	2.658	17.905	.6536	1.530	.624	iml o
.954	7.371	2.888	20.308	.6375	1.569	.608	iml o
.954	7.751	3.100	22.923	.6290	1.590	.600	iml o
.954	7.788	3.160	23.478	.6229	1.605	.594	iml o
.954	8.056	3.379	25.969	.6086	1.643	.581	iml o
.954	8.493	3.648	29.557	.5980	1.672	.570	iml o
.954	9.657	4.409	40.619	.5696	1.755	.543	iml o
.954	9.978	4.675	44.501	.5571	1.795	.531	iml o
.954	9.980	4.693	44.682	.5553	1.801	.530	iml o
.954	10.390	4.905	48.619	.5534	1.807	.528	iml o
.954	10.786	5.328	54.824	.5304	1.885	.506	iml o





Appx #

C 1.4437

S 3.218

POLYETHYLENE, high-density, Marlex 50

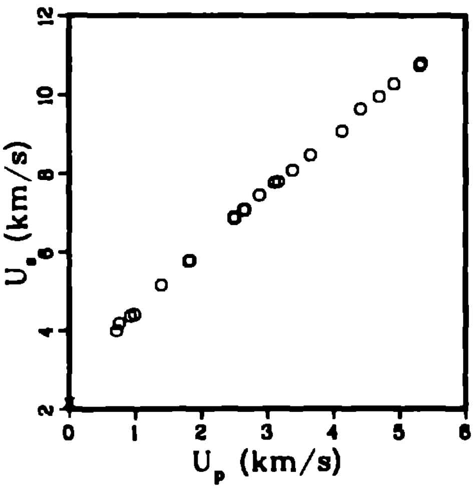
Average ρ_0 = 0.954 g/cm^3.

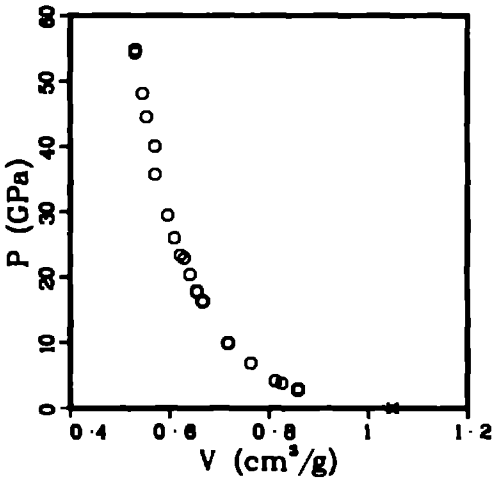
Sound velocities longitudinal 2.46 km/s.
shear 1.01 km/s.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.954	2.166	0.000	0.000	1.0482	.954	1.000	ssp	×
.954	3.985	.721	2.741	.8586	1.165	.819	iml	o
.954	4.174	.753	2.998	.8591	1.164	.820	iml	o
.954	4.355	.921	3.826	.8265	1.210	.789	iml	o
.954	4.399	.986	4.138	.8133	1.230	.776	iml	o
.954	5.147	1.398	6.865	.7635	1.310	.728	iml	o
.954	5.755	1.808	9.926	.7189	1.391	.686	iml	o
.954	5.779	1.824	10.056	.7174	1.394	.684	iml	o
.954	6.873	2.493	16.346	.6680	1.497	.637	iml	o
.954	6.835	2.497	16.282	.6653	1.503	.635	iml	o
.954	7.056	2.643	17.791	.6556	1.525	.625	iml	o
.954	7.076	2.657	17.936	.6546	1.528	.625	iml	o
.954	7.434	2.882	20.439	.6418	1.558	.612	iml	o
.954	7.760	3.099	22.942	.6296	1.588	.601	iml	o
.954	7.774	3.162	23.451	.6219	1.608	.593	iml	o
.954	8.079	3.377	26.028	.6101	1.639	.582	iml	o
.954	8.464	3.651	29.481	.5961	1.678	.569	iml	o
.954	9.072	4.136	35.796	.5703	1.753	.544	iml	o
.954	9.631	4.412	40.537	.5680	1.760	.542	iml	o

(Continued)





POLYETHYLENE, high-density, Marlex 50
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.954	9.946	4.697	44.567	.5532	1.808	.528	iml o
.954	10.265	4.921	48.190	.5457	1.832	.521	iml o
.954	10.736	5.305	54.335	.5303	1.886	.506	iml o
.954	10.797	5.326	54.860	.5311	1.883	.507	iml o

POLYIMIDE

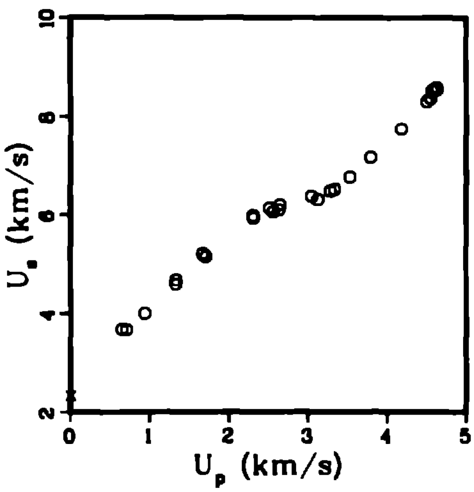
Average ρ_0 = 1.414 g/cm^3.

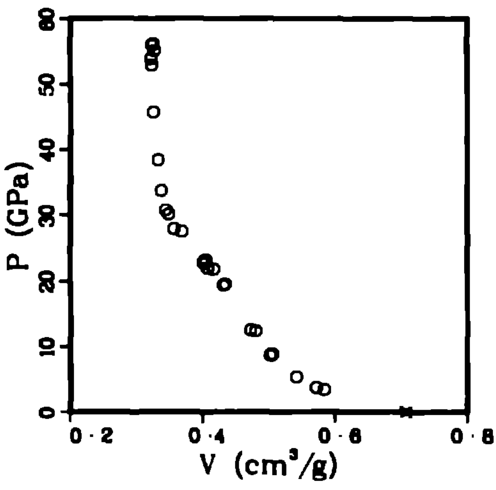
Sound velocities longitudinal 2.72 km/s.
shear 1.22 km/s.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.414	2.327	0.000	0.000	.7072	1.414	1.000	ssp	×
1.414	3.681	.645	3.357	.5833	1.714	.825	iml	o
1.414	3.670	.706	3.664	.5712	1.751	.808	iml	o
1.414	3.999	.936	5.293	.5417	1.846	.766	iml	o
1.414	4.594	1.330	8.640	.5025	1.990	.710	iml	o
1.414	4.685	1.334	8.837	.5058	1.977	.715	iml	o
1.414	5.210	1.675	12.340	.4798	2.084	.679	iml	o
1.414	5.153	1.714	12.489	.4720	2.119	.667	iml	o
1.414	5.980	2.307	19.507	.4344	2.302	.614	iml	o
1.414	5.931	2.312	19.389	.4315	2.317	.610	iml	o
1.414	6.135	2.516	21.826	.4172	2.397	.590	iml	o
1.414	6.060	2.563	21.962	.4081	2.450	.577	iml	o
1.414	6.096	2.635	22.713	.4015	2.491	.568	iml	o
1.414	6.200	2.648	23.214	.4052	2.468	.573	iml	o
1.414	6.374	3.052	27.507	.3686	2.713	.521	iml	o
1.414	6.311	3.129	27.922	.3566	2.804	.504	iml	o
1.414	6.486	3.286	30.137	.3489	2.866	.493	iml	o
1.414	6.514	3.341	30.773	.3445	2.903	.487	iml	o
1.414	6.762	3.530	33.752	.3380	2.958	.478	iml	o

(Continued)





POLYIMIDE
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.414	7.165	3.794	38.438	.3327	3.005	.470	iml o
1.414	7.742	4.179	45.748	.3255	3.072	.460	iml o
1.414	8.299	4.503	52.842	.3235	3.091	.457	iml o
1.414	8.364	4.552	53.835	.3223	3.102	.456	iml o
1.414	8.517	4.573	55.073	.3275	3.054	.463	iml o
1.414	8.578	4.626	56.110	.3258	3.069	.461	iml o
1.414	8.542	4.632	55.947	.3237	3.089	.458	iml o

POLYMETHYLMETHACRYLATE, acrylic, Plexiglas

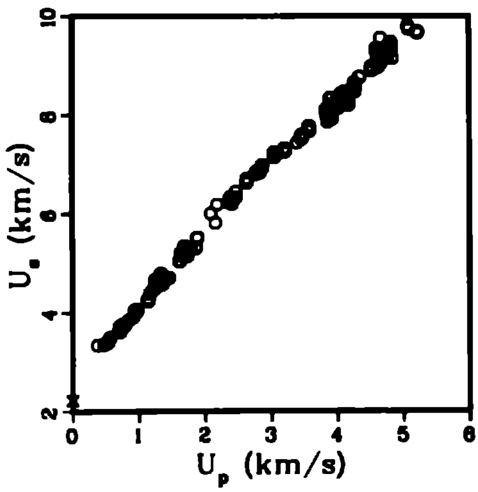
Average ρ_0 = 1.186 g/cm^3.

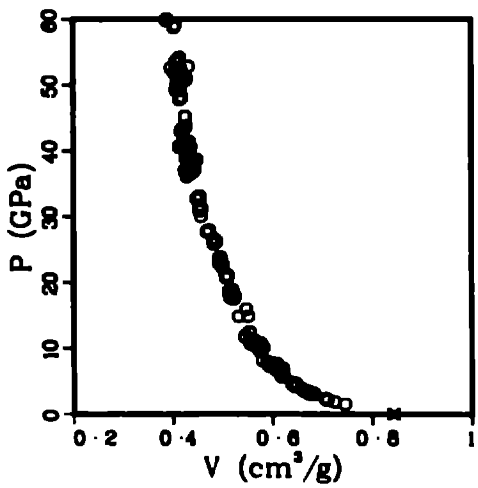
Sound velocities longitudinal 2.72 km/s.
shear 1.36 km/s.

References 6, 13, 51, 53

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.184	2.221	0.000	0.000	.8446	1.184	1.000	ssp ×
1.189	2.229	0.000	0.000	.8410	1.189	1.000	ssp ×
1.191	3.345	.376	1.498	.7453	1.342	.888	iml o
1.187	3.350	.470	1.869	.7243	1.381	.860	iml o
1.190	3.389	.531	2.141	.7087	1.411	.843	iml o
1.186	3.446	.545	2.227	.7098	1.409	.842	iml o
1.187	3.501	.570	2.369	.7053	1.418	.837	iml o
1.186	3.612	.700	2.999	.6798	1.471	.806	iml o
1.186	3.709	.706	3.106	.6827	1.465	.810	iml o
1.186	3.702	.718	3.152	.6796	1.471	.806	iml o
1.190	3.604	.719	3.084	.6727	1.487	.800	iml o
1.189	3.757	.756	3.377	.6718	1.489	.799	iml o
1.186	3.718	.765	3.373	.6697	1.493	.794	iml o
1.189	3.741	.788	3.505	.6639	1.506	.789	iml o
1.186	3.836	.841	3.826	.6583	1.519	.781	iml o
1.186	3.908	.917	4.250	.6453	1.550	.765	iml o
1.187	4.053	.939	4.517	.6473	1.545	.768	iml o
1.187	4.039	.940	4.507	.6464	1.547	.767	iml o
1.187	4.029	.941	4.500	.6457	1.549	.766	iml o

(Continued)





POLYMETHYLMETHACRYLATE , acrylic , Plexiglas
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.187	4.008	.942	4.482	.6445	1.552	.765	iml	o
1.187	4.014	.966	4.603	.6397	1.563	.759	iml	o
1.187	4.070	.967	4.672	.6423	1.557	.762	iml	o
1.186	4.039	.970	4.647	.6407	1.561	.760	iml	o
1.186	4.050	.980	4.707	.6391	1.565	.758	iml	o
1.180	4.260	1.133	5.695	.6221	1.608	.734	iml	o
1.182	4.284	1.148	5.813	.6193	1.615	.732	iml	o
1.180	4.239	1.150	5.752	.6176	1.619	.729	iml	o
1.187	4.392	1.172	6.110	.6177	1.619	.733	iml	o
1.187	4.453	1.210	6.396	.6135	1.630	.728	iml	o
1.180	4.663	1.249	6.872	.6205	1.612	.732	iml	o
1.187	4.519	1.267	6.796	.6063	1.649	.720	iml	o
1.180	4.649	1.283	7.038	.6136	1.630	.724	iml	o
1.180	4.639	1.284	7.029	.6129	1.632	.723	iml	o
1.186	4.782	1.337	7.583	.6074	1.646	.720	iml	o
1.186	4.784	1.337	7.586	.6075	1.646	.721	iml	o
1.189	4.667	1.344	7.458	.5988	1.670	.712	iml	o
1.187	4.573	1.346	7.306	.5945	1.682	.706	iml	o
1.186	4.658	1.357	7.497	.5975	1.674	.709	iml	o
1.187	4.688	1.367	7.607	.5968	1.676	.708	iml	o
1.187	4.677	1.368	7.595	.5960	1.678	.708	iml	o
1.187	4.683	1.368	7.604	.5964	1.677	.708	iml	o
1.187	4.684	1.368	7.606	.5964	1.677	.708	iml	o
1.184	4.589	1.371	7.449	.5923	1.688	.701	iml	o
1.187	4.701	1.419	7.918	.5882	1.700	.698	iml	o
1.189	4.704	1.462	8.177	.5796	1.725	.689	iml	o
1.180	5.041	1.621	9.642	.5749	1.739	.678	iml	o
1.180	5.049	1.629	9.705	.5740	1.742	.677	iml	o
1.180	5.200	1.637	10.045	.5807	1.722	.685	iml	o
1.187	5.143	1.672	10.207	.5686	1.759	.675	iml	o
1.187	5.181	1.689	10.387	.5678	1.761	.674	iml	o
1.186	5.328	1.693	10.698	.5752	1.738	.682	iml	o
1.186	5.330	1.693	10.702	.5753	1.738	.682	iml	o
1.187	5.230	1.723	10.696	.5649	1.770	.671	iml	o
1.187	5.198	1.725	10.643	.5629	1.777	.668	iml	o
1.187	5.275	1.732	10.845	.5658	1.767	.672	iml	o
1.187	5.232	1.734	10.769	.5633	1.775	.669	iml	o
1.189	5.136	1.744	10.650	.5555	1.800	.660	iml	o
1.187	5.306	1.759	11.079	.5632	1.776	.668	iml	o
1.185	5.291	1.774	11.123	.5609	1.783	.665	iml	o
1.183	5.292	1.774	11.106	.5619	1.780	.665	iml	o
1.186	5.303	1.783	11.214	.5597	1.787	.664	iml	o
1.189	5.303	1.866	11.766	.5451	1.835	.648	iml	o

(Continued)

POLYMETHYLMETHACRYLATE, acrylic, Plexiglas
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.189	5.303	1.866	11.766	.5451	1.835	.648	iml o
1.187	5.507	1.886	12.328	.5539	1.805	.658	iml o
1.186	5.515	1.895	12.395	.5534	1.807	.656	iml o
1.180	6.005	2.097	14.859	.5515	1.813	.651	iml o
1.180	5.814	2.166	14.860	.5317	1.881	.627	iml o
1.180	6.182	2.188	15.961	.5475	1.826	.646	iml o
1.189	6.241	2.367	17.564	.5221	1.915	.621	iml o
1.186	6.239	2.377	17.589	.5219	1.916	.619	iml o
1.189	6.324	2.387	17.948	.5236	1.910	.623	iml o
1.186	6.325	2.403	18.026	.5228	1.913	.620	iml o
1.186	6.194	2.416	17.748	.5143	1.944	.610	iml o
1.186	6.442	2.474	18.902	.5194	1.925	.616	iml o
1.189	6.324	2.477	18.625	.5116	1.955	.608	iml o
1.187	6.641	2.639	20.803	.5077	1.970	.603	iml o
1.187	6.621	2.641	20.756	.5064	1.975	.601	iml o
1.186	6.695	2.643	20.986	.5103	1.960	.605	iml o
1.186	6.693	2.643	20.980	.5102	1.960	.605	iml o
1.187	6.790	2.765	22.285	.4994	2.002	.593	iml o
1.186	6.841	2.789	22.628	.4994	2.002	.592	iml o
1.186	6.834	2.790	22.613	.4989	2.004	.592	iml o
1.186	6.832	2.833	22.955	.4935	2.026	.585	iml o
1.186	6.822	2.834	22.930	.4929	2.029	.585	iml o
1.186	6.971	2.870	23.728	.4960	2.016	.588	iml o
1.186	6.956	2.871	23.685	.4952	2.020	.587	iml o
1.187	6.938	2.871	23.644	.4938	2.025	.586	iml o
1.186	6.928	2.872	23.598	.4936	2.026	.585	iml o
1.187	6.932	2.872	23.632	.4934	2.027	.586	iml o
1.186	7.242	3.049	26.188	.4882	2.048	.579	iml o
1.187	7.176	3.052	25.997	.4842	2.065	.575	iml o
1.186	7.182	3.052	25.996	.4849	2.062	.575	iml o
1.186	7.143	3.055	25.881	.4826	2.072	.572	iml o
1.187	7.136	3.055	25.877	.4818	2.076	.572	iml o
1.184	7.235	3.090	26.470	.4839	2.067	.573	iml o
1.185	7.206	3.092	26.403	.4818	2.076	.571	iml o
1.187	7.228	3.093	26.537	.4820	2.075	.572	iml o
1.186	7.325	3.212	27.904	.4734	2.112	.562	iml o
1.187	7.281	3.215	27.786	.4705	2.126	.558	iml o
1.186	7.288	3.215	27.789	.4712	2.122	.559	iml o
1.187	7.279	3.215	27.778	.4704	2.126	.558	iml o
1.186	7.244	3.218	27.647	.4686	2.134	.556	iml o
1.187	7.440	3.402	30.044	.4572	2.187	.543	iml o
1.186	7.593	3.465	31.203	.4584	2.182	.544	iml o
1.186	7.549	3.468	31.049	.4558	2.194	.541	iml o

(Continued)

POLYMETHYLMETHACRYLATE . acrylic . Plexiglas
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.187	7.548	3.468	31.071	.4554	2.196	.541	iml o
1.187	7.526	3.469	30.990	.4541	2.202	.539	iml o
1.186	7.520	3.470	30.948	.4541	2.202	.539	iml o
1.187	7.602	3.499	31.573	.4547	2.199	.540	iml o
1.187	7.765	3.580	32.997	.4540	2.202	.539	iml o
1.187	7.765	3.580	32.997	.4540	2.202	.539	iml o
1.187	7.757	3.581	32.972	.4535	2.205	.538	iml o
1.187	7.723	3.583	32.846	.4516	2.214	.536	iml o
1.187	7.687	3.586	32.720	.4495	2.225	.533	iml o
1.187	7.677	3.587	32.687	.4488	2.228	.533	iml o
1.187	8.115	3.844	37.027	.4434	2.255	.526	iml o
1.187	8.098	3.845	36.959	.4425	2.260	.525	iml o
1.187	8.069	3.847	36.846	.4408	2.269	.523	iml o
1.187	8.012	3.852	36.633	.4374	2.286	.519	iml o
1.187	7.964	3.855	36.442	.4347	2.301	.516	iml o
1.187	7.860	3.863	36.041	.4284	2.334	.509	iml o
1.186	8.041	3.876	36.964	.4367	2.290	.518	iml o
1.186	8.038	3.876	36.950	.4366	2.291	.518	iml o
1.186	7.951	3.883	36.616	.4314	2.318	.512	iml o
1.186	7.918	3.885	36.483	.4295	2.328	.509	iml o
1.186	7.911	3.886	36.460	.4290	2.331	.509	iml o
1.187	8.342	3.903	38.647	.4483	2.231	.532	iml o
1.187	8.320	3.904	38.555	.4472	2.236	.531	iml o
1.187	8.212	3.912	38.133	.4411	2.267	.524	iml o
1.187	8.196	3.913	38.068	.4402	2.271	.523	iml o
1.187	8.194	3.913	38.059	.4401	2.272	.522	iml o
1.187	7.920	3.934	36.984	.4240	2.359	.503	iml o
1.187	8.104	3.944	37.939	.4325	2.312	.513	iml o
1.186	8.274	4.008	39.330	.4347	2.300	.516	iml o
1.185	8.212	4.017	39.090	.4311	2.320	.511	iml o
1.185	8.147	4.025	38.858	.4270	2.342	.506	iml o
1.185	8.146	4.025	38.853	.4269	2.342	.506	iml o
1.187	8.426	4.065	40.657	.4360	2.293	.518	iml o
1.189	8.285	4.075	40.142	.4274	2.340	.508	iml o
1.187	8.471	4.120	41.427	.4327	2.311	.514	iml o
1.186	8.412	4.161	41.513	.4261	2.347	.505	iml o
1.186	8.324	4.168	41.148	.4210	2.375	.499	iml o
1.186	8.269	4.172	40.915	.4178	2.394	.495	iml o
1.186	8.201	4.177	40.627	.4137	2.417	.491	iml o
1.186	8.208	4.177	40.662	.4141	2.415	.491	iml o
1.187	8.649	4.261	43.745	.4274	2.340	.507	iml o
1.186	8.596	4.273	43.563	.4240	2.358	.503	iml o
1.186	8.596	4.273	43.563	.4240	2.358	.503	iml o

(Continued)

POLYMETHYLMETHACRYLATE, acrylic, Plexiglas
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.189	8.463	4.274	43.007	.4163	2.402	.495	iml o
1.186	8.562	4.275	43.411	.4222	2.369	.501	iml o
1.186	8.554	4.276	43.380	.4217	2.371	.500	iml o
1.186	8.537	4.277	43.304	.4207	2.377	.499	iml o
1.186	8.772	4.346	45.214	.4254	2.351	.505	iml o
1.186	8.760	4.348	45.173	.4247	2.355	.504	iml o
1.185	8.984	4.523	48.152	.4190	2.386	.497	iml o
1.185	8.951	4.527	48.018	.4171	2.398	.494	iml o
1.186	8.916	4.531	47.912	.4147	2.411	.492	iml o
1.185	8.898	4.534	47.807	.4139	2.416	.490	iml o
1.188	9.343	4.593	50.980	.4279	2.337	.508	iml o
1.187	9.303	4.596	50.752	.4263	2.346	.506	iml o
1.186	9.101	4.613	49.792	.4158	2.405	.493	iml o
1.185	9.322	4.623	51.068	.4254	2.351	.504	iml o
1.188	8.960	4.624	49.220	.4073	2.455	.484	iml o
1.185	8.985	4.624	49.233	.4096	2.441	.485	iml o
1.186	9.253	4.632	50.832	.4211	2.375	.499	iml o
1.187	9.344	4.635	51.408	.4246	2.355	.504	iml o
1.185	9.210	4.638	50.618	.4189	2.387	.496	iml o
1.187	9.208	4.646	50.780	.4174	2.396	.495	iml o
1.187	9.148	4.651	50.504	.4141	2.415	.492	iml o
1.188	9.331	4.654	51.591	.4219	2.370	.501	iml o
1.187	9.092	4.655	50.238	.4111	2.432	.488	iml o
1.187	9.048	4.659	50.038	.4087	2.447	.485	iml o
1.185	9.281	4.660	51.251	.4202	2.380	.498	iml o
1.185	9.045	4.661	49.958	.4090	2.445	.485	iml o
1.186	9.558	4.663	52.859	.4318	2.316	.512	iml o
1.185	9.223	4.665	50.985	.4170	2.398	.494	iml o
1.188	9.191	4.666	50.948	.4144	2.413	.492	iml o
1.187	9.192	4.666	50.910	.4148	2.411	.492	iml o
1.185	9.353	4.741	52.546	.4161	2.403	.493	iml o
1.186	9.280	4.750	52.279	.4116	2.430	.488	iml o
1.185	9.190	4.763	51.870	.4065	2.460	.482	iml o
1.185	9.159	4.767	51.738	.4047	2.471	.480	iml o
1.187	9.195	4.774	52.106	.4051	2.469	.481	iml o
1.187	9.479	4.817	54.199	.4143	2.413	.492	iml o
1.187	9.447	4.820	54.049	.4126	2.424	.490	iml o
1.187	9.358	4.827	53.618	.4079	2.452	.484	iml o
1.187	9.332	4.829	53.491	.4065	2.460	.483	iml o
1.187	9.153	4.844	52.628	.3966	2.521	.471	iml o
1.189	9.806	5.075	59.171	.4058	2.464	.482	iml o
1.186	9.742	5.087	58.775	.4029	2.482	.478	iml o
1.185	9.688	5.220	59.927	.3892	2.569	.461	iml o

(Continued)

POLYMETHYLMETHACRYLATE, acrylic, Plexiglas
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.186	9.684	5.220	59.953	.3887	2.573	.461	iml o
1.185	9.676	5.222	59.876	.3885	2.574	.460	iml o
1.185	9.671	5.223	59.856	.3881	2.576	.460	iml o

POLYPHENYLQUINOXALINE

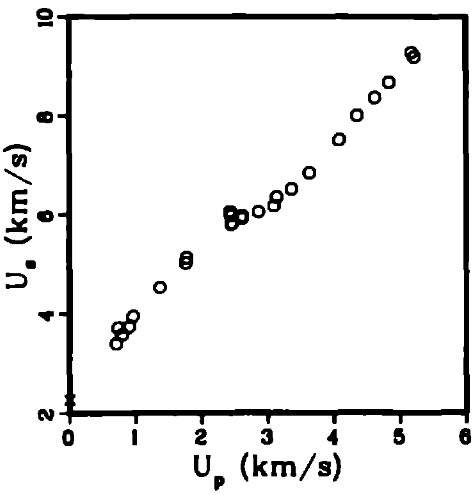
Average ρ_0 = 1.207 g/cm^3.

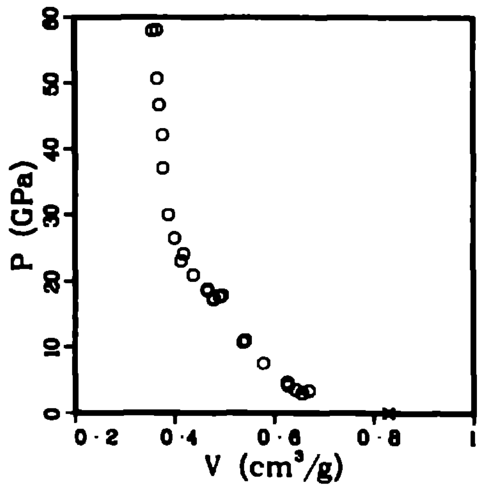
Sound velocities longitudinal 2.70 km/s.
shear 1.27 km/s.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.205	2.267	0.000	0.000	.8299	1.205	1.000	ssp ×
1.207	3.404	.710	2.917	.6557	1.525	.791	iml o
1.199	3.720	.735	3.278	.6692	1.494	.802	iml o
1.209	3.583	.799	3.461	.6427	1.556	.777	iml o
1.208	3.738	.905	4.087	.6274	1.594	.758	iml o
1.209	3.945	.959	4.574	.6261	1.597	.757	iml o
1.206	4.530	1.366	7.463	.5791	1.727	.698	iml o
1.205	5.025	1.767	10.699	.5381	1.859	.648	iml o
1.206	5.129	1.776	10.986	.5421	1.845	.654	iml o
1.210	6.059	2.427	17.793	.4954	2.019	.599	iml o
1.205	5.981	2.446	17.629	.4905	2.039	.591	iml o
1.208	5.808	2.452	17.203	.4783	2.091	.578	iml o
1.206	5.821	2.462	17.284	.4785	2.090	.577	iml o
1.198	5.918	2.610	18.504	.4666	2.143	.559	iml o
1.204	5.962	2.618	18.793	.4659	2.147	.561	iml o
1.206	6.055	2.862	20.899	.4373	2.287	.527	iml o
1.204	6.174	3.096	23.014	.4141	2.415	.499	iml o
1.209	6.352	3.135	24.075	.4189	2.387	.506	iml o
1.209	6.515	3.359	26.458	.4007	2.496	.484	iml o

(Continued)





POLYPHENYLQUINOXALINE
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.209	6.839	3.630	30.014	.3881	2.577	.469	iml o
1.209	7.505	4.087	37.084	.3767	2.655	.455	iml o
1.209	8.000	4.355	42.122	.3769	2.653	.456	iml o
1.209	8.357	4.622	46.699	.3697	2.705	.447	iml o
1.209	8.666	4.836	50.668	.3656	2.736	.442	iml o
1.209	9.274	5.182	58.102	.3650	2.740	.441	iml o
1.209	9.178	5.225	57.978	.3562	2.807	.431	iml o

POLYPROPYLENE

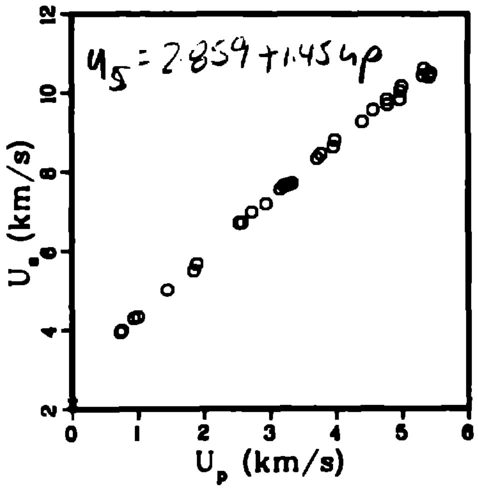
Average ρ_0 = 0.904 g/cm^3.

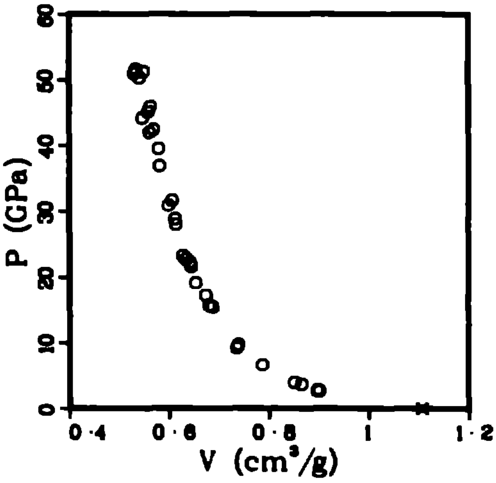
Sound velocities longitudinal 2.58 km/s.
shear 1.26 km/s.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.904	2.131	0.000	0.000	1.1062	.904	1.000	ssp	x
.904	3.939	.729	2.596	.9015	1.109	.815	iml	o
.904	3.983	.752	2.708	.8973	1.114	.811	iml	o
.904	4.295	.933	3.623	.8659	1.155	.783	iml	o
.904	4.332	.997	3.904	.8516	1.174	.770	iml	o
.904	5.019	1.447	6.565	.7873	1.270	.712	iml	o
.904	5.509	1.846	9.193	.7355	1.360	.665	iml	o
.904	5.678	1.886	9.681	.7388	1.354	.668	iml	o
.904	6.710	2.538	15.395	.6878	1.454	.622	iml	o
.904	6.702	2.575	15.601	.6812	1.468	.616	iml	o
.904	6.979	2.726	17.198	.6741	1.483	.609	iml	o
.904	7.193	2.941	19.124	.6539	1.529	.591	iml	o
.904	7.567	3.157	21.596	.6447	1.551	.583	iml	o
.903	7.646	3.216	22.204	.6416	1.559	.579	iml	o
.904	7.673	3.273	22.703	.6343	1.576	.573	iml	o
.904	7.706	3.334	23.225	.6276	1.593	.567	iml	o
.903	8.340	3.712	27.955	.6145	1.627	.555	iml	o
.904	8.448	3.768	28.776	.6128	1.632	.554	iml	o
.904	8.628	3.955	30.848	.5991	1.669	.542	iml	o

(Continued)





POLYPROPYLENE
(Continued)

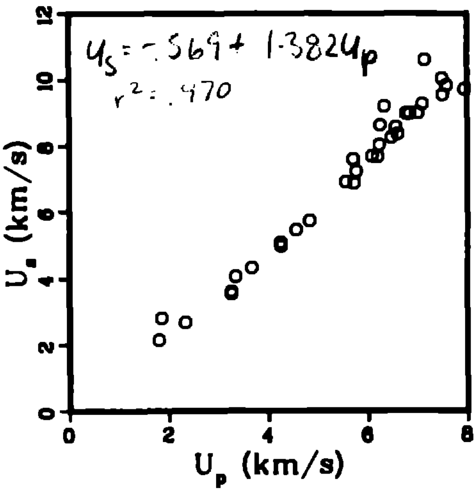
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.904	8.802	3.976	31.637	.6065	1.649	.548	iml o
.904	9.269	4.400	36.868	.5811	1.721	.525	iml o
.904	9.570	4.563	39.476	.5788	1.728	.523	iml o
.904	9.831	4.771	42.401	.5694	1.756	.515	iml o
.904	9.704	4.782	41.950	.5611	1.782	.507	iml o
.904	10.040	4.968	45.090	.5588	1.789	.505	iml o
.904	9.832	4.970	44.174	.5470	1.828	.495	iml o
.903	10.163	5.000	45.886	.5628	1.777	.508	iml o
.904	10.440	5.327	50.275	.5418	1.846	.490	iml o
.904	10.613	5.339	51.223	.5497	1.819	.497	iml o
.903	10.411	5.418	50.935	.5311	1.883	.480	iml o
.903	10.507	5.436	51.576	.5345	1.871	.483	iml o

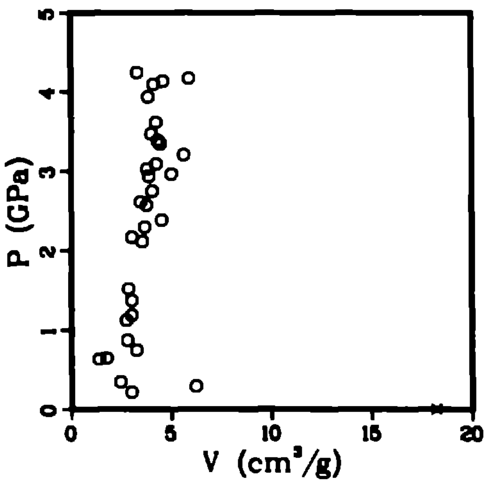
POLYSTYRENE , foamed

Average ρ_0 = 0.055 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.055	2.148	1.795	.212	2.9880	.335	.164	iml o
.055	2.804	1.847	.285	6.2054	.161	.341	iml o
.055	2.681	2.322	.342	2.4346	.411	.134	iml o
.055	3.603	3.254	.645	1.7612	.568	.097	iml o
.055	3.530	3.261	.633	1.3855	.722	.076	iml o
.055	4.068	3.339	.747	3.2582	.307	.179	iml o
.055	4.328	3.663	.872	2.7936	.358	.154	iml o
.055	5.081	4.240	1.185	3.0094	.332	.166	iml o
.053	4.975	4.252	1.121	2.7420	.365	.145	iml o
.055	5.469	4.554	1.370	3.0419	.329	.167	iml o
.055	5.730	4.825	1.521	2.8716	.348	.158	iml o
.055	6.910	5.561	2.113	3.5495	.282	.195	iml o
.055	7.593	5.705	2.382	4.5209	.221	.249	iml o
.055	6.874	5.729	2.166	3.0285	.330	.167	iml o
.055	7.230	5.770	2.294	3.6716	.272	.202	iml o
.055	7.685	6.082	2.571	3.7925	.264	.209	iml o
.055	7.667	6.197	2.613	3.4860	.287	.192	iml o
.055	8.027	6.230	2.750	4.0704	.246	.224	iml o
.055	8.629	6.245	2.964	5.0232	.199	.276	iml o
.055	9.186	6.338	3.202	5.6370	.177	.310	iml o
.055	8.243	6.475	2.936	3.8997	.256	.214	iml o
.055	8.567	6.558	3.090	4.2637	.235	.235	iml o

(Continued)





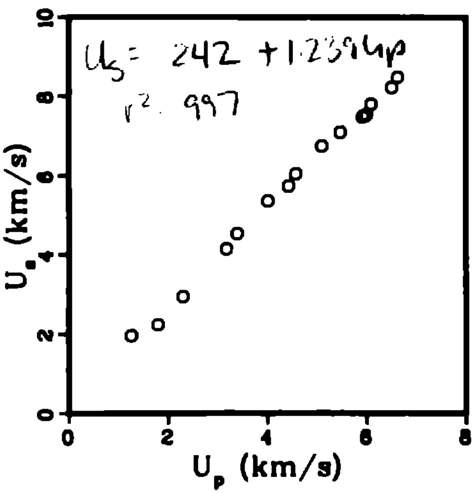
POLYSTYRENE, foamed
(Continued)

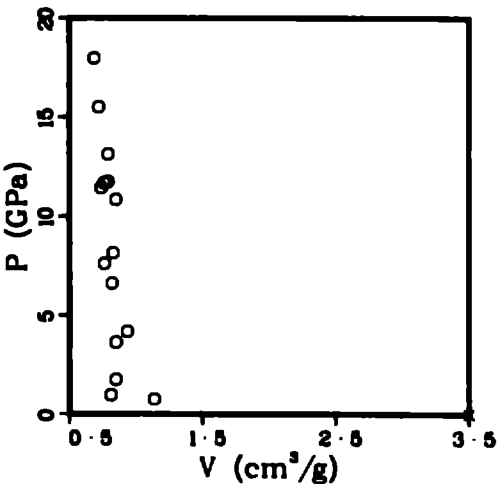
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.055	8.345	6.598	3.028	3.8063	.263	.209	iml o
.055	8.976	6.773	3.344	4.4624	.224	.245	iml o
.055	8.987	6.846	3.384	4.3315	.231	.238	iml o
.055	8.993	7.013	3.469	4.0031	.250	.220	iml o
.055	9.261	7.100	3.616	4.2426	.236	.233	iml o
.055	10.593	7.154	4.168	5.9027	.169	.325	iml o
.055	10.033	7.492	4.134	4.6048	.217	.253	iml o
.055	9.534	7.506	3.936	3.8675	.259	.213	iml o
.055	9.817	7.584	4.095	4.1357	.242	.227	iml o
.055	9.711	7.943	4.242	3.3102	.302	.182	iml o

POLYSTYRENE, foamed, pressed, ρ_0 = 0.30 g/cm^3.

Average ρ_0 = 0.286 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.313	1.957	1.260	.772	1.1379	.879	.356	iml o
.244	2.237	1.794	.979	.8116	1.232	.198	iml o
.259	2.950	2.301	1.758	.8494	1.177	.220	iml o
.275	4.147	3.177	3.623	.8506	1.176	.234	iml o
.270	4.544	3.395	4.165	.9365	1.068	.253	iml o
.307	5.365	4.013	6.610	.8209	1.218	.252	iml o
.299	5.739	4.428	7.598	.7640	1.309	.228	iml o
.294	6.046	4.573	8.129	.8287	1.207	.244	iml o
.332	6.756	5.097	11.433	.7398	1.352	.246	iml o
.301	7.100	5.469	11.688	.7632	1.310	.230	iml o
.265	7.489	5.918	11.745	.7916	1.263	.210	iml o
.240	7.534	5.996	10.842	.8506	1.176	.204	iml o
.277	7.797	6.088	13.149	.7913	1.264	.219	iml o
.290	8.218	6.503	15.498	.7196	1.390	.209	iml o
.320	8.483	6.623	17.979	.6852	1.459	.219	iml o

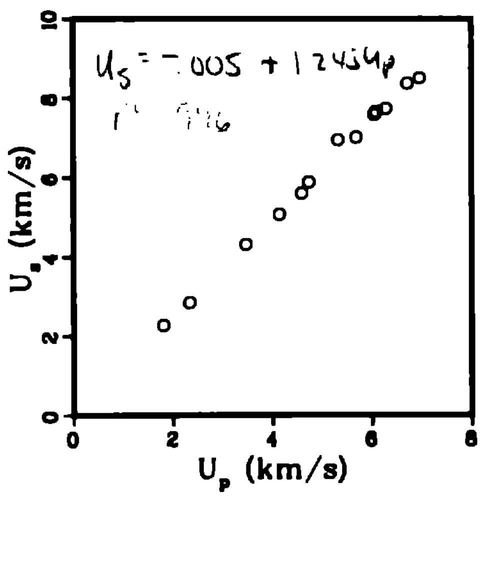


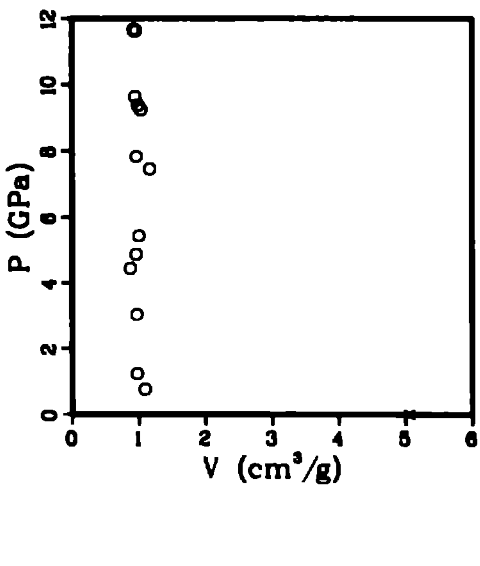


POLYSTYRENE, foamed, pressed, ρ_0 = 0.20 g/cm^3.

Average ρ_0 = 0.198 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.187	2.271	1.808	.768	1.0902	.917	.204	iml	o
.186	2.852	2.335	1.239	.9746	1.026	.181	iml	o
.203	4.316	3.465	3.036	.9713	1.030	.197	iml	o
.211	5.078	4.142	4.438	.8736	1.145	.184	iml	o
.189	5.609	4.590	4.866	.9612	1.040	.182	iml	o
.195	5.885	4.732	5.430	1.0047	.995	.196	iml	o
.201	6.954	5.322	7.439	1.1676	.856	.235	iml	o
.196	7.018	5.688	7.824	.9669	1.034	.190	iml	o
.204	7.589	6.052	9.369	.9928	1.007	.203	iml	o
.198	7.663	6.087	9.236	1.0387	.963	.206	iml	o
.198	7.740	6.284	9.630	.9501	1.053	.188	iml	o
.207	8.371	6.713	11.632	.9568	1.045	.198	iml	o
.197	8.509	6.959	11.665	.9247	1.081	.182	iml	o

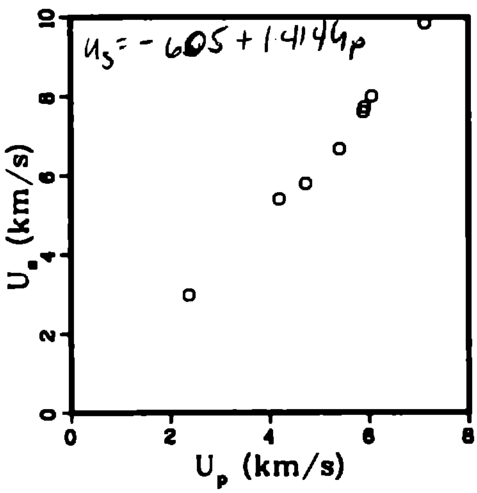


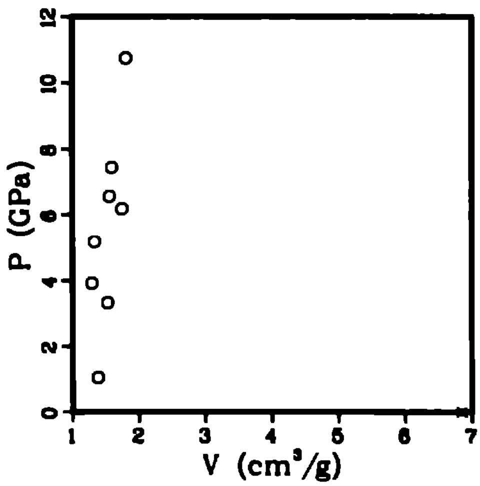


POLYSTYRENE, foamed, pressed, $\rho_0 = 0.15\ g/cm^3$.

Average $\rho_0 = 0.146\ g/cm^3$.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.149	2.991	2.375	1.058	1.3822	.723	.206	iml o
.147	5.409	4.195	3.336	1.5268	.655	.224	iml o
.143	5.801	4.730	3.924	1.2911	.775	.185	iml o
.143	6.686	5.413	5.175	1.3315	.751	.190	iml o
.146	7.623	5.892	6.558	1.5553	.643	.227	iml o
.135	7.738	5.915	6.179	1.7451	.573	.236	iml o
.153	8.013	6.060	7.429	1.5930	.628	.244	iml o
.153	9.859	7.132	10.758	1.8078	.553	.277	iml o

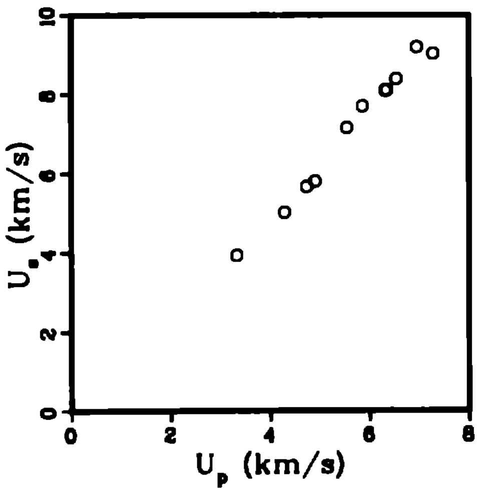


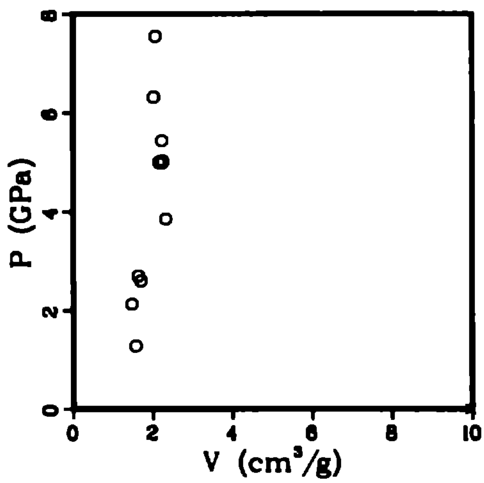


POLYSTYRENE, foamed, pressed, ρ_0 = 0.10 g/cm^3.

Average ρ_0 = 0.100 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.098	3.931	3.327	1.282	1.5679	.638	.154	iml o
.099	5.020	4.289	2.132	1.4709	.680	.146	iml o
.097	5.669	4.734	2.603	1.7003	.588	.165	iml o
.095	5.802	4.904	2.703	1.6292	.614	.155	iml o
.097	7.158	5.544	3.849	2.3246	.430	.225	iml o
.111	7.700	5.861	4.991	2.1594	.463	.239	iml o
.098	8.100	6.317	5.014	2.2462	.445	.220	iml o
.097	8.104	6.346	4.989	2.2364	.447	.217	iml o
.099	8.390	6.539	5.431	2.2285	.449	.221	iml o
.118	9.200	6.953	7.548	2.0698	.483	.244	iml o
.096	9.035	7.280	6.314	2.0234	.494	.194	iml o

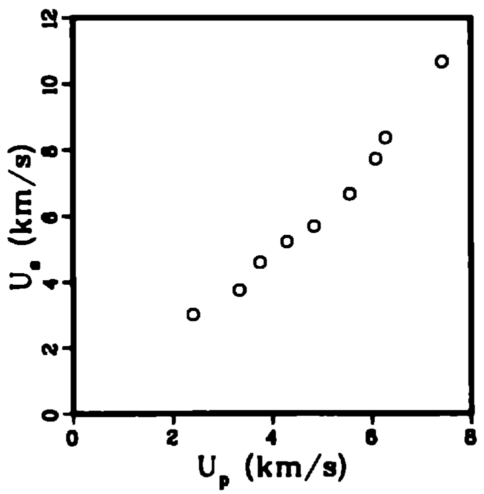


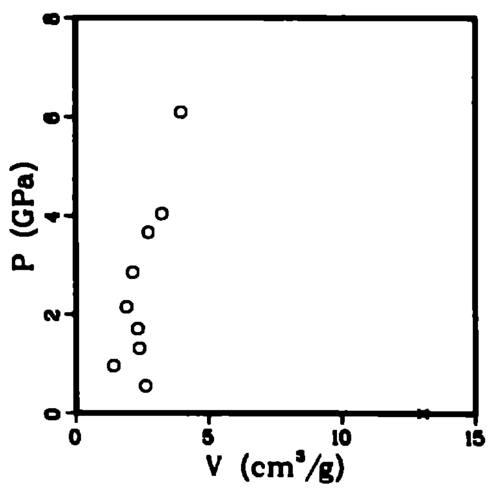


POLYSTYRENE, foamed, pressed, ρ_0 = 0.08 g/cm^3.

Average ρ_0 = 0.077 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.076	3.009	2.409	.551	2.6237	.381	.199	iml	o
.076	3.758	3.349	.957	1.4320	.698	.109	iml	o
.076	4.596	3.760	1.313	2.3934	.418	.182	iml	o
.076	5.226	4.301	1.708	2.3289	.429	.177	iml	o
.078	5.694	4.845	2.152	1.9116	.523	.149	iml	o
.077	6.666	5.562	2.855	2.1509	.465	.166	iml	o
.078	7.728	6.076	3.663	2.7406	.365	.214	iml	o
.077	8.370	6.273	4.043	3.2537	.307	.251	iml	o
.077	10.674	7.417	6.096	3.9628	.252	.305	iml	o





POLYSTYRENE, Styrolux

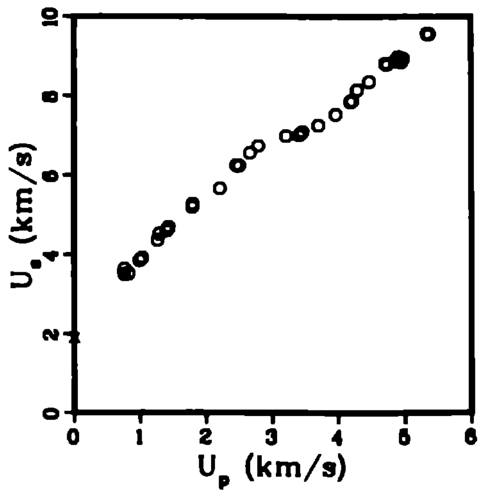
Average ρ_0 = 1.046 g/cm³.

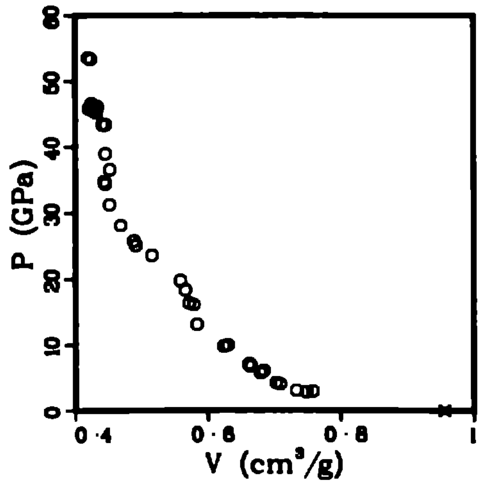
Sound velocities longitudinal 2.31 km/s.
shear 1.14 km/s.

References 13, 51

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.046	1.898	0.000	0.000	.9560	1.046	1.000	ssp ×
1.047	3.506	.759	2.786	.7483	1.336	.784	iml o
1.044	3.638	.760	2.887	.7578	1.320	.791	iml o
1.044	3.519	.825	3.031	.7333	1.364	.766	iml o
1.047	3.850	.993	4.003	.7088	1.411	.742	iml o
1.047	3.913	1.034	4.236	.7027	1.423	.736	iml o
1.044	4.353	1.266	5.753	.6793	1.472	.709	iml o
1.044	4.513	1.290	6.078	.6841	1.462	.714	iml o
1.044	4.591	1.406	6.739	.6645	1.505	.694	iml o
1.049	4.679	1.429	7.014	.6621	1.510	.695	iml o
1.047	4.679	1.433	7.020	.6626	1.509	.694	iml o
1.049	5.195	1.795	9.782	.6239	1.603	.654	iml o
1.047	5.281	1.798	9.942	.6299	1.587	.660	iml o
1.044	5.664	2.213	13.086	.5836	1.713	.609	iml o
1.047	6.251	2.463	16.120	.5788	1.728	.606	iml o
1.046	6.233	2.506	16.338	.5717	1.749	.598	iml o
1.047	6.560	2.672	18.352	.5661	1.767	.593	iml o
1.047	6.742	2.799	19.758	.5586	1.790	.585	iml o
1.047	6.994	3.217	23.557	.5158	1.939	.540	iml o

(Continued)





POLYSTYRENE , Styrolux
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.044	7.019	3.418	25.047	.4914	2.035	.513	iml o
1.047	7.091	3.465	25.725	.4884	2.048	.511	iml o
1.044	7.257	3.707	28.085	.4686	2.134	.489	iml o
1.047	7.528	3.968	31.275	.4517	2.214	.473	iml o
1.047	7.851	4.188	34.425	.4456	2.244	.467	iml o
1.047	7.873	4.216	34.753	.4436	2.254	.464	iml o
1.047	8.145	4.289	36.576	.4522	2.212	.473	iml o
1.044	8.352	4.469	38.967	.4453	2.246	.465	iml o
1.045	8.818	4.713	43.429	.4455	2.245	.466	iml o
1.045	8.784	4.735	43.464	.4411	2.267	.461	iml o
1.047	8.888	4.868	45.300	.4320	2.315	.452	iml o
1.049	8.980	4.900	46.158	.4331	2.309	.454	iml o
1.047	8.879	4.912	45.663	.4267	2.343	.447	iml o
1.047	8.848	4.953	45.884	.4205	2.378	.440	iml o
1.047	8.949	4.973	46.595	.4244	2.357	.444	iml o
1.045	9.570	5.336	53.363	.4234	2.362	.442	iml o
1.045	9.556	5.368	53.605	.4194	2.384	.438	iml o

POLYSULFONE

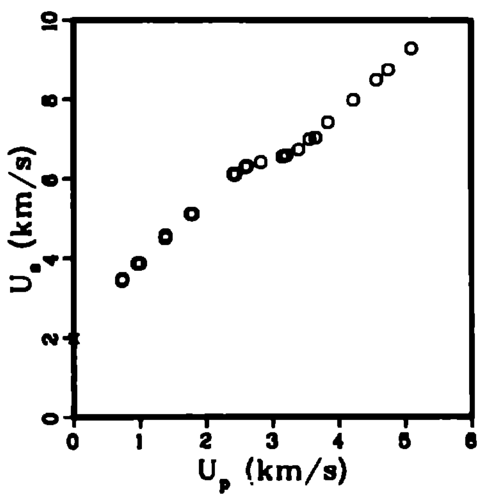
Average ρ_0 = 1.235 g/cm^3.

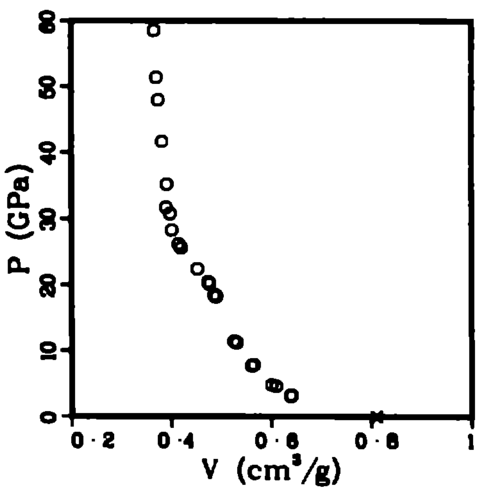
Sound velocities longitudinal 2.25 km/s.
shear .93 km/s.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.235	1.977	0.000	0.000	.8097	1.235	1.000	ssp ×
1.235	3.482	.729	3.135	.6402	1.562	.791	iml o
1.235	3.434	.729	3.092	.6378	1.568	.788	iml o
1.235	3.869	.957	4.573	.6094	1.641	.753	iml o
1.235	3.868	1.001	4.782	.6002	1.666	.741	iml o
1.235	4.576	1.384	7.821	.5648	1.770	.698	iml o
1.235	4.494	1.385	7.687	.5602	1.785	.692	iml o
1.235	5.125	1.766	11.178	.5307	1.884	.655	iml o
1.235	5.119	1.799	11.373	.5252	1.904	.649	iml o
1.235	6.113	2.418	18.255	.4894	2.043	.604	iml o
1.236	6.111	2.419	18.271	.4888	2.046	.604	iml o
1.235	6.104	2.444	18.424	.4855	2.060	.600	iml o
1.235	6.287	2.592	20.125	.4759	2.101	.588	iml o
1.236	6.311	2.617	20.414	.4736	2.112	.585	iml o
1.236	6.407	2.826	22.379	.4522	2.211	.559	iml o
1.236	6.549	3.153	25.522	.4195	2.384	.519	iml o
1.235	6.580	3.212	26.102	.4145	2.413	.512	iml o
1.235	6.729	3.398	28.238	.4008	2.495	.495	iml o
1.235	6.995	3.560	30.754	.3976	2.515	.491	iml o

(Continued)





POLYSULFONE
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.235	7.034	3.651	31.716	.3894	2.568	.481	iml o
1.235	7.421	3.839	35.184	.3908	2.559	.483	iml o
1.235	7.983	4.224	41.644	.3813	2.623	.471	iml o
1.235	8.493	4.572	47.955	.3738	2.675	.462	iml o
1.235	8.751	4.753	51.368	.3699	2.703	.457	iml o
1.235	9.295	5.100	58.545	.3654	2.736	.451	iml o

POLYTETRAFLUOROETHYLENE, Teflon

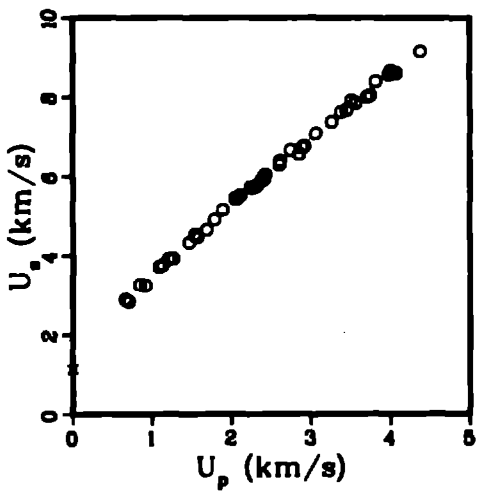
Average ρ_0 = 2.152 g/cm^3.

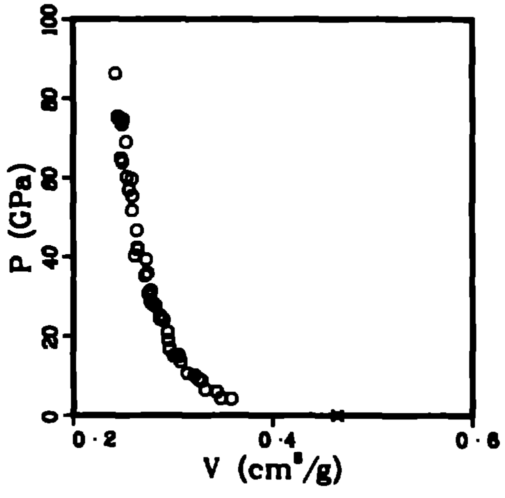
Sound velocities longitudinal 1.23 km/s.
shear .41 km/s.

References 13, 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.151	1.135	0.000	0.000	.4649	2.151	1.000	ssp ×
2.152	2.889	.662	4.116	.3582	2.792	.771	iml o
2.153	2.822	.709	4.308	.3478	2.875	.749	iml o
2.152	3.255	.847	5.933	.3438	2.909	.740	iml o
2.153	3.235	.921	6.415	.3322	3.010	.715	iml o
2.152	3.707	1.087	8.672	.3284	3.045	.707	iml o
2.147	3.755	1.131	9.118	.3255	3.072	.699	iml o
2.152	3.913	1.205	10.147	.3216	3.110	.692	iml o
2.153	3.907	1.263	10.624	.3143	3.181	.677	iml o
2.147	4.320	1.466	13.597	.3077	3.250	.661	iml o
2.152	4.512	1.539	14.943	.3062	3.266	.659	iml o
2.153	4.518	1.550	15.077	.3051	3.277	.657	iml o
2.153	4.457	1.570	15.066	.3009	3.324	.648	iml o
2.152	4.645	1.687	16.863	.2959	3.379	.637	iml o
2.153	4.903	1.789	18.885	.2950	3.390	.635	iml o
2.147	5.150	1.892	20.920	.2947	3.394	.633	iml o
2.153	5.453	2.046	24.021	.2902	3.446	.625	iml o
2.152	5.430	2.072	24.212	.2874	3.480	.618	iml o
2.153	5.516	2.109	25.046	.2869	3.486	.618	iml o

(Continued)





POLYTETRAFLUOROETHYLENE, Teflon
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.153	5.717	2.242	27.596	.2823	3.542	.608	iml o
2.154	5.729	2.290	28.259	.2787	3.588	.600	iml o
2.152	5.770	2.321	28.820	.2778	3.600	.598	iml o
2.156	5.895	2.378	30.223	.2767	3.614	.597	iml o
2.154	5.927	2.408	30.742	.2756	3.628	.594	iml o
2.152	5.990	2.410	31.066	.2777	3.601	.598	iml o
2.153	6.036	2.424	31.501	.2779	3.598	.598	iml o
2.153	6.291	2.606	35.297	.2721	3.676	.586	iml o
2.152	6.379	2.613	35.870	.2743	3.645	.590	iml o
2.152	6.655	2.747	39.341	.2729	3.665	.587	iml o
2.155	6.551	2.856	40.319	.2617	3.821	.564	iml o
2.152	6.723	2.897	41.913	.2644	3.781	.569	iml o
2.149	6.751	2.921	42.378	.2640	3.788	.567	iml o
2.152	7.084	3.062	46.679	.2638	3.790	.568	iml o
2.152	7.377	3.261	51.769	.2593	3.857	.558	iml o
2.152	7.625	3.378	55.430	.2588	3.864	.557	iml o
2.152	7.673	3.451	56.984	.2557	3.911	.550	iml o
2.152	7.910	3.508	59.714	.2586	3.867	.557	iml o
2.152	7.848	3.565	60.209	.2536	3.943	.546	iml o
2.152	8.003	3.711	63.913	.2492	4.013	.536	iml o
2.151	8.040	3.749	64.835	.2481	4.030	.534	iml o
2.152	8.390	3.818	68.935	.2532	3.949	.545	iml o
2.152	8.575	3.986	73.555	.2487	4.021	.535	iml o
2.152	8.664	4.008	74.729	.2497	4.004	.537	iml o
2.152	8.602	4.050	74.972	.2459	4.067	.529	iml o
2.152	8.604	4.078	75.507	.2444	4.091	.526	iml o
2.152	9.153	4.375	86.175	.2426	4.122	.522	iml o

POLYURETHANE

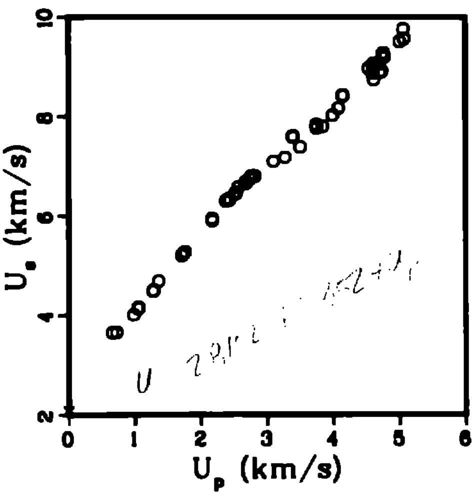
Average ρ_0 = 1.264 g/cm^3.

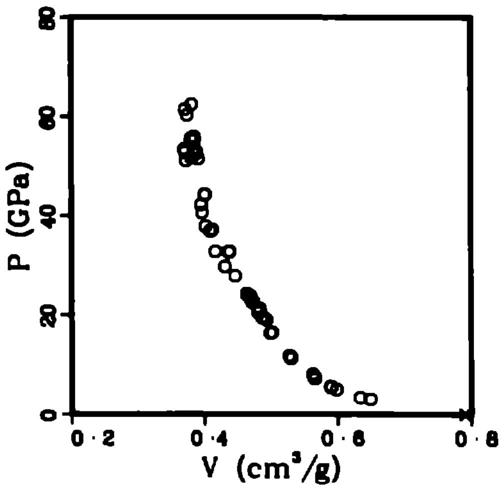
Sound velocities longitudinal 2.39 km/s.
shear 1.03 km/s.

References 13, 51, 54

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.265	2.073	0.000	0.000	.7905	1.265	1.000	ssp	×
1.262	3.644	.659	3.031	.6491	1.541	.819	iml	o
1.265	3.652	.725	3.349	.6336	1.578	.801	iml	o
1.262	4.007	.982	4.966	.5982	1.672	.755	iml	o
1.265	4.155	1.053	5.535	.5902	1.694	.747	iml	o
1.265	4.139	1.054	5.519	.5892	1.697	.745	iml	o
1.265	4.498	1.278	7.272	.5659	1.767	.716	iml	o
1.265	4.484	1.279	7.255	.5650	1.770	.715	iml	o
1.262	4.681	1.358	8.022	.5625	1.778	.710	iml	o
1.265	5.202	1.715	11.286	.5299	1.887	.670	iml	o
1.265	5.203	1.715	11.288	.5299	1.887	.670	iml	o
1.262	5.269	1.761	11.710	.5276	1.896	.666	iml	o
1.265	5.946	2.171	16.330	.5019	1.993	.635	iml	o
1.265	5.900	2.176	16.241	.4990	2.004	.631	iml	o
1.262	6.298	2.376	18.885	.4935	2.027	.623	iml	o
1.265	6.338	2.427	19.459	.4878	2.050	.617	iml	o
1.265	6.317	2.429	19.410	.4865	2.055	.615	iml	o
1.265	6.457	2.527	20.641	.4811	2.078	.609	iml	o
1.265	6.445	2.529	20.619	.4803	2.082	.608	iml	o

(Continued)





POLYURETHANE
(Continued)

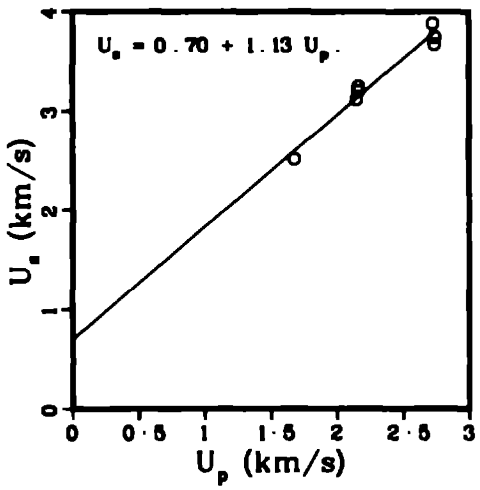
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.262	6.570	2.565	21.267	.4830	2.070	.610	iml o
1.265	6.679	2.680	22.643	.4733	2.113	.599	iml o
1.265	6.652	2.683	22.577	.4717	2.120	.597	iml o
1.265	6.746	2.743	23.408	.4691	2.132	.593	iml o
1.265	6.797	2.766	23.783	.4688	2.133	.593	iml o
1.262	6.795	2.820	24.182	.4635	2.157	.585	iml o
1.262	7.099	3.100	27.773	.4464	2.240	.563	iml o
1.262	7.177	3.273	29.645	.4310	2.320	.544	iml o
1.265	7.609	3.393	32.659	.4380	2.283	.554	iml o
1.265	7.588	3.396	32.598	.4367	2.290	.552	iml o
1.262	7.389	3.505	32.684	.4165	2.401	.526	iml o
1.265	7.836	3.749	37.162	.4123	2.425	.522	iml o
1.265	7.773	3.752	36.893	.4089	2.445	.517	iml o
1.262	7.801	3.844	37.844	.4019	2.488	.507	iml o
1.265	8.029	3.998	40.606	.3969	2.520	.502	iml o
1.265	8.168	4.083	42.188	.3954	2.529	.500	iml o
1.265	8.424	4.149	44.213	.4012	2.493	.507	iml o
1.265	8.416	4.150	44.182	.4007	2.496	.507	iml o
1.262	8.975	4.542	51.445	.3914	2.555	.494	iml o
1.265	8.877	4.602	51.678	.3807	2.627	.482	iml o
1.262	9.019	4.610	52.471	.3874	2.582	.489	iml o
1.265	9.069	4.611	52.899	.3886	2.573	.492	iml o
1.265	8.739	4.618	51.051	.3728	2.683	.472	iml o
1.265	9.055	4.654	53.310	.3842	2.603	.486	iml o
1.265	8.886	4.713	52.978	.3712	2.694	.470	iml o
1.265	8.919	4.741	53.490	.3703	2.700	.468	iml o
1.262	9.245	4.750	55.419	.3853	2.596	.486	iml o
1.265	9.281	4.765	55.943	.3847	2.600	.487	iml o
1.265	9.199	4.777	55.589	.3800	2.632	.481	iml o
1.265	9.516	5.009	60.297	.3744	2.671	.474	iml o
1.262	9.764	5.066	62.424	.3813	2.623	.481	iml o
1.265	9.570	5.078	61.475	.3711	2.695	.469	iml o

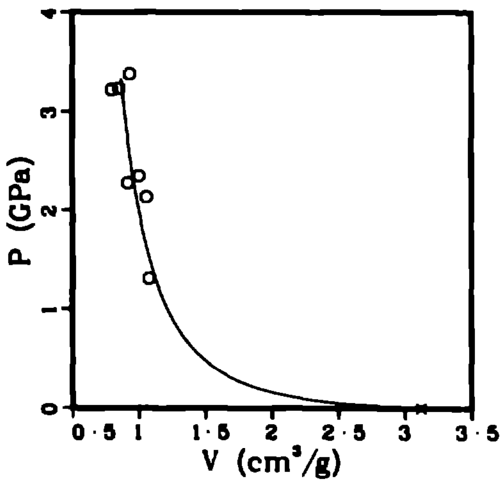
POLYURETHANE, foamed, ρ_0 = 0.32 g/cm^3.

Average ρ_0 = 0.321 g/cm^3.

References 13, 54

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.310	2.518	1.680	1.310	1.0749	.930	.333	iml o
.339	3.121	2.150	2.277	.9167	1.091	.311	iml o
.308	3.206	2.164	2.135	1.0563	.947	.325	iml o
.334	3.250	2.165	2.347	1.0010	.999	.334	iml o
.319	3.883	2.725	3.376	.9346	1.070	.298	iml o
.320	3.676	2.737	3.222	.7978	1.254	.255	iml o
.315	3.747	2.740	3.233	.8534	1.172	.269	iml o



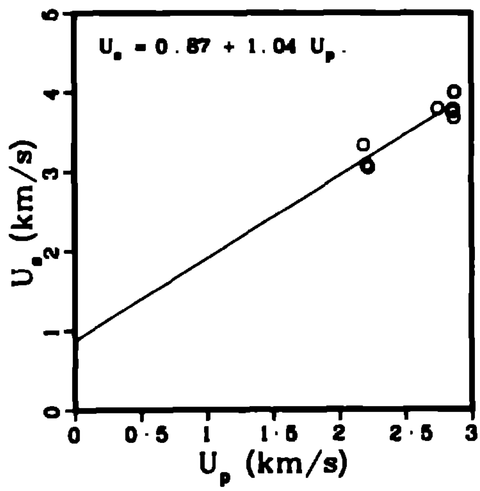


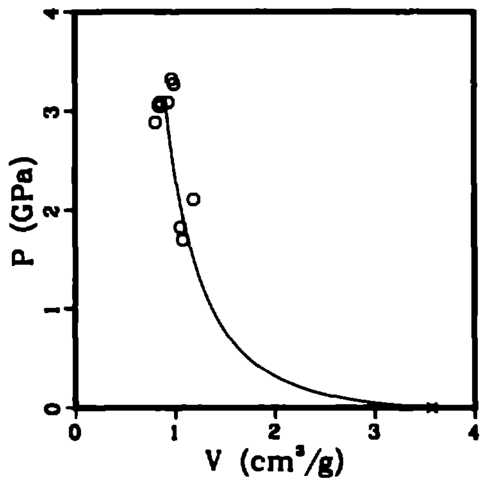
POLYURETHANE, foamed, ρ_0 = 0.28 g/cm^3.

Average ρ_0 = 0.280 g/cm^3.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.289	3.331	2.187	2.108	1.1871	.842	.343	iml o
.267	3.083	2.211	1.819	1.059[illegible]	.944	.283	iml o
.250	3.049	2.223	1.694	1.0841	.922	.271	iml o
.296	3.794	2.746	3.087	.9322	1.073	.276	iml o
.286	3.755	2.854	3.061	.8401	1.190	.240	iml o
.285	3.785	2.861	3.087	.8563	1.168	.244	iml o
.282	3.778	2.862	3.051	.8592	1.164	.242	iml o
.273	3.681	2.868	2.886	.8078	1.238	.221	iml o
.285	4.001	2.869	3.271	.9927	1.007	.283	iml o
.289	3.997	2.871	3.321	.9734	1.027	.282	iml o



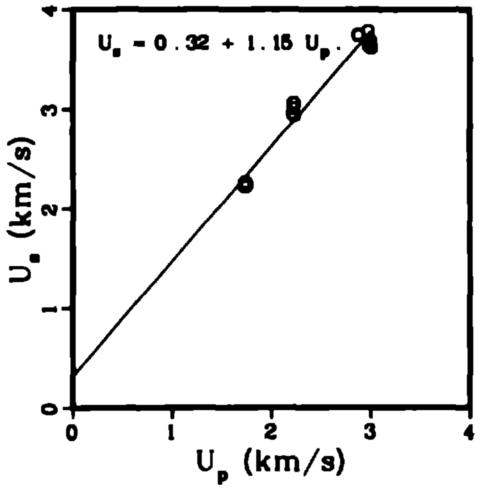


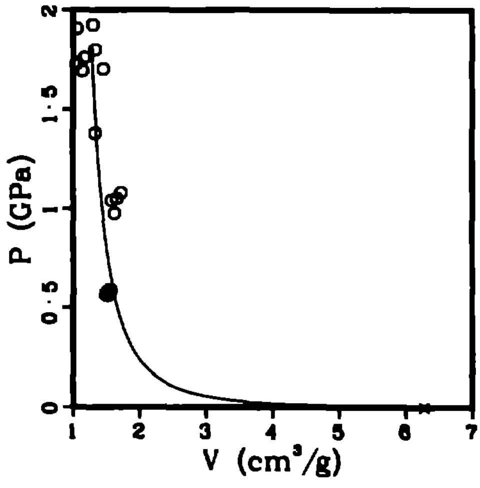
POLYURETHANE, foamed, ρ_0 = 0.16 g/cm^3.

Average ρ_0 = 0.159 g/cm^3.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.145	2.227	1.732	.561	1.5287	.654	.222	iml o
.150	2.259	1.736	.589	1.5424	.648	.232	iml o
.149	2.265	1.738	.585	1.5658	.639	.233	iml o
.147	2.227	1.742	.569	1.4856	.673	.218	iml o
.145	2.242	1.750	.570	1.5093	.663	.219	iml o
.159	2.955	2.214	1.043	1.5732	.636	.251	iml o
.159	3.058	2.222	1.082	1.7172	.582	.273	iml o
.157	3.008	2.225	1.053	1.6548	.604	.260	iml o
.149	2.938	2.230	.976	1.6173	.618	.241	iml o
.202	3.057	2.232	1.379	1.3353	.749	.270	iml o
.178	3.748	2.878	1.924	1.3011	.769	.232	iml o
.158	3.743	2.880	1.702	1.4602	.685	.231	iml o
.160	3.782	2.976	1.800	1.3328	.750	.213	iml o
.175	3.657	2.981	1.906	1.0575	.946	.185	iml o
.156	3.633	2.984	1.693	1.1437	.874	.179	iml o
.159	3.685	2.997	1.758	1.1728	.853	.187	iml o
.159	3.612	3.006	1.729	1.0539	.949	.168	iml o



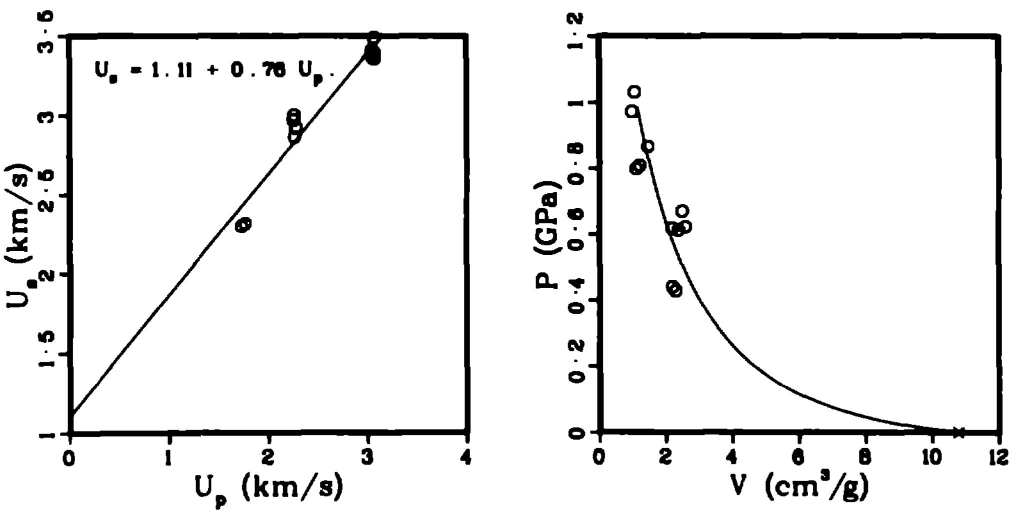


POLYURETHANE, foamed, ρ_0 = 0.09 g/cm^3.

Average ρ_s = 0.093 g/cm^3.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.107	2.300	1.735	.428	2.2915	.436	.246	iml o
.107	2.317	1.772	.440	2.1942	.456	.235	iml o
.093	2.974	2.259	.622	2.5963	.385	.240	iml o
.099	3.004	2.265	.670	2.4975	.400	.246	iml o
.095	2.869	2.272	.618	2.1950	.456	.208	iml o
.091	2.924	2.287	.612	2.3809	.420	.218	iml o
.099	3.410	3.051	1.030	1.0634	.940	.105	iml o
.095	3.368	3.053	.972	.9897	1.010	.094	iml o
.077	3.360	3.071	.799	1.1113	.900	.086	iml o
.081	3.490	3.075	.866	1.4735	.679	.119	iml o
.077	3.395	3.076	.808	1.2140	.824	.094	iml o



POLYVINYL CHLORIDE. Boltron

Average ρ_0 = 1.376 g/cm^3.

Sound velocities longitudinal 2.30 km/s.
shear 1.08 km/s.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.376	1.933	0.000	0.000	.7267	1.376	1.000	ssp	×
1.376	3.353	.716	3.303	.5716	1.750	.786	iml	o
1.376	3.717	.942	4.818	.5426	1.843	.747	iml	o
1.376	4.375	1.358	8.175	.5012	1.995	.690	iml	o
1.376	4.397	1.361	8.234	.5018	1.993	.690	iml	o
1.376	4.962	1.700	11.607	.4778	2.093	.657	iml	o
1.376	5.017	1.759	12.143	.4719	2.119	.649	iml	o
1.376	5.853	2.368	19.071	.4327	2.311	.595	iml	o
1.376	5.907	2.396	19.475	.4320	2.315	.594	iml	o
1.376	6.127	2.536	21.380	.4259	2.348	.586	iml	o
1.376	6.140	2.562	21.645	.4235	2.361	.583	iml	o
1.376	6.366	2.753	24.115	.4125	2.424	.568	iml	o
1.376	6.734	3.043	28.196	.3983	2.510	.548	iml	o
1.376	6.826	3.092	29.042	.3975	2.515	.547	iml	o
1.376	7.082	3.258	31.749	.3924	2.548	.540	iml	o
1.376	7.357	3.413	34.551	.3896	2.567	.536	iml	o
1.376	7.417	3.498	35.700	.3840	2.604	.528	iml	o
1.376	7.752	3.648	38.912	.3847	2.599	.529	iml	o
1.366	7.797	3.676	39.152	.3869	2.584	.529	iml	o

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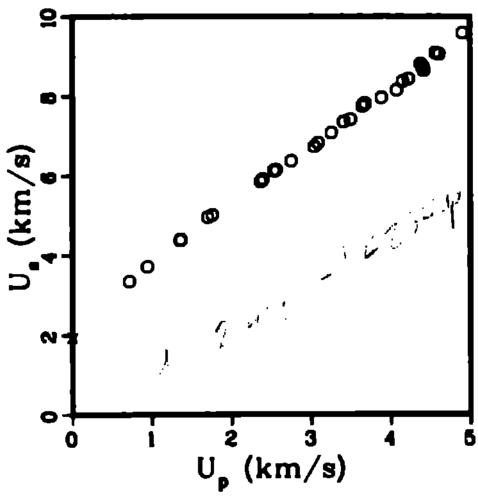
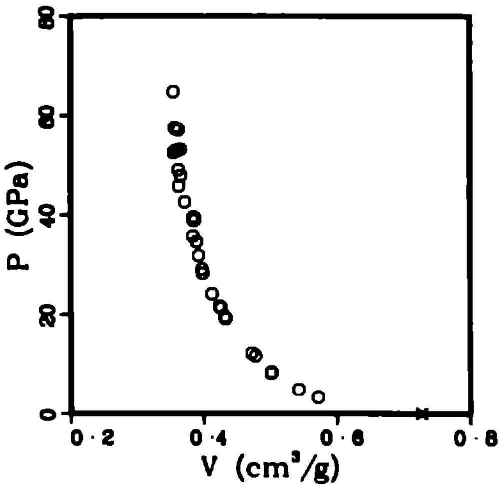




POLYVINYL CHLORIDE, Boltron
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.376	7.812	3.678	39.536	.3846	2.600	.529	iml o
1.376	7.959	3.888	42.580	.3717	2.690	.511	iml o
1.376	8.148	4.080	45.744	.3628	2.756	.499	iml o
1.376	8.368	4.155	47.842	.3659	2.733	.503	iml o
1.376	8.427	4.228	49.026	.3621	2.762	.498	iml o
1.376	8.818	4.382	53.169	.3656	2.735	.503	iml o
1.376	8.736	4.409	52.999	.3600	2.778	.495	iml o
1.376	8.699	4.415	52.847	.3579	2.794	.492	iml o
1.376	8.640	4.419	52.536	.3550	2.817	.489	iml o
1.376	9.100	4.565	57.161	.3622	2.761	.498	iml o
1.376	9.062	4.613	57.521	.3568	2.803	.491	iml o
1.376	9.592	4.907	64.765	.3550	2.817	.488	iml o

POLYVINYLIDENE FLUORIDE, Kynar

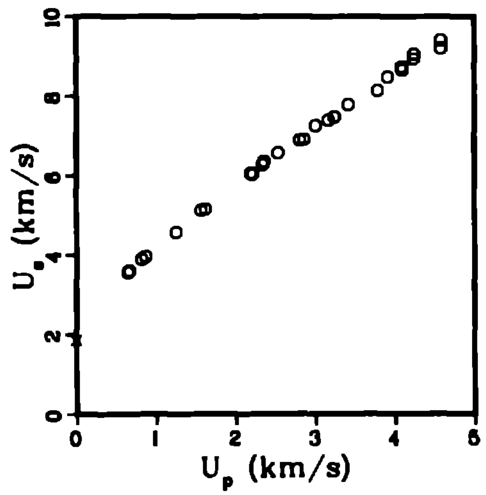
Average ρ_0 = 1.767 g/cm^3.

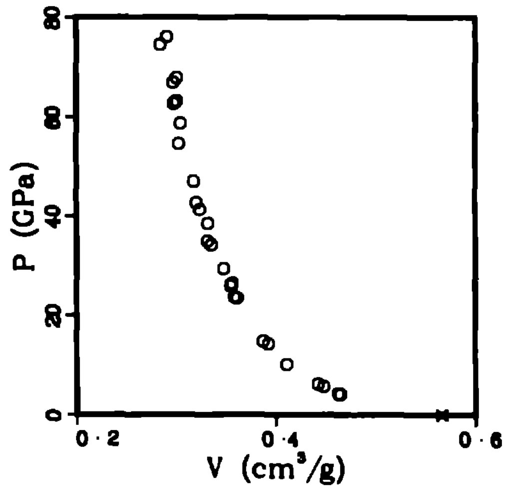
Sound velocities longitudinal 2.10 km/s.
shear .85 km/s.

Reference 51

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.768	1.857	0.000	0.000	.5656	1.768	1.000	ssp ×
1.766	3.562	.642	4.038	.4642	2.154	.820	iml o
1.766	3.604	.661	4.207	.4624	2.163	.817	iml o
1.766	3.897	.816	5.616	.4477	2.234	.791	iml o
1.766	3.963	.869	6.082	.4421	2.262	.781	iml o
1.766	4.573	1.254	10.127	.4110	2.433	.726	iml o
1.768	5.136	1.569	14.247	.3928	2.546	.695	iml o
1.768	5.167	1.626	14.854	.3876	2.580	.685	iml o
1.766	6.057	2.192	23.447	.3613	2.768	.638	iml o
1.766	6.042	2.215	23.634	.3587	2.788	.633	iml o
1.766	6.279	2.342	25.970	.3550	2.817	.627	iml o
1.766	6.355	2.359	26.475	.3561	2.809	.629	iml o
1.766	6.569	2.536	29.420	.3476	2.876	.614	iml o
1.766	6.891	2.810	34.196	.3353	2.982	.592	iml o
1.766	6.910	2.864	34.950	.3316	3.016	.586	iml o
1.766	7.264	3.004	38.536	.3321	3.011	.586	iml o
1.766	7.400	3.165	41.361	.3241	3.086	.572	iml o
1.766	7.479	3.242	42.820	.3208	3.117	.567	iml o
1.766	7.785	3.418	46.992	.3176	3.148	.561	iml o

(Continued)





POLYVINYLIDENE FLUORIDE, Kynar
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.766	8.152	3.789	54.548	.3031	3.300	.535	iml o
1.768	8.479	3.916	58.704	.3044	3.285	.538	iml o
1.768	8.730	4.091	63.143	.3006	3.327	.531	iml o
1.766	8.652	4.101	62.661	.2979	3.357	.526	iml o
1.768	8.931	4.237	66.902	.2973	3.364	.526	iml o
1.766	9.055	4.241	67.818	.3010	3.322	.532	iml o
1.766	9.412	4.578	76.094	.2908	3.438	.514	iml o
1.768	9.208	4.579	74.545	.2843	3.517	.503	iml o

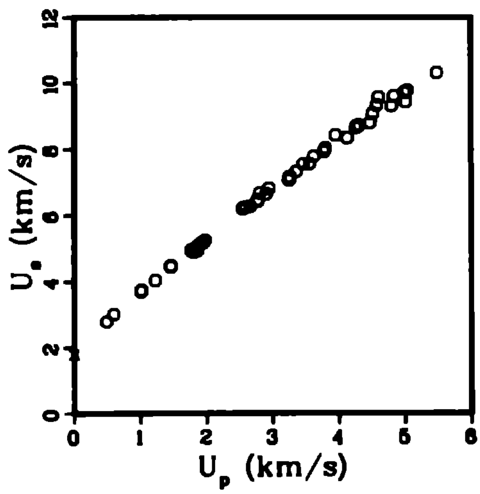
POLY 4-METHYL-1-PENTENE, TPX

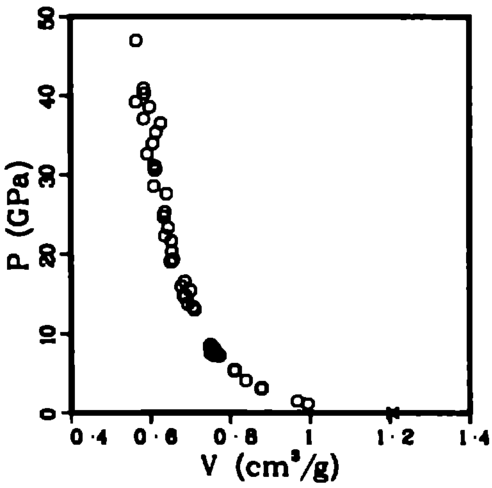
Average ρ_0 = 0.830 g/cm^3.

Sound velocities longitudinal 2.19 km/s.
shear 1.08 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.829	1.800	0.000	0.000	1.2063	.829	1.000	ssp	×
.830	2.798	.490	1.138	.9938	1.006	.825	iml	o
.830	3.019	.594	1.488	.9678	1.033	.803	iml	o
.830	3.706	1.009	3.104	.8768	1.141	.728	iml	o
.829	3.738	1.013	3.139	.8794	1.137	.729	iml	o
.830	4.032	1.225	4.100	.8388	1.192	.696	iml	o
.830	4.464	1.459	5.406	.8110	1.233	.673	iml	o
.829	4.446	1.462	5.389	.8096	1.235	.671	iml	o
.830	4.927	1.767	7.226	.7727	1.294	.641	iml	o
.831	4.951	1.804	7.420	.7651	1.307	.636	iml	o
.831	4.910	1.805	7.363	.7612	1.314	.632	iml	o
.831	4.902	1.816	7.395	.7578	1.320	.630	iml	o
.830	4.918	1.816	7.413	.7599	1.316	.631	iml	o
.831	4.939	1.859	7.630	.7504	1.333	.624	iml	o
.831	4.947	1.859	7.642	.7512	1.331	.624	iml	o
.829	5.073	1.872	7.873	.7611	1.314	.631	iml	o
.830	5.146	1.912	8.166	.7572	1.321	.628	iml	o
.830	5.167	1.952	8.371	.7497	1.334	.622	iml	o
.830	5.239	1.976	8.592	.7504	1.333	.623	iml	o
.829	6.199	2.545	13.079	.7110	1.406	.589	iml	o

(Continued)





POLY 4-METHYL-1-PENTENE. TPX
(Continued)

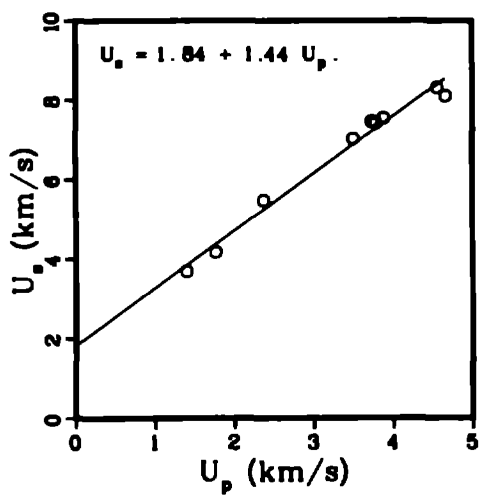
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.827	6.242	2.595	13.396	.7065	1.415	.584	iml o
.829	6.262	2.661	13.814	.6937	1.442	.575	iml o
.830	6.451	2.772	14.849	.6868	1.456	.570	iml o
.831	6.419	2.773	14.786	.6838	1.462	.568	iml o
.827	6.666	2.806	15.469	.7002	1.428	.579	iml o
.830	6.634	2.904	15.990	.6774	1.476	.562	iml o
.827	6.808	2.945	16.581	.6861	1.457	.567	iml o
.831	7.078	3.248	19.104	.6512	1.536	.541	iml o
.831	7.078	3.248	19.104	.6512	1.536	.541	iml o
.830	7.094	3.250	19.136	.6529	1.532	.542	iml o
.829	7.160	3.258	19.338	.6574	1.521	.545	iml o
.827	7.313	3.359	20.315	.6538	1.530	.541	iml o
.829	7.547	3.464	21.672	.6526	1.532	.541	iml o
.830	7.553	3.562	22.330	.6366	1.571	.528	iml o
.829	7.779	3.621	23.351	.6448	1.551	.535	iml o
.827	7.925	3.777	24.754	.6329	1.580	.523	iml o
.829	8.038	3.798	25.308	.6363	1.572	.527	iml o
.829	8.428	3.952	27.612	.6406	1.561	.531	iml o
.830	8.344	4.129	28.595	.6086	1.643	.505	iml o
.830	8.657	4.261	30.617	.6118	1.635	.508	iml o
.829	8.698	4.275	30.825	.6134	1.630	.509	iml o
.830	8.721	4.310	31.198	.6094	1.641	.506	iml o
.830	8.800	4.474	32.678	.5923	1.688	.492	iml o
.829	9.080	4.516	33.993	.6063	1.649	.503	iml o
.829	9.329	4.576	35.390	.6146	1.627	.509	iml o
.829	9.575	4.602	36.529	.6265	1.596	.519	iml o
.830	9.309	4.801	37.095	.5834	1.714	.484	iml o
.830	9.606	4.836	38.557	.5983	1.671	.497	iml o
.830	9.715	4.994	40.269	.5855	1.708	.486	iml o
.830	9.426	5.013	39.220	.5641	1.773	.468	iml o
.830	9.777	5.041	40.907	.5836	1.713	.484	iml o
.830	10.328	5.484	47.010	.5651	1.770	.469	iml o

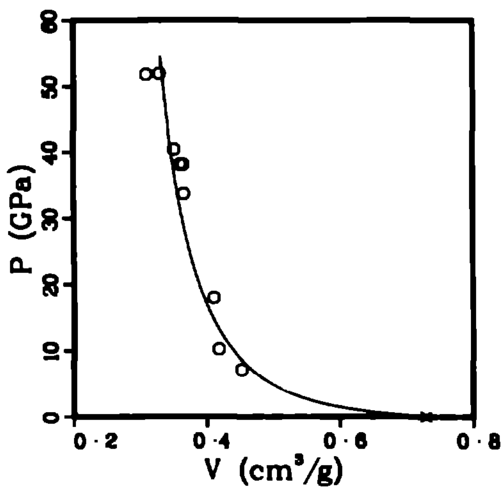
RUBBER, Silastic, RTV-521

Average ρ_0 = 1.372 g/cm^3.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.370	3.686	1.400	7.070	.4527	2.209	.620	iml o
1.380	4.169	1.767	10.166	.4175	2.395	.576	iml o
1.380	5.477	2.373	17.936	.4107	2.435	.567	iml o
1.370	7.027	3.504	33.733	.3660	2.733	.501	iml o
1.370	7.463	3.730	38.137	.3651	2.739	.500	iml o
1.360	7.424	3.780	38.165	.3609	2.771	.491	iml o
1.380	7.542	3.881	40.393	.3518	2.843	.485	iml o
1.370	8.313	4.558	51.910	.3297	3.033	.452	iml o
1.370	8.102	4.664	51.769	.3097	3.229	.424	iml o

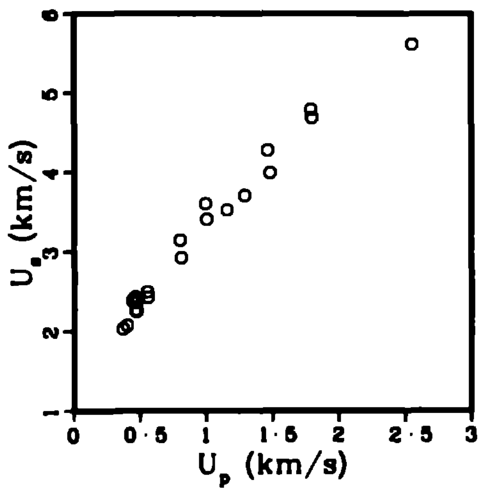


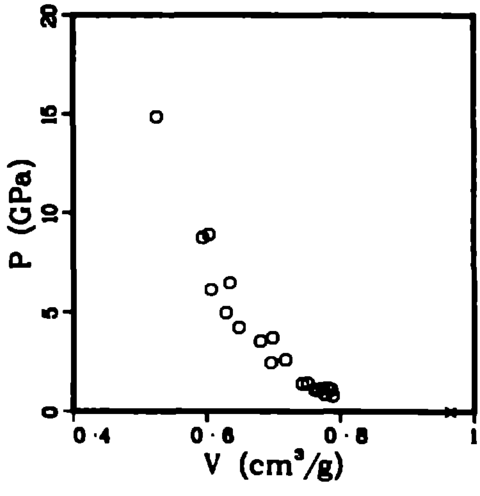


SYLGARD

Average ρ_0 = 1.037 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.037	2.028	.369	.776	.7889	1.268	.818	iml	o
1.037	2.073	.401	.862	.7778	1.286	.807	iml	o
1.037	2.383	.440	1.087	.7863	1.272	.815	iml	o
1.037	2.426	.461	1.160	.7811	1.280	.810	iml	o
1.037	2.265	.465	1.092	.7663	1.305	.795	iml	o
1.037	2.364	.469	1.150	.7730	1.294	.802	iml	o
1.037	2.251	.472	1.102	.7621	1.312	.790	iml	o
1.037	2.492	.551	1.424	.7511	1.331	.779	iml	o
1.037	2.423	.556	1.397	.7430	1.346	.771	iml	o
1.037	3.142	.802	2.613	.7182	1.392	.745	iml	o
1.037	2.922	.812	2.460	.6963	1.436	.722	iml	o
1.037	3.604	.993	3.711	.6986	1.431	.724	iml	o
1.037	3.405	1.003	3.542	.6803	1.470	.705	iml	o
1.037	3.525	1.156	4.226	.6481	1.543	.672	iml	o
1.037	3.708	1.290	4.960	.6288	1.590	.652	iml	o
1.037	4.271	1.462	6.475	.6342	1.577	.658	iml	o
1.037	3.989	1.481	6.126	.6063	1.649	.629	iml	o
1.037	4.790	1.792	8.901	.6036	1.657	.626	iml	o
1.037	4.688	1.800	8.751	.5941	1.683	.616	iml	o
1.037	5.613	2.555	14.872	.5254	1.903	.545	iml	o





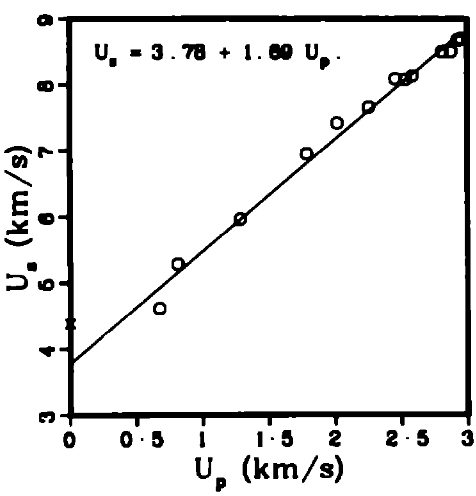
OTHER SYNTHETICS

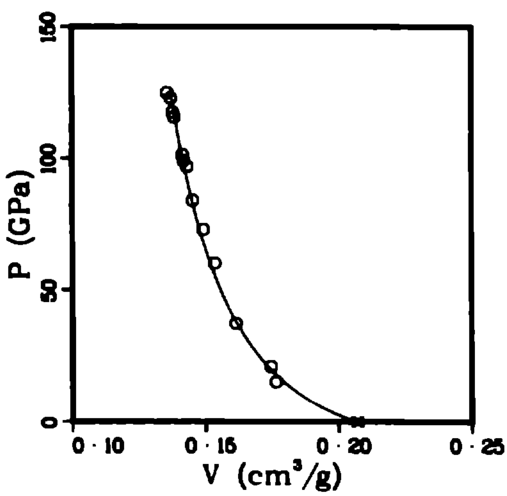
COPPER-27.2 WT% BORON CARBIDE

Average ρ_0 = 4.840 g/cm³.

Sound velocities longitudinal 5.86 km/s.
shear 3.37 km/s.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
4.822	4.381	0.000	0.000	.2074	4.822	1.000	ssp ×
4.835	4.611	.675	15.049	.1765	5.664	.854	iml o
4.844	5.281	.814	20.823	.1746	5.727	.846	iml o
4.856	5.962	1.286	37.232	.1615	6.192	.784	iml o
4.835	6.947	1.787	60.023	.1536	6.509	.743	iml o
4.872	7.414	2.018	72.892	.1494	6.694	.728	iml o
4.854	7.657	2.256	83.849	.1453	6.882	.705	iml o
4.860	8.090	2.457	96.603	.1433	6.980	.696	iml o
4.834	8.077	2.533	98.899	.1420	7.043	.686	iml o
4.819	8.130	2.585	101.276	.1415	7.066	.682	iml o
4.835	8.504	2.811	115.579	.1385	7.222	.669	iml o
4.800	8.504	2.877	117.437	.1379	7.254	.662	iml o
4.831	8.681	2.928	122.794	.1372	7.290	.663	iml o
4.863	8.694	2.954	124.892	.1358	7.366	.660	iml o



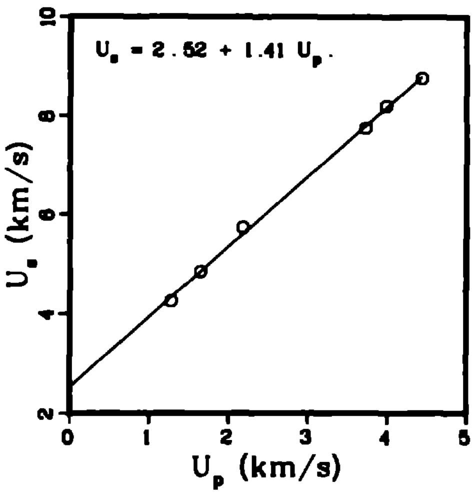


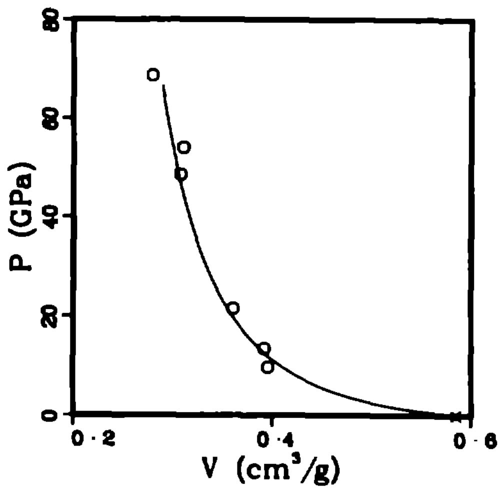
COPPER OXIDE-56 WT% EPOXY

Average ρ_0 = 1.710 g/cm^3.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.761	4.249	1.284	9.608	.3963	2.524	.698	iml o
1.684	4.850	1.649	13.468	.3919	2.552	.660	iml o
1.717	5.734	2.179	21.453	.3611	2.769	.620	iml o
1.682	7.744	3.730	48.585	.3082	3.245	.518	iml o
1.651	8.198	3.991	54.018	.3108	3.217	.513	iml o
1.786	8.763	4.437	68.665	.2795	3.577	.494	iml o

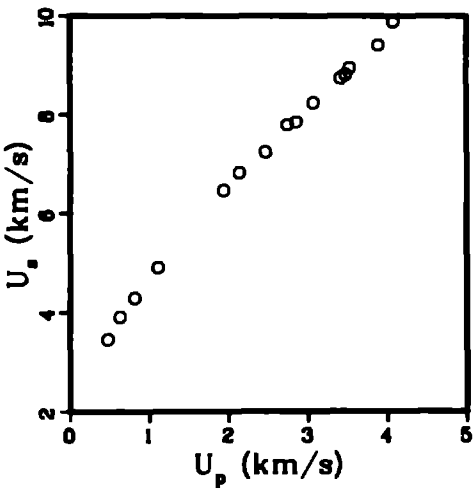


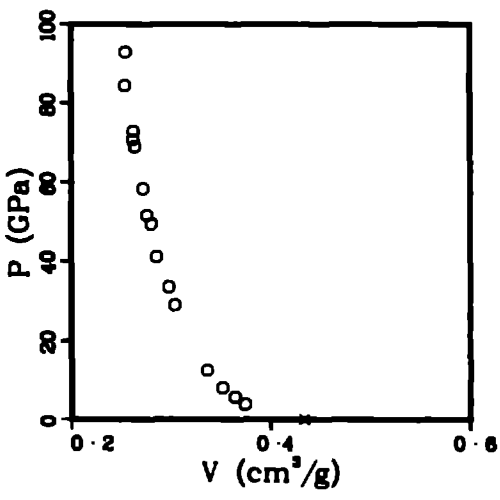


EPOXY-40 VOL% CORUNDUM

Average ρ_0 = 2.307 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.306	3.462	.475	3.792	.3742	2.673	.863	iml o
2.307	3.913	.628	5.669	.3639	2.748	.840	iml o
2.306	4.287	.812	8.027	.3515	2.845	.811	iml o
2.307	4.912	1.106	12.533	.3359	2.977	.775	iml o
2.307	6.467	1.936	28.884	.3037	3.293	.701	iml o
2.307	6.815	2.135	33.567	.2977	3.359	.687	iml o
2.307	7.234	2.465	41.138	.2858	3.499	.659	iml o
2.310	7.786	2.743	49.335	.2804	3.566	.648	iml o
2.306	7.846	2.855	51.655	.2759	3.625	.636	iml o
2.307	8.236	3.070	58.331	.2719	3.678	.627	iml o
2.306	8.735	3.418	68.848	.2640	3.788	.609	iml o
2.307	8.805	3.481	70.710	.2621	3.815	.605	iml o
2.307	8.943	3.531	72.850	.2623	3.812	.605	iml o
2.307	9.409	3.890	84.439	.2543	3.933	.587	iml o
2.307	9.887	4.078	93.016	.2547	3.927	.588	iml o

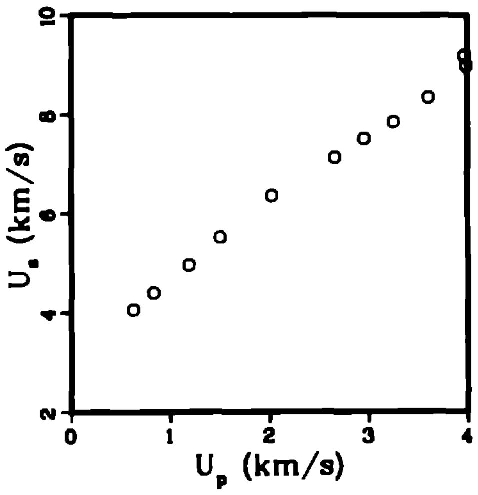


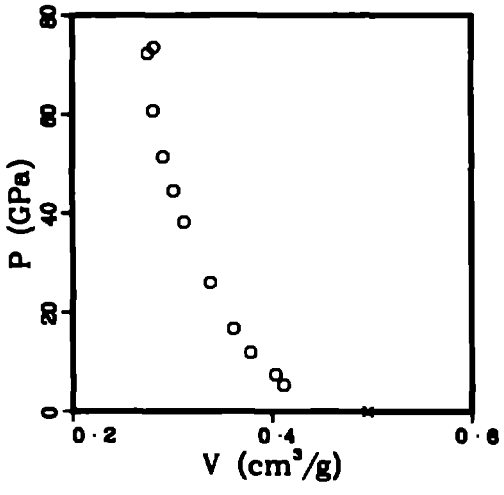


EPOXY-40 VOL% ENSTATITE

Average ρ_0 = 2.017 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.055	4.061	.628	5.241	.4114	2.431	.845	iml	o
2.013	4.397	.828	7.329	.4032	2.480	.812	iml	o
2.011	4.965	1.187	11.852	.3784	2.643	.761	iml	o
2.012	5.520	1.504	16.704	.3616	2.765	.728	iml	o
2.016	6.364	2.027	26.006	.3380	2.958	.681	iml	o
2.011	7.139	2.659	38.174	.3121	3.205	.628	iml	o
2.009	7.510	2.956	44.599	.3018	3.313	.606	iml	o
2.012	7.851	3.255	51.417	.2910	3.437	.585	iml	o
2.018	8.344	3.609	60.769	.2812	3.556	.567	iml	o
2.016	9.183	3.969	73.478	.2816	3.551	.568	iml	o
2.016	8.978	3.992	72.254	.2755	3.630	.555	iml	o

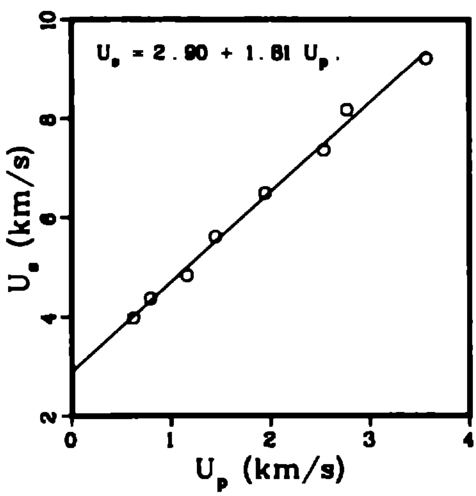


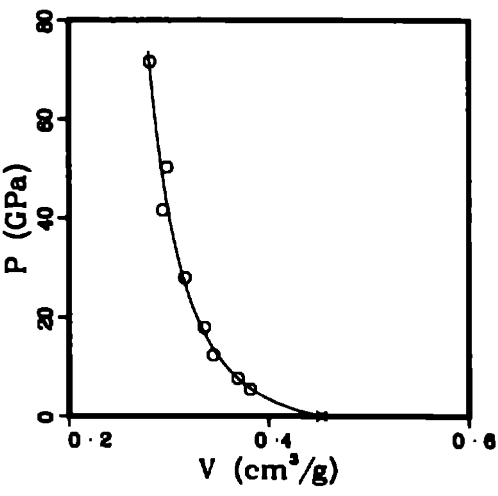


EPOXY-40 VOL% FORSTERITE, ρ_0 = 2.2 g/cm^3.

Average ρ_0 = 2.210 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.211	3.981	.622	5.475	.3816	2.620	.844	iml o
2.219	4.377	.793	7.702	.3690	2.710	.819	iml o
2.204	4.836	1.161	12.375	.3448	2.900	.760	iml o
2.212	5.610	1.446	17.944	.3356	2.980	.742	iml o
2.213	6.490	1.947	27.964	.3163	3.161	.700	iml o
2.226	7.357	2.539	41.580	.2942	3.399	.655	iml o
2.216	8.175	2.771	50.199	.2983	3.352	.661	iml o
2.178	9.216	3.568	71.618	.2814	3.554	.613	iml o

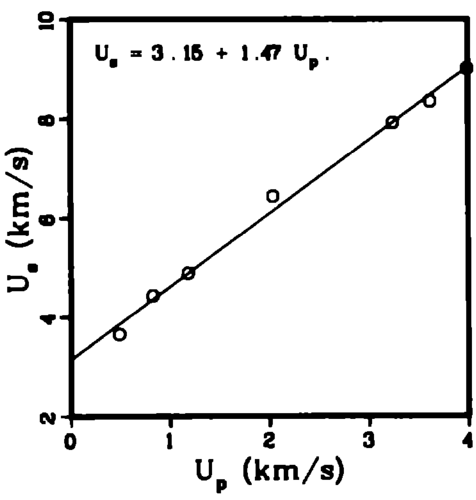


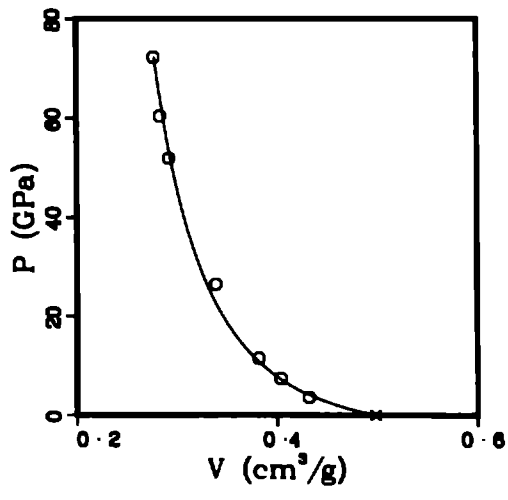


EPOXY-40 VOL% FORSTERITE, ρ_0 = 2.0 g/cm^3.

Average ρ_0 = 2.007 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.006	3.653	.488	3.576	.4319	2.315	.866	iml o
2.015	4.434	.825	7.371	.4039	2.476	.814	iml o
1.986	4.886	1.181	11.460	.3818	2.619	.758	iml o
2.016	6.437	2.037	26.434	.3391	2.949	.684	iml o
2.019	7.917	3.242	51.821	.2925	3.419	.591	iml o
2.000	8.350	3.619	60.437	.2833	3.530	.567	iml o
2.009	9.015	3.991	72.282	.2774	3.605	.557	iml o

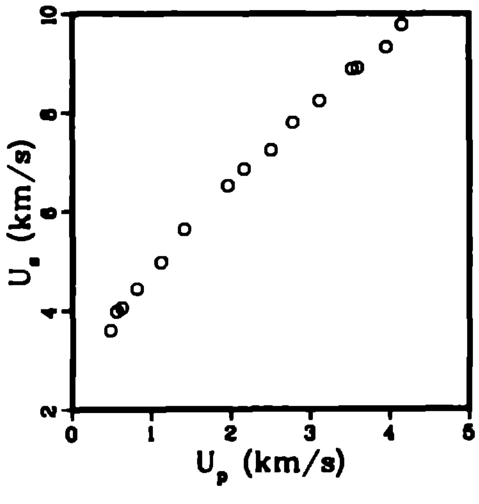


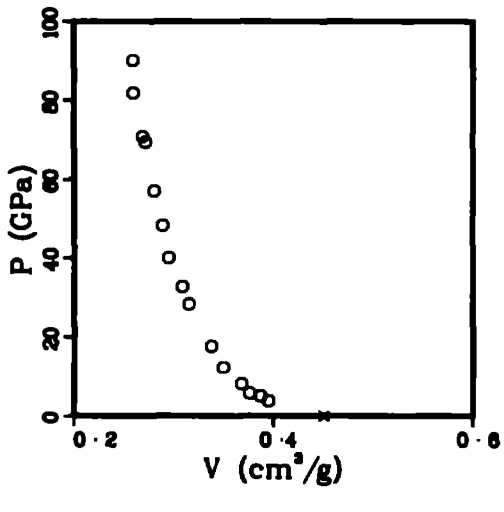


EPOXY-40 VOL% PERICLASE

Average ρ_0 = 2.219 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.194	3.597	.477	3.764	.3953	2.529	.867	iml o
2.218	3.979	.562	4.960	.3872	2.583	.859	iml o
2.248	4.053	.626	5.704	.3761	2.659	.846	iml o
2.218	4.439	.814	8.013	.3682	2.716	.817	iml o
2.218	4.976	1.117	12.328	.3496	2.860	.776	iml o
2.218	5.633	1.413	17.654	.3378	2.961	.749	iml o
2.218	6.521	1.958	28.320	.3155	3.170	.700	iml o
2.218	6.855	2.162	32.872	.3087	3.240	.685	iml o
2.218	7.231	2.501	40.112	.2949	3.391	.654	iml o
2.225	7.797	2.779	48.211	.2892	3.457	.644	iml o
2.218	8.240	3.114	56.912	.2805	3.565	.622	iml o
2.218	8.876	3.521	69.318	.2720	3.676	.603	iml o
2.218	8.897	3.589	70.824	.2690	3.718	.597	iml o
2.218	9.325	3.958	81.863	.2595	3.854	.576	iml o
2.218	9.785	4.152	90.111	.2595	3.853	.576	iml o



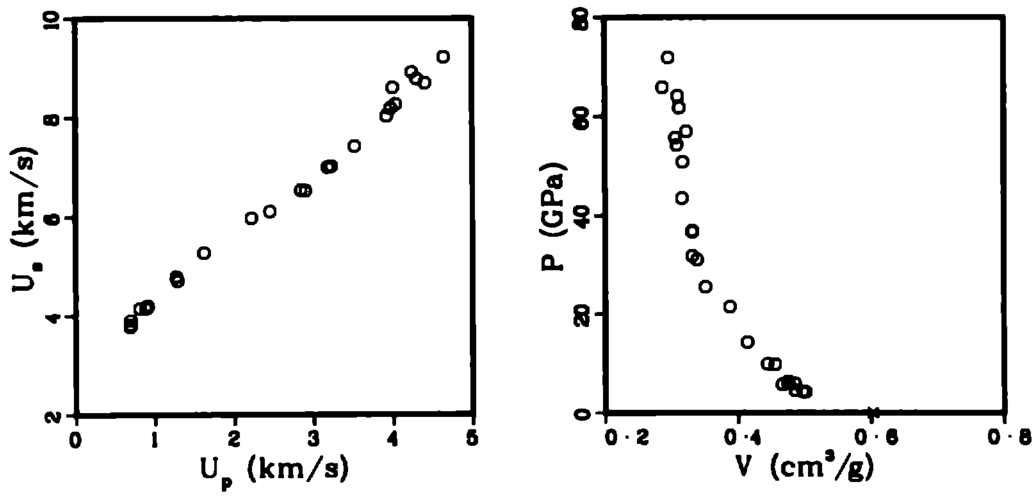


EPOXY-40 VOL% QUARTZ

Average ρ_0 = 1.660 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.633	3.779	.687	4.240	.5010	1.996	.818	iml o
1.646	3.804	.690	4.320	.4973	2.011	.819	iml o
1.693	3.902	.692	4.571	.4859	2.058	.823	iml o
1.726	4.152	.809	5.798	.4665	2.144	.805	iml o
1.622	4.163	.888	5.996	.4850	2.062	.787	iml o
1.653	4.171	.893	6.157	.4754	2.103	.786	iml o
1.649	4.197	.909	6.291	.4751	2.105	.783	iml o
1.614	4.787	1.267	9.789	.4556	2.195	.735	iml o
1.636	4.705	1.287	9.907	.4440	2.252	.726	iml o
1.673	5.267	1.619	14.266	.4140	2.415	.693	iml o
1.621	5.976	2.218	21.486	.3879	2.578	.629	iml o
1.706	6.109	2.451	25.544	.3510	2.849	.599	iml o
1.670	6.537	2.840	31.004	.3387	2.953	.566	iml o
1.678	6.528	2.899	31.756	.3313	3.018	.556	iml o
1.646	7.000	3.181	36.651	.3315	3.017	.546	iml o
1.631	7.021	3.227	36.953	.3313	3.018	.540	iml o
1.665	7.431	3.519	43.539	.3162	3.163	.526	iml o
1.613	8.033	3.923	50.831	.3172	3.153	.512	iml o
1.669	8.187	3.974	54.301	.3083	3.243	.515	iml o
1.657	8.600	4.001	57.015	.3227	3.099	.535	iml o
1.670	8.268	4.039	55.769	.3063	3.265	.511	iml o
1.695	8.920	4.240	64.106	.3095	3.231	.525	iml o

(Continued)



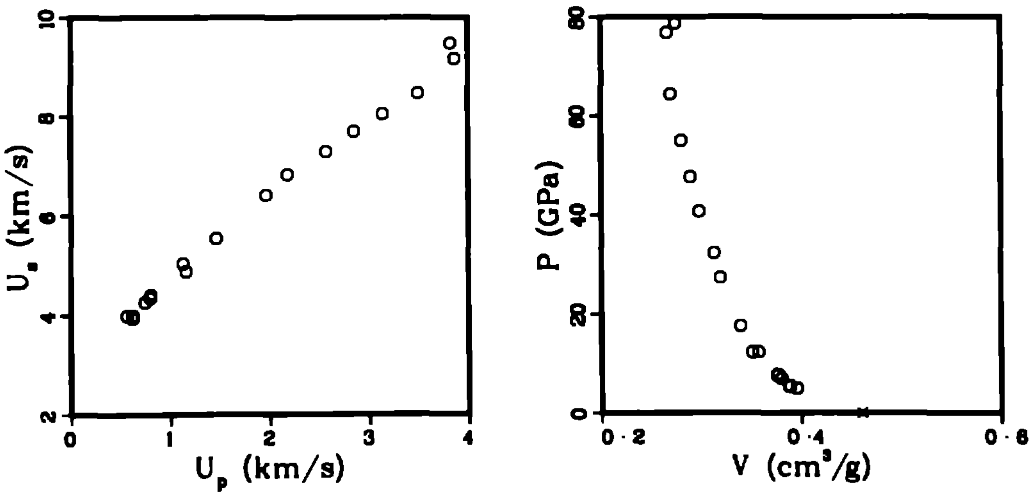
EPOXY-40 VOL% QUARTZ
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.635	8.782	4.300	61.742	.3121	3.204	.510	iml o
1.718	8.693	4.408	65.832	.2869	3.485	.493	iml o
1.680	9.224	4.643	71.949	.2956	3.383	.497	iml o

EPOXY-40 VOL% SPINEL

Average ρ_0 = 2.171 g/cm^3.

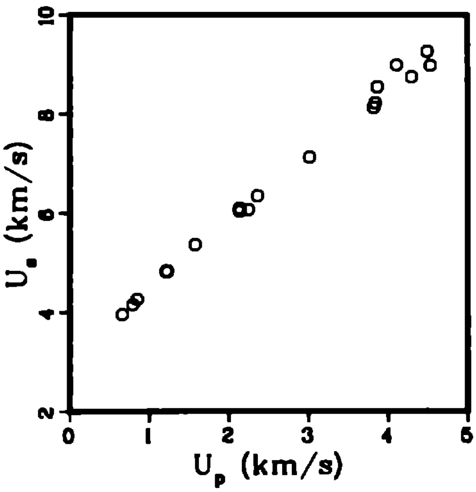
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.171	3.995	.566	4.909	.3954	2.529	.858	iml	o
2.171	3.942	.623	5.332	.3878	2.579	.842	iml	o
2.171	3.991	.626	5.424	.3884	2.575	.843	iml	o
2.171	4.264	.747	6.915	.3799	2.632	.825	iml	o
2.171	4.351	.800	7.557	.3759	2.660	.816	iml	o
2.171	4.406	.806	7.710	.3764	2.657	.817	iml	o
2.171	5.045	1.133	12.409	.3572	2.800	.775	iml	o
2.171	4.885	1.163	12.334	.3510	2.849	.762	iml	o
2.170	5.549	1.462	17.604	.3394	2.946	.737	iml	o
2.171	6.420	1.968	27.430	.3194	3.131	.693	iml	o
2.171	6.828	2.182	32.345	.3134	3.191	.680	iml	o
2.171	7.285	2.571	40.662	.2981	3.355	.647	iml	o
2.171	7.689	2.854	47.641	.2896	3.452	.629	iml	o
2.171	8.047	3.143	54.908	.2807	3.562	.609	iml	o
2.171	8.467	3.501	64.355	.2702	3.702	.587	iml	o
2.171	9.479	3.825	78.714	.2747	3.640	.596	iml	o
2.171	9.162	3.864	76.858	.2664	3.754	.578	iml	o

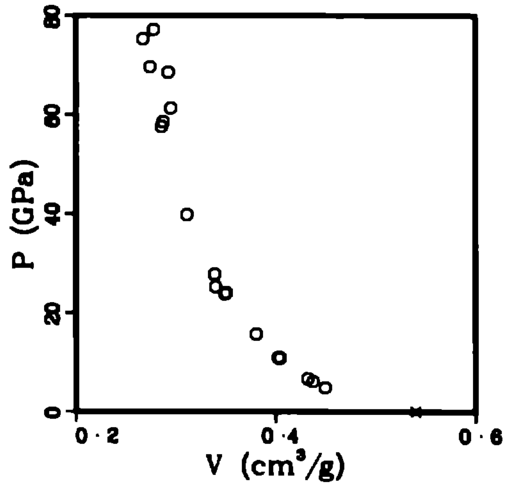


EPOXY-40 VOL% WOLLASTONITE

Average ρ_0 = 1.852 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.853	3.953	.660	4.834	.4496	2.224	.833	iml	o
1.850	4.154	.793	6.094	.4374	2.286	.809	iml	o
1.854	4.264	.848	6.704	.4321	2.314	.801	iml	o
1.852	4.827	1.212	10.835	.4044	2.473	.749	iml	o
1.851	4.820	1.227	10.947	.4027	2.483	.745	iml	o
1.854	5.354	1.576	15.644	.3806	2.627	.706	iml	o
1.853	6.090	2.134	24.082	.3506	2.853	.650	iml	o
1.849	6.038	2.138	23.869	.3493	2.863	.646	iml	o
1.853	6.070	2.246	25.262	.3400	2.941	.630	iml	o
1.852	6.346	2.361	27.748	.3391	2.949	.628	iml	o
1.851	7.122	3.017	39.773	.3114	3.211	.576	iml	o
1.853	8.130	3.822	57.578	.2860	3.497	.530	iml	o
1.852	8.222	3.842	58.503	.2876	3.477	.533	iml	o
1.853	8.545	3.870	61.277	.2953	3.387	.547	iml	o
1.853	8.987	4.111	68.460	.2928	3.415	.543	iml	o
1.852	8.745	4.298	69.609	.2746	3.642	.509	iml	o
1.852	9.269	4.495	77.162	.2781	3.596	.515	iml	o
1.850	8.978	4.534	75.307	.2676	3.737	.495	iml	o



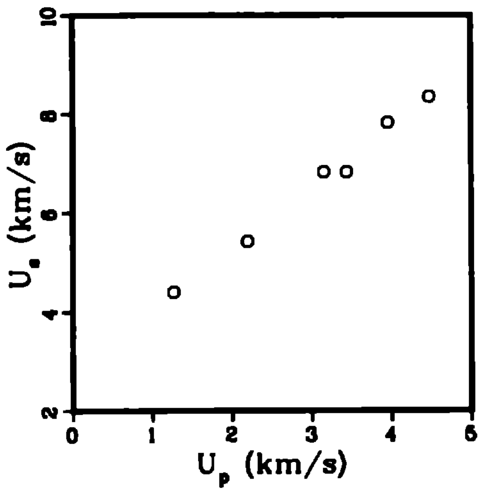


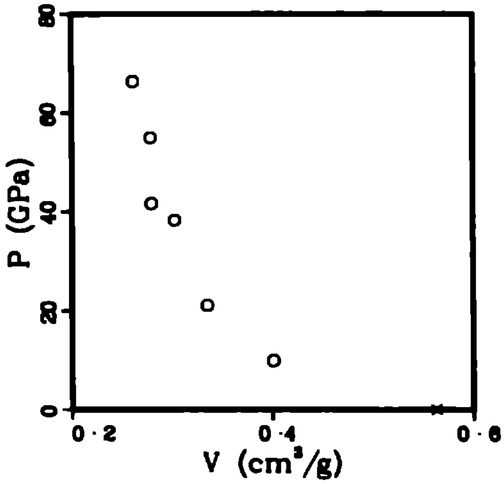
EPOXY-71 WT% LITHIUM ALUMINUM SILICATE

Average ρ_0 = 1.775 g/cm^3.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.777	4.408	1.267	9.924	.4010	2.494	.713	iml o
1.776	5.417	2.194	21.108	.3350	2.985	.595	iml o
1.776	6.821	3.154	38.208	.3027	3.304	.538	iml o
1.774	6.822	3.439	41.620	.2795	3.577	.496	iml o
1.775	7.827	3.958	54.988	.2785	3.591	.494	iml o
1.775	8.348	4.476	66.324	.2613	3.827	.464	iml o





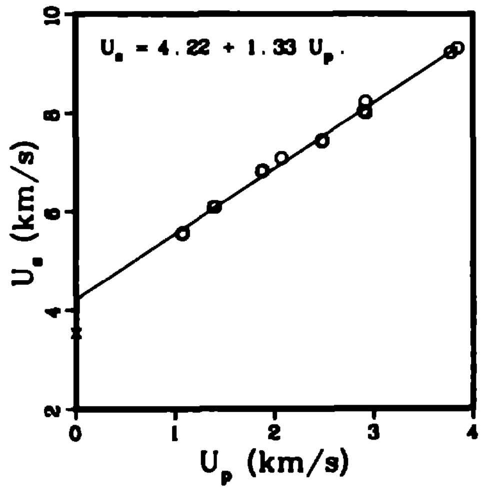
EPOXY-90 WT% LITHIUM TETRABORATE

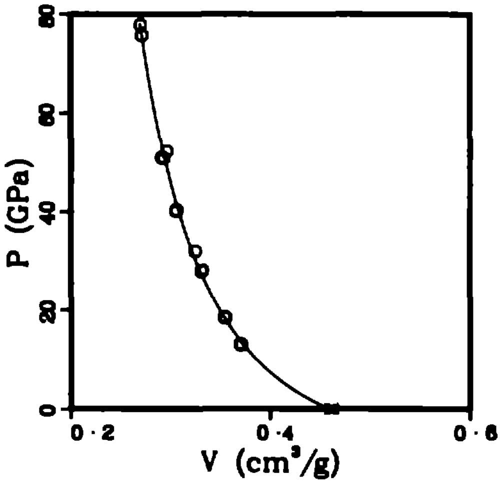
Average ρ_0 = 2.176 g/cm^3.

Sound velocities longitudinal 4.91 km/s.
shear 2.95 km/s.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.160	3.536	0.000	0.000	.4630	2.160	1.000	ssp ×
2.174	5.544	1.072	12.920	.3710	2.695	.807	iml o
2.181	5.565	1.080	13.108	.3695	2.706	.806	iml o
2.177	6.091	1.388	18.405	.3547	2.819	.772	iml o
2.175	6.087	1.403	18.575	.3538	2.826	.770	iml o
2.188	6.813	1.873	27.921	.3314	3.018	.725	iml o
2.181	6.832	1.883	28.058	.3321	3.011	.724	iml o
2.177	7.086	2.072	31.963	.3250	3.077	.708	iml o
2.179	7.425	2.479	40.108	.3057	3.271	.666	iml o
2.176	7.446	2.488	40.312	.3060	3.268	.666	iml o
2.178	8.038	2.906	50.875	.2931	3.411	.638	iml o
2.176	8.226	2.922	52.303	.2963	3.375	.645	iml o
2.178	8.002	2.927	51.013	.2912	3.434	.634	iml o
2.173	9.222	3.778	75.709	.2717	3.681	.590	iml o
2.172	9.316	3.848	77.862	.2702	3.701	.587	iml o

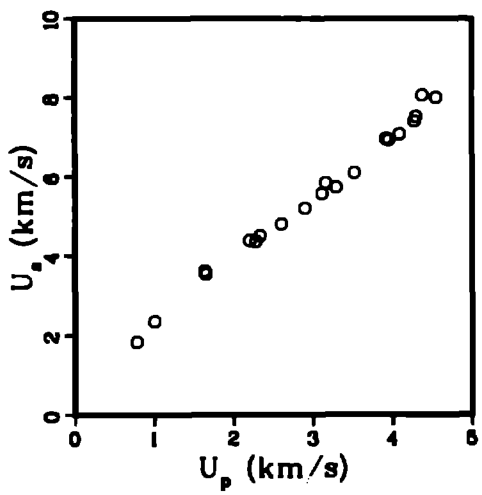


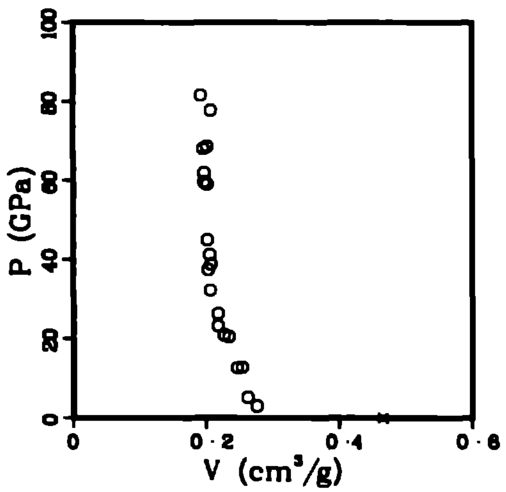


NIOBIUM CARBIDE-50 WT% CARBON

Average ρ_0 = 2.148 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.087	1.837	.777	2.979	.2765	3.617	.577	iml o
2.188	2.350	1.000	5.142	.2626	3.809	.574	iml o
2.155	3.615	1.636	12.745	.2540	3.936	.547	iml o
2.163	3.543	1.654	12.675	.2465	4.057	.533	iml o
2.124	4.382	2.203	20.504	.2341	4.271	.497	iml o
2.101	4.360	2.282	20.904	.2268	4.408	.477	iml o
2.209	4.501	2.334	23.206	.2179	4.588	.481	iml o
2.100	4.800	2.604	26.248	.2179	4.590	.457	iml o
2.136	5.196	2.899	32.175	.2070	4.832	.442	iml o
2.160	5.561	3.113	37.393	.2038	4.907	.440	iml o
2.231	5.840	3.158	41.146	.2058	4.858	.459	iml o
2.054	5.738	3.290	38.775	.2077	4.814	.427	iml o
2.089	6.100	3.521	44.868	.2024	4.941	.423	iml o
2.161	6.961	3.924	59.028	.2019	4.953	.436	iml o
2.171	6.931	3.960	59.587	.1974	5.065	.429	iml o
2.137	7.077	4.094	61.916	.1972	5.070	.422	iml o
2.145	7.405	4.282	68.014	.1966	5.086	.422	iml o
2.117	7.527	4.302	68.551	.2024	4.941	.428	iml o
2.201	8.066	4.379	77.742	.2077	4.815	.457	iml o
2.238	8.005	4.552	81.550	.1927	5.188	.431	iml o

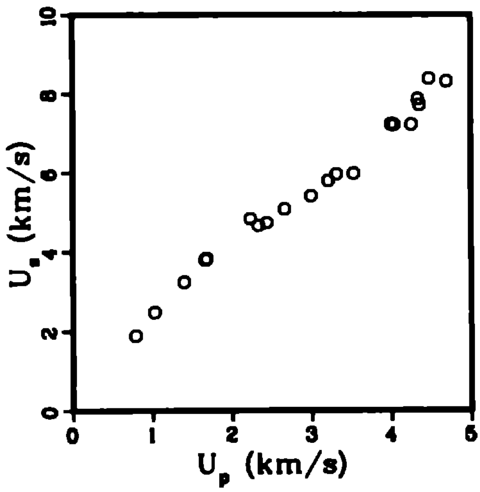


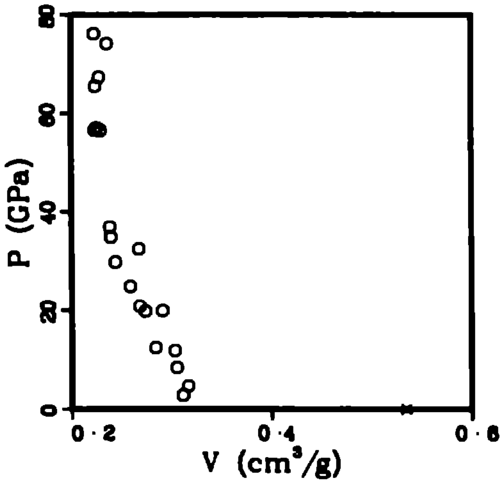


NIOBIUM CARBIDE-70 WT% CARBON

Average ρ_0 = 1.871 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.873	1.890	.788	2.789	.3113	3.212	.583	iml o
1.848	2.472	1.026	4.687	.3165	3.159	.585	iml o
1.864	3.242	1.398	8.448	.3051	3.277	.569	iml o
1.978	3.796	1.663	12.487	.2841	3.520	.562	iml o
1.850	3.825	1.679	11.881	.3033	3.297	.561	iml o
1.850	4.828	2.229	19.909	.2910	3.437	.538	iml o
1.825	4.658	2.330	19.807	.2739	3.652	.500	iml o
1.807	4.729	2.437	20.825	.2682	3.728	.485	iml o
1.840	5.081	2.661	24.878	.2589	3.863	.476	iml o
1.835	5.416	2.993	29.746	.2438	4.102	.447	iml o
1.865	5.800	3.211	34.733	.2393	4.178	.446	iml o
1.864	5.963	3.314	36.835	.2383	4.196	.444	iml o
1.533	5.982	3.530	32.372	.2674	3.740	.410	iml o
1.952	7.242	4.001	56.560	.2293	4.362	.448	iml o
1.956	7.224	4.039	57.072	.2254	4.436	.441	iml o
1.841	7.231	4.256	56.657	.2235	4.475	.411	iml o
1.972	7.874	4.337	67.343	.2278	4.390	.449	iml o
1.946	7.724	4.357	65.490	.2240	4.464	.436	iml o
1.977	8.386	4.477	74.225	.2358	4.241	.466	iml o
1.951	8.316	4.698	76.223	.2230	4.484	.435	iml o

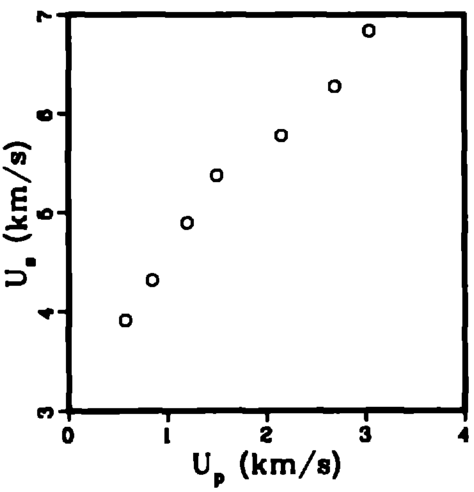


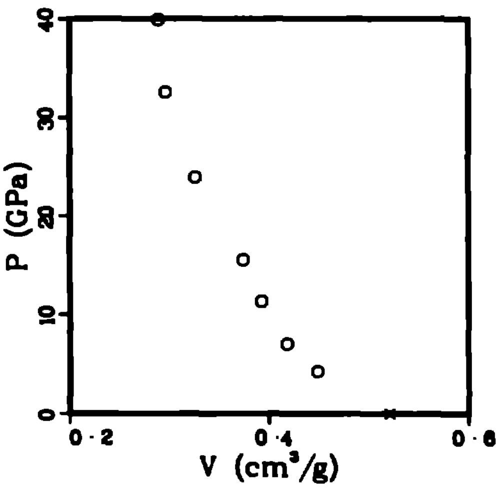


PARAFFIN-81.3 WT% ALPHA QUARTZ

Average ρ_0 = 1.920 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.904	3.911	.569	4.237	.4488	2.228	.855	iml o
1.921	4.318	.847	7.026	.4165	2.390	.804	iml o
1.923	4.896	1.199	11.289	.3927	2.547	.755	iml o
1.924	5.375	1.502	15.533	.3745	2.670	.721	iml o
1.923	5.777	2.151	23.896	.3264	3.064	.628	iml o
1.924	6.277	2.695	32.547	.2966	3.372	.571	iml o
1.918	6.839	3.042	39.903	.2895	3.455	.555	iml o

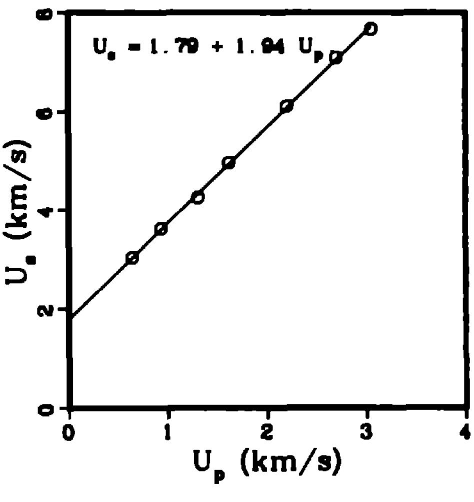


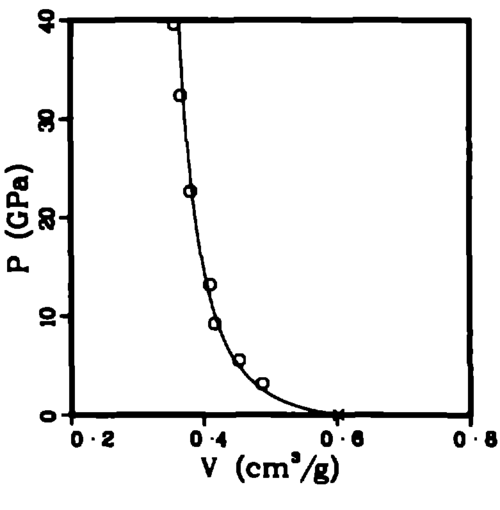


PARAFFIN-65.6 WT% CORUNDUM

Average ρ_0 = 1.662 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.622	3.036	.636	3.132	.4874	2.052	.791	iml o
1.637	3.619	.932	5.521	.4536	2.205	.742	iml o
1.664	4.253	1.305	9.235	.4166	2.401	.693	iml o
1.647	4.959	1.615	13.190	.4094	2.442	.674	iml o
1.681	6.111	2.204	22.641	.3803	2.629	.639	iml o
1.691	7.089	2.701	32.378	.3660	2.732	.619	iml o
1.691	7.671	3.053	39.602	.3560	2.809	.602	iml o

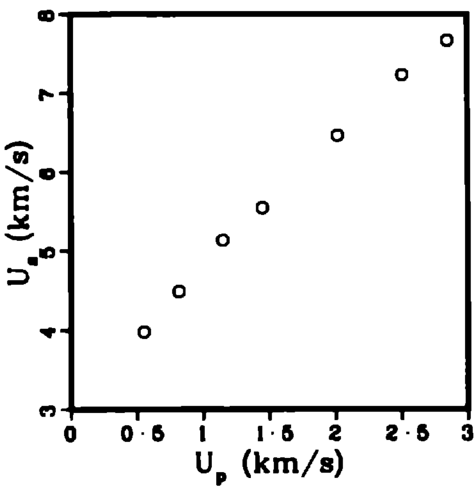


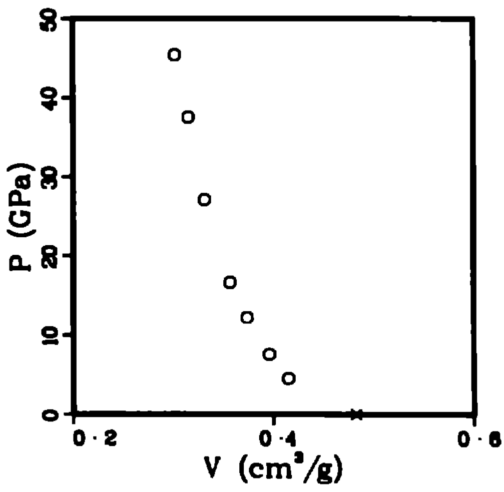


PARAFFIN-80.2 WT% ENSTATITE

Average ρ_0 = 2.073 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
2.075	3.980	.551	4.550	.4152	2.408	.862	iml	o
2.066	4.492	.817	7.582	.3960	2.525	.818	iml	o
2.077	5.136	1.149	12.257	.3738	2.676	.776	iml	o
2.070	5.549	1.450	16.655	.3569	2.802	.739	iml	o
2.074	6.471	2.019	27.097	.3317	3.015	.688	iml	o
2.070	7.236	2.508	37.566	.3157	3.168	.653	iml	o
2.079	7.671	2.849	45.436	.3024	3.307	.629	iml	o

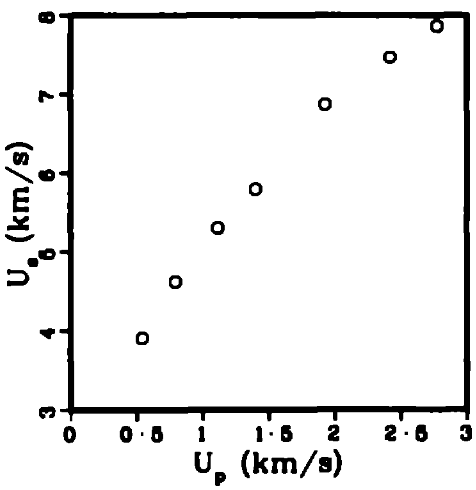


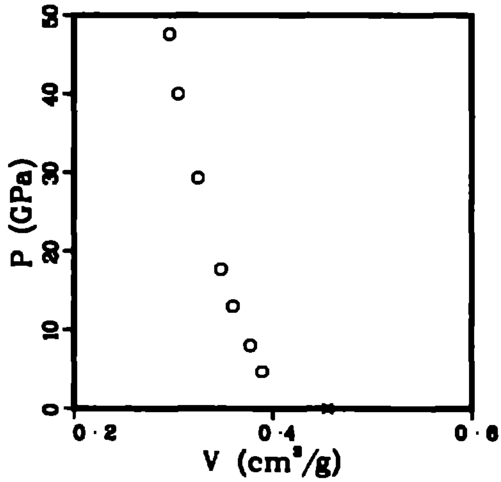


PARAFFIN-85.3 WT% FORSTERITE

Average ρ_s = 2.198 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.213	3.905	.542	4.684	.3892	2.570	.861	iml o
2.194	4.620	.792	8.028	.3777	2.648	.829	iml o
2.193	5.298	1.115	12.955	.3600	2.778	.790	iml o
2.179	5.794	1.401	17.688	.3480	2.874	.758	iml o
2.211	t.869	1.930	29.312	.3252	3.075	.719	iml o
2.212	7.469	2.421	39.998	.3055	3.273	.676	iml o
2.183	7.865	2.775	47.645	.2965	3.373	.647	iml o

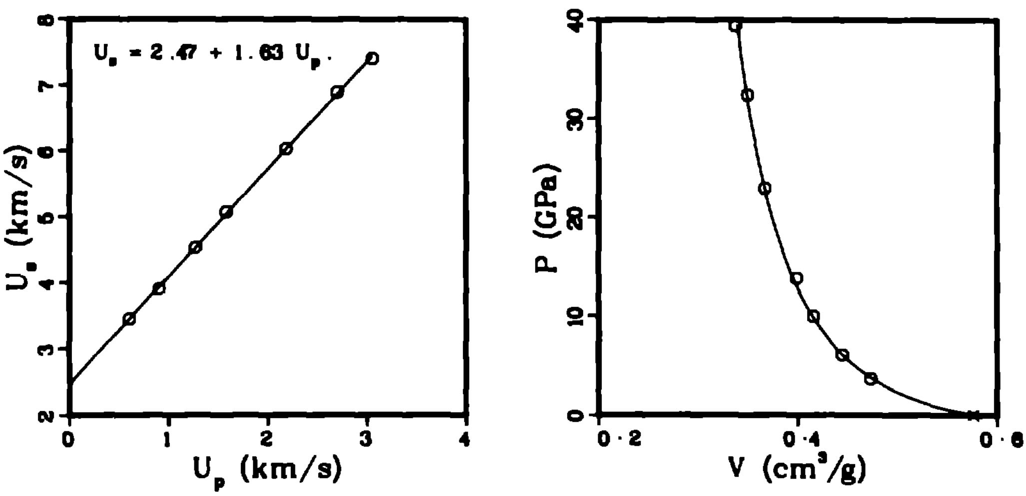




PARAFFIN-61.0 WT% HEMATITE

Average ρ_0 = 1.736 g/cm^3.

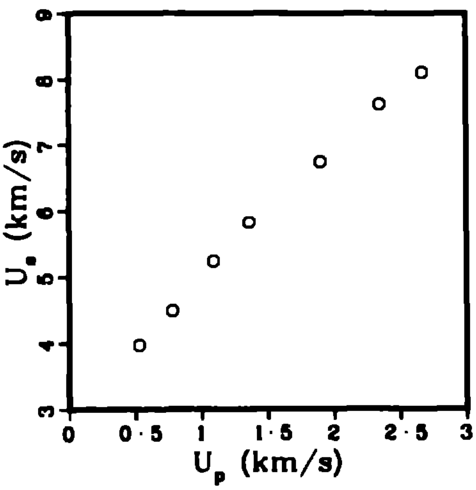
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.744	3.456	.604	3.640	.4732	2.113	.825	iml o
1.729	3.905	.901	6.083	.4449	2.248	.769	iml o
1.733	4.539	1.267	9.966	.4160	2.404	.721	iml o
1.725	5.076	1.583	13.861	.3989	2.507	.688	iml o
1.737	6.035	2.190	22.957	.3668	2.726	.637	iml o
1.741	6.894	2.700	32.407	.3494	2.862	.608	iml o
1.740	7.407	3.059	39.425	.3374	2.964	.587	iml o

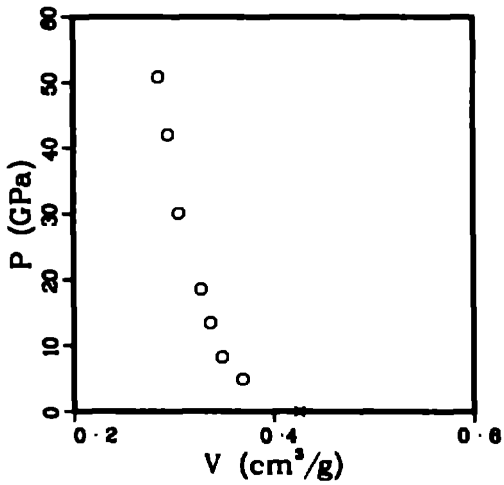


PARAFFIN-84.2 WT% PERICLASE

Average ρ_0 = 2.353 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
2.350	3.968	.528	4.923	.3689	2.711	.867	iml o
2.373	4.486	.778	8.282	.3483	2.871	.827	iml o
2.352	5.236	1.091	13.436	.3366	2.971	.792	iml o
2.339	5.825	1.362	18.557	.3276	3.053	.766	iml o
2.351	6.742	1.899	30.100	.3055	3.273	.718	iml o
2.351	7.623	2.348	42.080	.2943	3.397	.692	iml o
2.352	8.104	2.669	50.873	.2851	3.507	.671	iml o

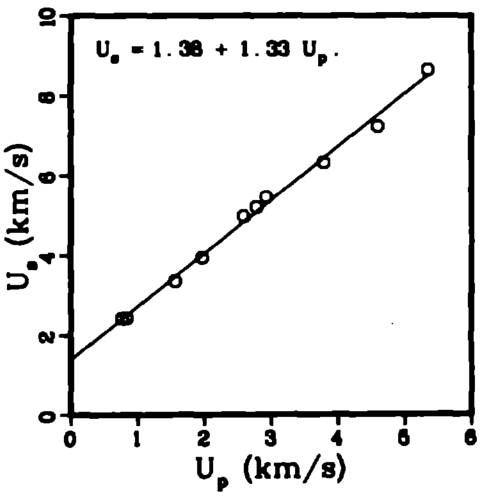


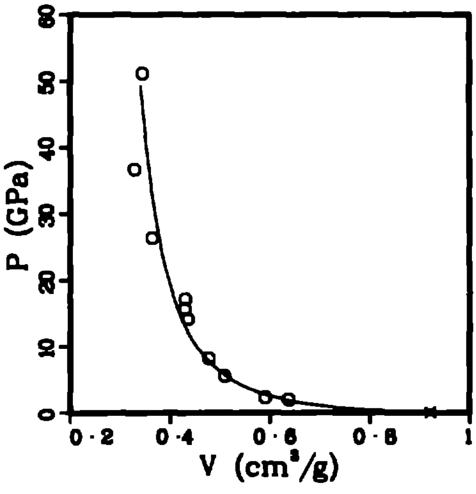


PHENOLIC REFRASIL, low-density phenolic, GE M-3057

Average ρ_o = 1.086 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.071	2.421	.766	1.986	.6383	1.567	.684	iml o
1.111	2.431	.835	2.255	.5909	1.692	.657	iml o
1.050	3.352	1.560	5.491	.5091	1.964	.535	iml o
1.050	3.950	1.968	8.162	.4779	2.093	.502	iml o
1.101	4.973	2.588	14.170	.4356	2.296	.480	iml o
1.084	5.208	2.781	15.700	.4299	2.326	.466	iml o
1.074	5.459	2.931	17.184	.4312	2.319	.463	iml o
1.101	6.321	3.789	26.369	.3638	2.749	.401	iml o
1.107	7.220	4.593	36.710	.3287	3.042	.364	iml o
1.107	8.641	5.347	51.147	.3444	2.904	.381	iml o

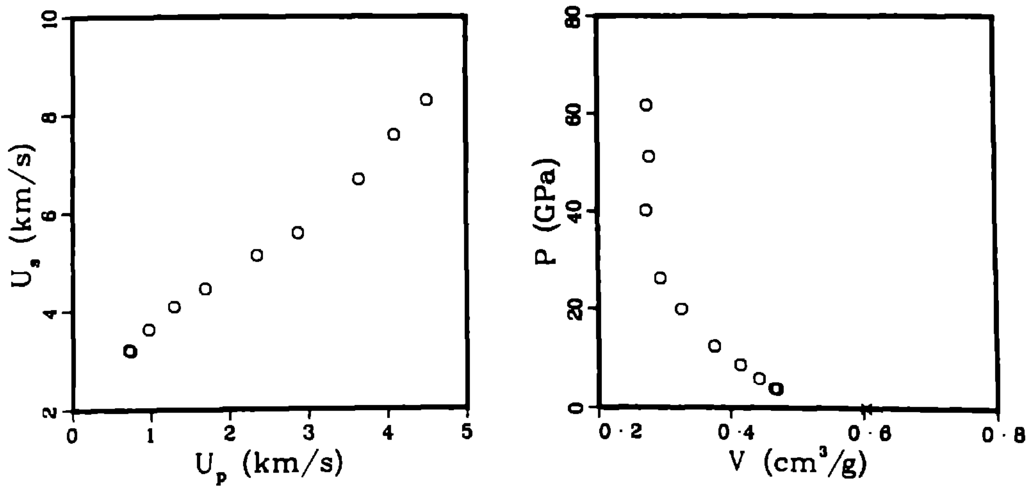




PHENOLIC REFRASIL, McDonnell-Douglas

Average ρ_0 = 1.656 g/cm^3.

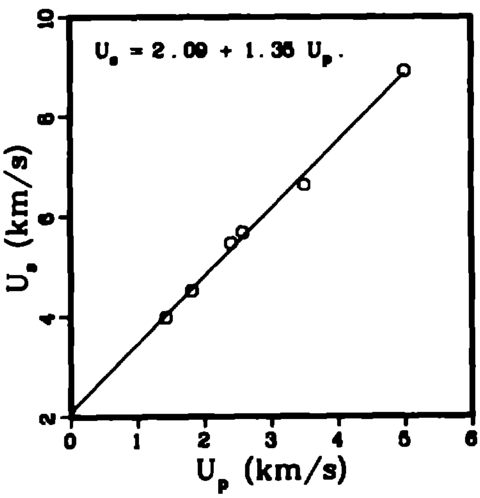
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.659	3.213	.708	3.774	.4699	2.128	.780	iml o
1.652	3.192	.735	3.876	.4659	2.146	.770	iml o
1.654	3.629	.971	5.828	.4428	2.258	.732	iml o
1.651	4.085	1.289	8.693	.4146	2.412	.684	iml o
1.659	4.454	1.680	12.414	.3754	2.664	.623	iml o
1.666	5.120	2.336	19.926	.3264	3.064	.544	iml o
1.655	5.560	2.852	26.244	.2943	3.398	.487	iml o
1.660	6.663	3.631	40.161	.2741	3.648	.455	iml o
1.652	7.577	4.085	51.133	.2790	3.585	.461	iml o
1.657	8.278	4.498	61.697	.2756	3.629	.457	iml o

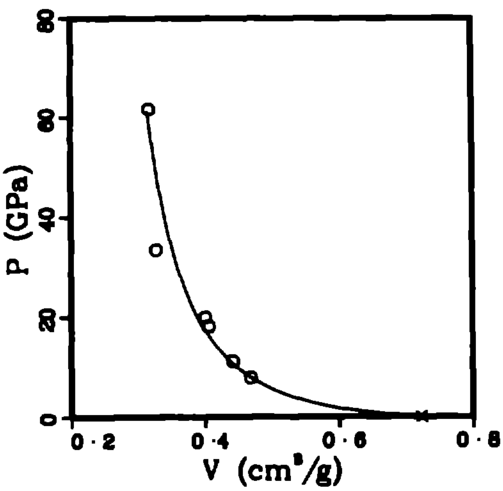


PHENOLIC REFRASIL, multiple-warp, GE 2B-3057

Average ρ_0 = 1.382 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.371	3.984	1.430	7.811	.4676	2.139	.641	iml o
1.353	4.509	1.814	11.067	.4418	2.264	.598	iml o
1.382	5.472	2.400	18.150	.4062	2.462	.561	iml o
1.361	5.680	2.583	19.968	.4006	2.496	.545	iml o
1.442	6.635	3.503	33.516	.3274	3.055	.472	iml o
1.384	8.916	5.005	61.760	.3169	3.155	.439	iml o



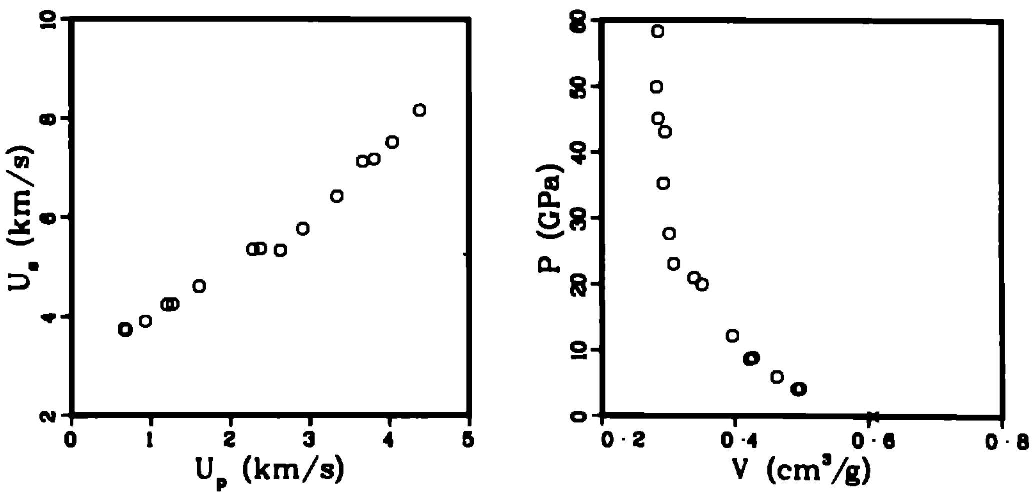


PHENOLIC REFRASIL, one-dimensional weave, Avco

Average ρ_0 = 1.649 g/cm^3.

Reference 13

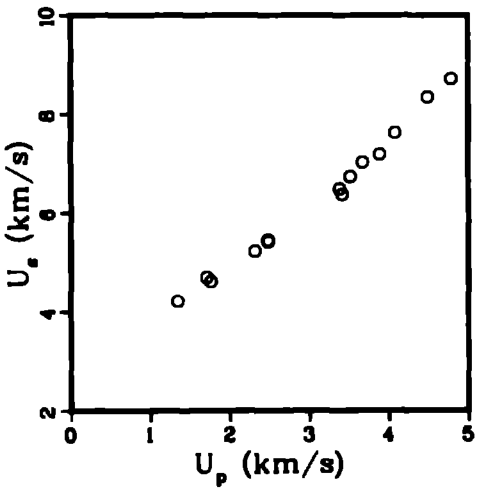
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.667	3.744	.664	4.144	.4935	2.026	.823	iml o
1.641	3.720	.683	4.169	.4975	2.010	.816	iml o
1.647	3.903	.929	5.972	.4626	2.161	.762	iml o
1.699	4.237	1.201	8.646	.4217	2.371	.717	iml o
1.642	4.245	1.270	8.852	.4268	2.343	.701	iml o
1.645	4.604	1.605	12.156	.3960	2.525	.651	iml o
1.637	5.345	2.279	19.941	.3504	2.854	.574	iml o
1.646	5.358	2.374	20.937	.3384	2.956	.557	iml o
1.646	5.325	2.627	23.026	.3078	3.249	.507	iml o
1.645	5.769	2.910	27.616	.3013	3.319	.496	iml o
1.643	6.423	3.339	35.236	.2922	3.422	.480	iml o
1.650	7.130	3.663	43.093	.2947	3.393	.486	iml o
1.651	7.179	3.808	45.134	.2844	3.516	.470	iml o
1.643	7.526	4.036	49.906	.2822	3.543	.464	iml o
1.630	8.170	4.381	58.342	.2845	3.515	.464	iml o

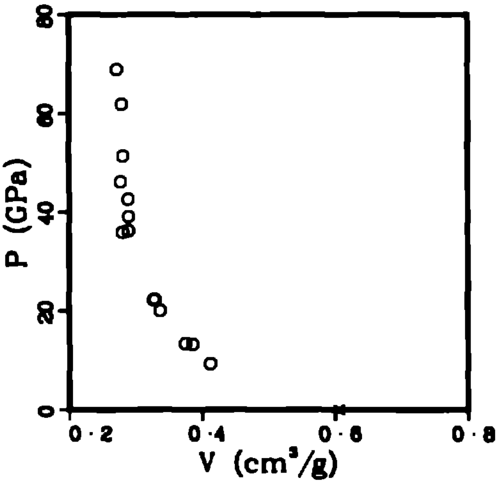


PHENOLIC REFRASIL, three-dimensional weave, Avco

Average ρ_0 = 1.651 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.651	4.209	1.346	9.353	.4120	2.427	.680	iml o
1.651	4.697	1.706	13.230	.3857	2.593	.637	iml o
1.651	4.613	1.759	13.397	.3747	2.669	.619	iml o
1.651	5.225	2.316	19.979	.3372	2.965	.557	iml o
1.651	5.439	2.481	22.279	.3294	3.036	.544	iml o
1.651	5.409	2.485	22.192	.3274	3.054	.541	iml o
1.651	6.481	3.380	36.166	.2898	3.451	.478	iml o
1.651	6.366	3.414	35.882	.2809	3.560	.464	iml o
1.651	6.731	3.517	39.084	.2892	3.458	.477	iml o
1.651	7.024	3.674	42.606	.2889	3.462	.477	iml o
1.651	7.183	3.890	46.132	.2777	3.601	.458	iml o
1.651	7.624	4.078	51.331	.2817	3.550	.465	iml o
1.651	8.343	4.492	61.874	.2796	3.577	.462	iml o
1.651	8.710	4.790	68.881	.2726	3.668	.450	iml o



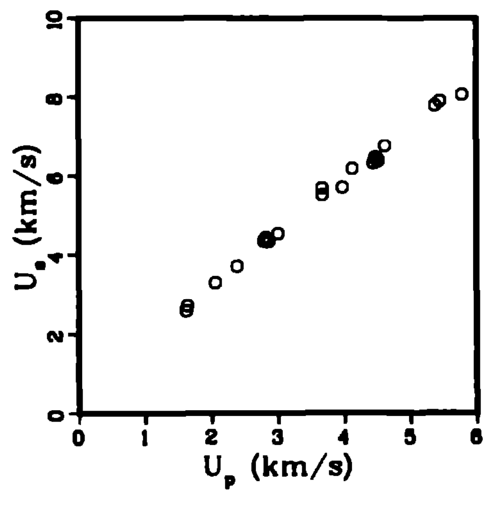


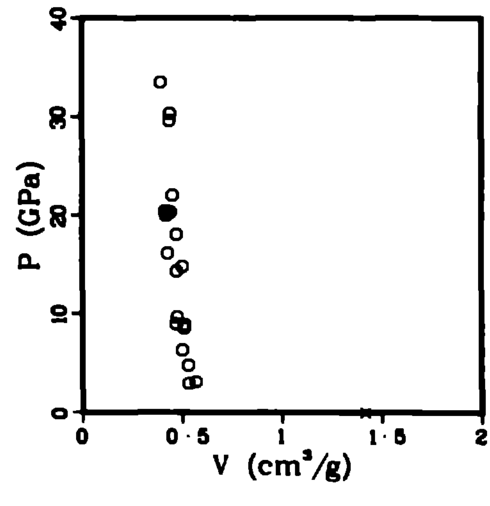
POLYURETHANE, FOAMED-50 WT% LITHIUM ALUMINUM SILICATE

Average ρ_0 = 0.707 g/cm^3.

Reference 13

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.702	2.585	1.617	2.934	.5334	1.875	.374	iml o
.699	2.712	1.632	3.094	.5697	1.755	.398	iml o
.705	3.302	2.064	4.805	.5318	1.880	.375	iml o
.712	3.716	2.390	6.323	.5012	1.995	.357	iml o
.703	4.350	2.792	8.538	.5095	1.963	.358	iml o
.708	4.433	2.825	8.866	.5123	1.952	.363	iml o
.721	4.335	2.865	8.955	.4703	2.126	.339	iml o
.709	4.531	3.007	9.660	.4744	2.108	.336	iml o
.707	5.694	3.670	14.774	.5028	1.989	.355	iml o
.706	5.517	3.674	14.310	.4732	2.113	.334	iml o
.709	5.714	3.977	16.112	.4288	2.332	.304	iml o
.705	6.188	4.127	18.004	.4724	2.117	.333	iml o
.708	6.334	4.446	19.938	.4210	2.375	.298	iml o
.701	6.478	4.472	20.308	.4417	2.264	.310	iml o
.704	6.426	4.506	20.385	.4244	2.356	.299	iml o
.707	6.387	4.517	20.397	.4141	2.415	.293	iml o
.704	6.773	4.617	22.015	.4522	2.212	.318	iml o
.706	7.794	5.380	29.604	.4387	2.279	.310	iml o
.703	7.907	5.454	30.317	.4413	2.266	.310	iml o
.717	8.065	5.787	33.464	.3939	2.538	.282	iml o



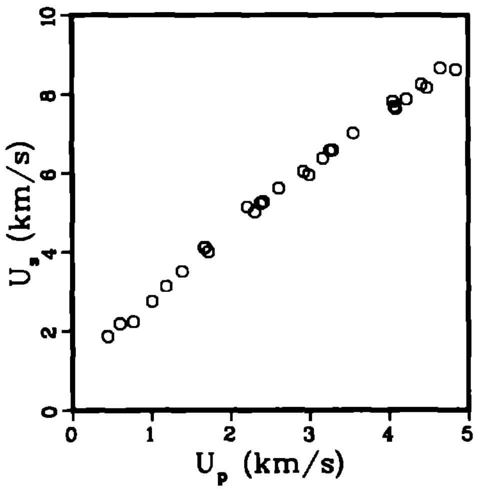


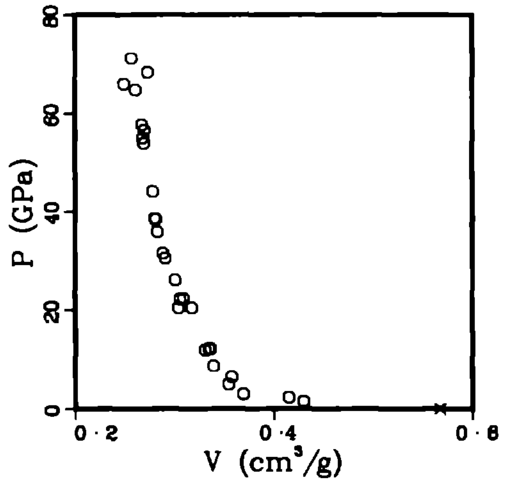
SILICON CARBIDE-50 WT% CARBON

Average ρ_0 = 1.763 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.770	1.870	.447	1.480	.4299	2.326	.761	iml o
1.744	2.185	.603	2.298	.4152	2.409	.724	iml o
1.771	2.232	.772	3.052	.3694	2.707	.654	iml o
1.780	2.742	1.012	4.939	.3545	2.821	.631	iml o
1.739	3.133	1.183	6.445	.3579	2.794	.622	iml o
1.781	3.511	1.387	8.673	.3397	2.944	.605	iml o
1.774	4.103	1.667	12.134	.3347	2.988	.594	iml o
1.760	4.113	1.680	12.161	.3361	2.975	.592	iml o
1.724	3.999	1.719	11.851	.3307	3.024	.570	iml o
1.797	5.145	2.208	20.414	.3177	3.148	.571	iml o
1.777	5.009	2.301	20.481	.3042	3.287	.541	iml o
1.787	5.239	2.375	22.235	.3059	3.269	.547	iml o
1.755	5.276	2.413	22.343	.3092	3.234	.543	iml o
1.782	5.618	2.609	26.119	.3006	3.327	.536	iml o
1.786	6.033	2.924	31.506	.2885	3.466	.515	iml o
1.713	5.958	2.990	30.516	.2908	3.439	.498	iml o
1.776	6.374	3.169	35.874	.2831	3.532	.503	iml o
1.794	6.569	3.257	38.383	.2810	3.558	.504	iml o
1.782	6.580	3.295	38.636	.2802	3.569	.499	iml o
1.774	7.007	3.548	44.103	.2783	3.594	.494	iml o
1.785	7.819	4.054	56.581	.2698	3.707	.482	iml o
1.756	7.688	4.067	54.905	.2682	3.728	.471	iml o

(Continued)





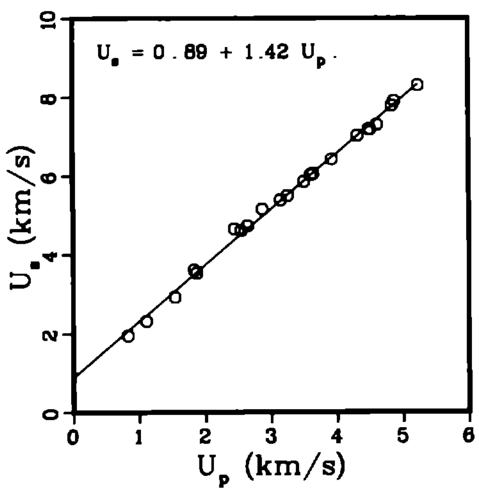
SILICON CARBIDE-50 WT% CARBON
(Continued)

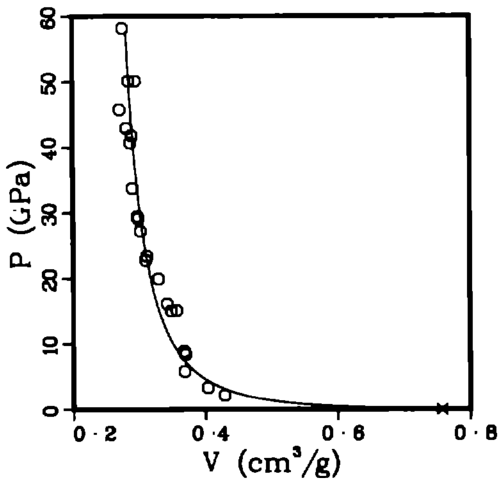
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.725	7.640	4.086	53.849	.2697	3.708	.465	iml o
1.734	7.876	4.224	57.687	.2674	3.740	.464	iml o
1.779	8.244	4.414	64.736	.2611	3.829	.465	iml o
1.804	8.157	4.482	65.954	.2497	4.004	.451	iml o
1.697	8.663	4.647	68.316	.2732	3.661	.464	iml o
1.705	8.619	4.843	71.170	.2570	3.892	.438	iml o

SILICON CARBIDE-80 WT% CARBON

Average ρ_0 = 1.320 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp	
1.341	1.947	.828	2.162	.4286	2.333	.575	im1	o
1.294	2.317	1.108	3.322	.4032	2.480	.522	im1	o
1.286	2.933	1.544	5.824	.3683	2.716	.474	im1	o
1.336	3.612	1.837	8.865	.3678	2.719	.491	im1	o
1.269	3.532	1.875	8.404	.3697	2.705	.469	im1	o
1.329	4.655	2.449	15.151	.3566	2.804	.474	im1	o
1.282	4.607	2.550	15.061	.3483	2.871	.446	im1	o
1.287	4.736	2.650	16.152	.3422	2.922	.440	im1	o
1.344	5.156	2.875	19.923	.3292	3.038	.442	im1	o
1.340	5.386	3.149	22.727	.3100	3.226	.415	im1	o
1.305	5.495	3.257	23.356	.3121	3.204	.407	im1	o
1.325	5.851	3.508	27.196	.3022	3.309	.400	im1	o
1.340	6.021	3.611	29.134	.2987	3.348	.400	im1	o
1.336	6.051	3.644	29.459	.2977	3.359	.398	im1	o
1.338	6.420	3.926	33.724	.2903	3.444	.388	im1	o
1.342	7.026	4.318	40.714	.2872	3.482	.385	im1	o
1.295	7.186	4.494	41.821	.2893	3.457	.375	im1	o
1.324	7.192	4.510	42.945	.2817	3.550	.373	im1	o
1.357	7.304	4.617	45.762	.2711	3.689	.368	im1	o
1.329	7.790	4.842	50.129	.2848	3.512	.378	im1	o
1.301	7.904	4.877	50.151	.2944	3.397	.383	im1	o
1.338	8.299	5.238	58.163	.2757	3.628	.369	im1	o

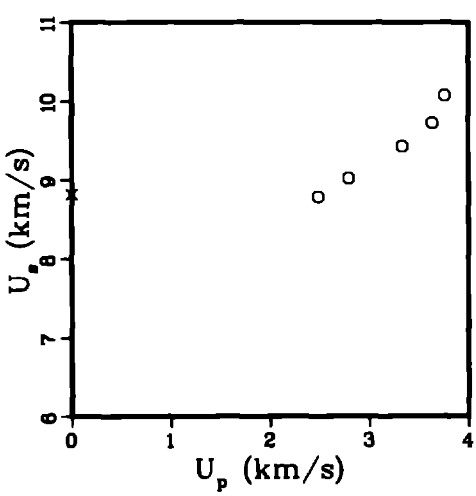


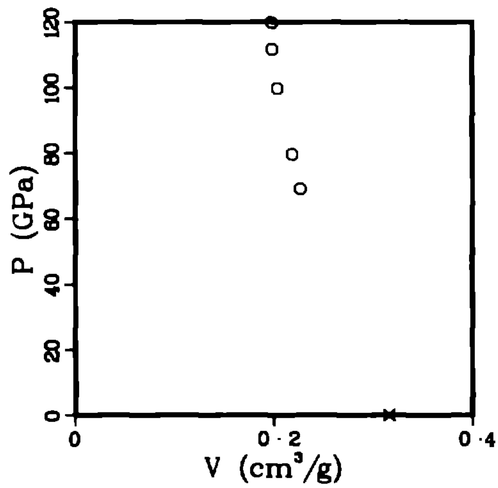


SILICON NITRIDE-5 WT% PERICLASE

Average ρ_0 = 3.164 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.160	8.818	0.000	0.000	.3165	3.160	1.000	ssp ×
3.168	8.787	2.482	69.092	.2265	4.415	.718	im1 o
3.160	9.023	2.791	79.579	.2186	4.575	.691	im1 o
3.174	9.426	3.333	99.717	.2037	4.910	.646	im1 o
3.158	9.725	3.640	111.790	.1981	5.047	.626	im1 o
3.165	10.072	3.760	119.861	.1980	5.050	.627	im1 o

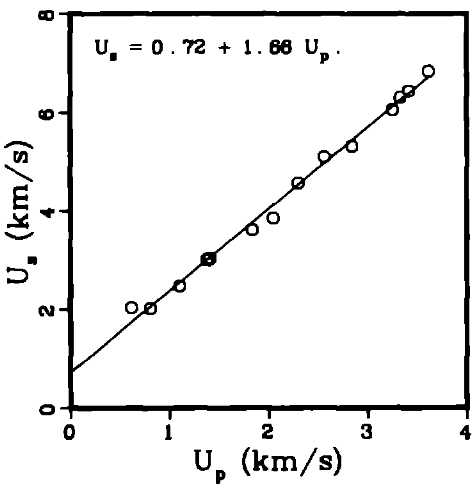


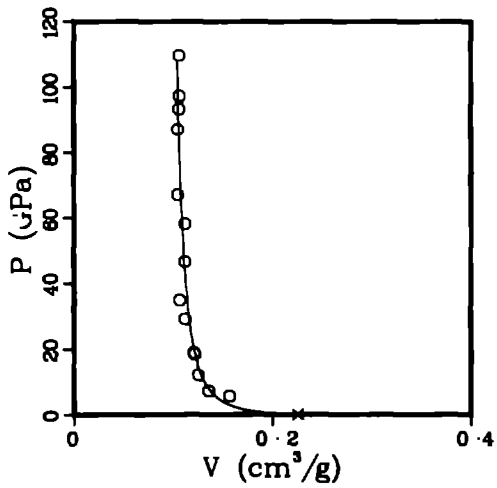


TANTALUM CARBIDE–70 WT% CARBON , ρ_0 = 4.4 g/cm^3.

Average ρ_0 = 4.433 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
4.435	2.032	.618	5.569	.1569	6.373	.696	iml o
4.413	2.020	.809	7.212	.1358	7.361	.600	iml o
4.421	2.473	1.100	12.026	.1256	7.963	.555	iml o
4.466	3.003	1.377	18.467	.1212	8.248	.541	iml o
4.439	3.032	1.405	18.910	.1209	8.272	.537	iml o
4.399	3.615	1.833	29.149	.1121	8.924	.493	iml o
4.417	3.859	2.046	34.874	.1064	9.402	.470	iml o
4.435	4.574	2.302	46.698	.1120	8.929	.497	iml o
4.460	5.105	2.561	58.310	.1117	8.950	.498	iml o
4.449	5.320	2.842	67.266	.1047	9.552	.466	iml o
4.420	6.060	3.255	87.186	.1047	9.549	.463	iml o
4.445	6.310	3.330	93.400	.1062	9.412	.472	iml o
4.426	6.443	3.414	97.356	.1062	9.415	.470	iml o
4.437	6.839	3.615	109.696	.1062	9.412	.471	iml o

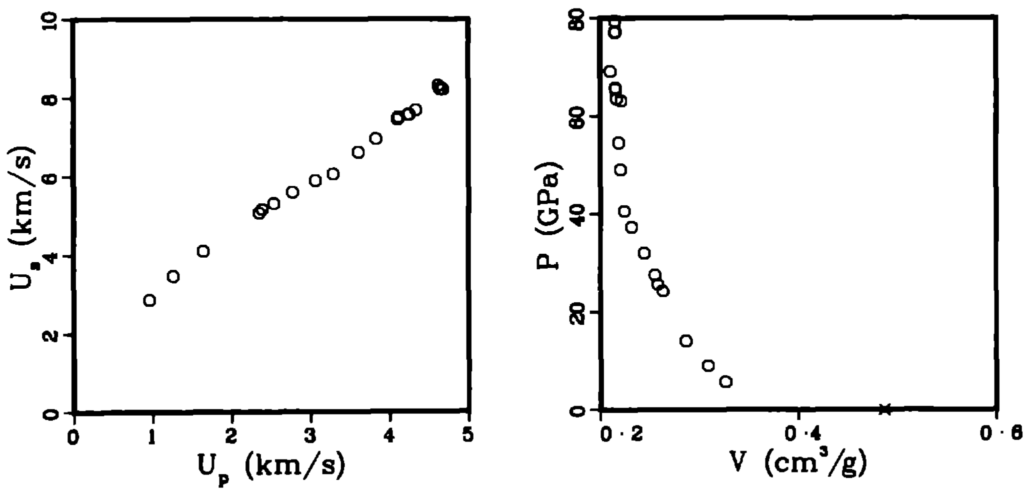




TANTALUM CARBIDE-70 WT% CARBON, ρ_0 = 2.0 g/cm^3.

Average ρ_0 = 2.054 g/cm^3.

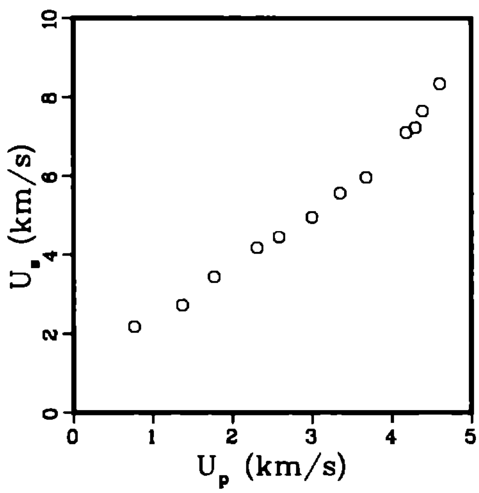
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.041	2.859	.956	5.578	.3261	3.066	.666	im1 o
2.064	3.477	1.264	9.071	.3084	3.243	.636	im1 o
2.090	4.099	1.644	14.084	.2866	3.490	.599	im1 o
2.040	5.071	2.349	24.300	.2631	3.800	.537	im1 o
2.083	5.164	2.386	25.665	.2583	3.872	.538	im1 o
2.049	5.315	2.534	27.596	.2554	3.916	.523	im1 o
2.065	5.594	2.770	31.998	.2445	4.091	.505	im1 o
2.069	5.886	3.066	37.338	.2316	4.318	.479	im1 o
2.037	6.057	3.292	40.617	.2241	4.462	.456	im1 o
2.056	6.609	3.611	49.067	.2206	4.532	.454	im1 o
2.050	6.943	3.831	54.527	.2186	4.574	.448	im1 o
2.079	7.451	4.102	63.543	.2162	4.625	.449	im1 o
2.045	7.503	4.114	63.124	.2209	4.527	.452	im1 o
2.045	7.575	4.243	65.728	.2151	4.649	.440	im1 o
2.040	7.569	4.247	65.577	.2151	4.648	.439	im1 o
2.073	7.690	4.336	69.122	.2104	4.753	.436	im1 o
2.069	8.310	4.615	79.347	.2149	4.653	.445	im1 o
2.025	8.224	4.638	77.239	.2153	4.644	.436	im1 o
2.008	8.215	4.675	77.117	.2146	4.660	.431	im1 o

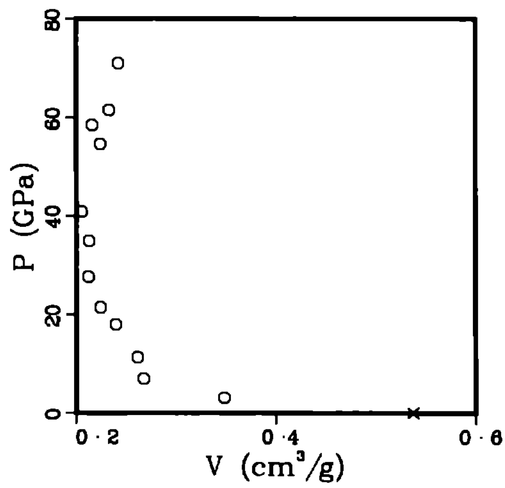


TANTALUM CARBIDE-85 WT% CARBON, ρ_0 = 1.9 g/cm^3.

Average ρ_0 = 1.860 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.860	2.173	.765	3.092	.3484	2.871	.648	im1 o
1.869	2.732	1.366	6.975	.2675	3.738	.500	im1 o
1.858	3.441	1.769	11.310	.2615	3.824	.486	im1 o
1.865	4.171	2.308	17.954	.2395	4.175	.447	im1 o
1.870	4.448	2.583	21.485	.2242	4.460	.419	im1 o
1.862	4.954	2.998	27.655	.2120	4.716	.395	im1 o
1.870	5.564	3.350	34.856	.2128	4.699	.398	im1 o
1.865	5.962	3.680	40.918	.2052	4.873	.383	im1 o
1.840	7.111	4.182	54.718	.2239	4.467	.412	im1 o
1.882	7.236	4.297	58.517	.2158	4.634	.406	im1 o
1.832	7.653	4.388	61.521	.2329	4.294	.427	im1 o
1.849	8.341	4.606	71.036	.2422	4.129	.448	im1 o

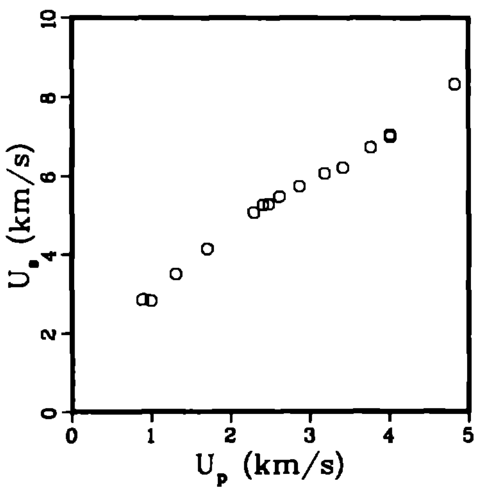


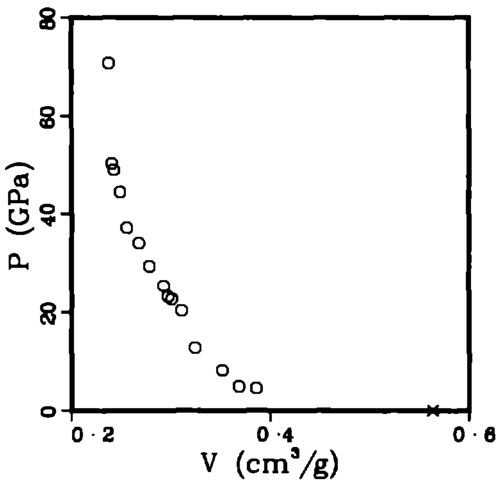


TANTALUM CARBIDE-85 WT% CARBON , ρ_0 = 1.8 g/cm^3.

Average ρ_0 = 1.775 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.788	2.848	.884	4.502	.3857	2.593	.690	im1 o
1.757	2.818	.994	4.922	.3684	2.714	.647	im1 o
1.780	3.503	1.312	8.181	.3514	2.846	.625	im1 o
1.810	4.137	1.707	12.782	.3245	3.081	.587	im1 o
1.757	5.051	2.294	20.358	.3107	3.219	.546	im1 o
1.796	5.248	2.414	22.753	.3007	3.326	.540	im1 o
1.778	5.268	2.486	23.285	.2970	3.367	.528	im1 o
1.776	5.468	2.621	25.453	.2932	3.411	.521	im1 o
1.788	5.725	2.872	29.399	.2787	3.588	.498	im1 o
1.767	6.052	3.187	34.081	.2679	3.733	.473	im1 o
1.756	6.200	3.416	37.191	.2557	3.911	.449	im1 o
1.762	6.712	3.764	44.515	.2493	4.012	.439	im1 o
1.786	7.032	4.008	50.337	.2408	4.153	.430	im1 o
1.753	6.978	4.010	49.052	.2426	4.121	.425	im1 o
1.764	8.309	4.824	70.706	.2378	4.206	.419	im1 o





TITANIUM CARBIDE-50 WT% CARBON

Average ρ_0 = 2.165 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.145	2.154	.748	3.456	.3043	3.286	.653	iml o
2.184	2.772	.951	5.757	.3008	3.325	.657	iml o
2.176	2.660	.972	5.626	.2916	3.429	.635	iml o
2.197	3.214	1.160	8.191	.2909	3.438	.639	iml o
2.176	3.412	1.325	9.837	.2811	3.558	.612	iml o
2.134	3.957	1.599	13.502	.2792	3.581	.596	iml o
2.137	3.971	1.606	13.629	.2787	3.588	.596	iml o
2.149	4.057	1.628	14.194	.2786	3.589	.599	iml o
2.163	4.320	1.772	16.558	.2727	3.667	.590	iml o
2.165	4.879	2.121	22.404	.2611	3.830	.565	iml o
2.157	4.887	2.188	23.064	.2560	3.906	.552	iml o
2.190	5.000	2.266	24.813	.2497	4.005	.547	iml o
2.153	5.280	2.511	28.545	.2436	4.105	.524	iml o
2.117	5.283	2.570	28.743	.2426	4.122	.514	iml o
2.176	5.698	2.801	34.729	.2337	4.280	.508	iml o
2.187	6.106	3.011	40.208	.2318	4.315	.507	iml o
2.201	6.333	3.091	43.085	.2326	4.299	.512	iml o
2.146	6.281	3.156	42.540	.2318	4.313	.498	iml o
2.185	6.468	3.174	44.857	.2331	4.290	.509	iml o
2.154	6.664	3.392	48.690	.2279	4.387	.491	iml o
2.135	6.828	3.505	51.095	.2279	4.387	.487	iml o
2.166	7.357	3.715	59.199	.2285	4.375	.495	iml o

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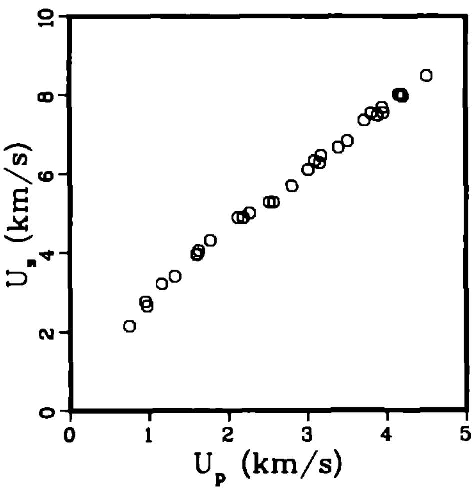
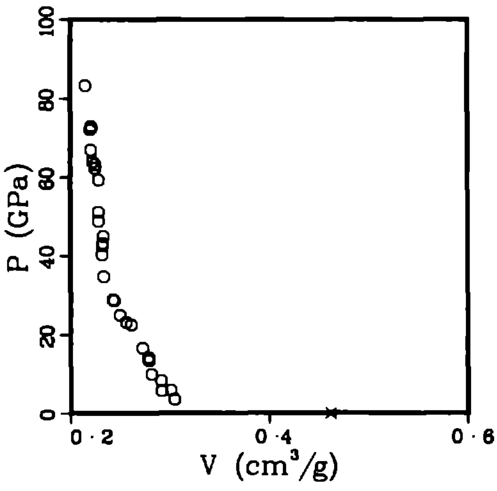




TITANIUM CARBIDE–50 WT% CARBON
(Continued)

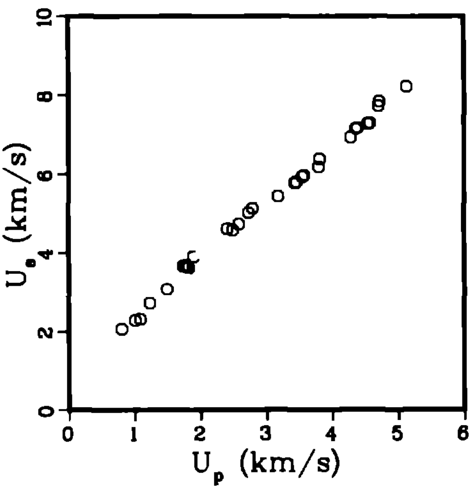
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.202	7.536	3.801	63.075	.2251	4.443	.496	iml o
2.140	7.481	3.882	62.148	.2248	4.448	.481	iml o
2.202	7.680	3.949	66.783	.2206	4.533	.486	iml o
2.138	7.545	3.955	63.799	.2225	4.493	.476	iml o
2.176	8.008	4.155	72.403	.2211	4.523	.481	iml o
2.166	8.022	4.190	72.804	.2205	4.534	.478	iml o
2.149	7.963	4.204	71.941	.2197	4.552	.472	iml o
2.176	8.479	4.508	83.174	.2152	4.646	.468	iml o

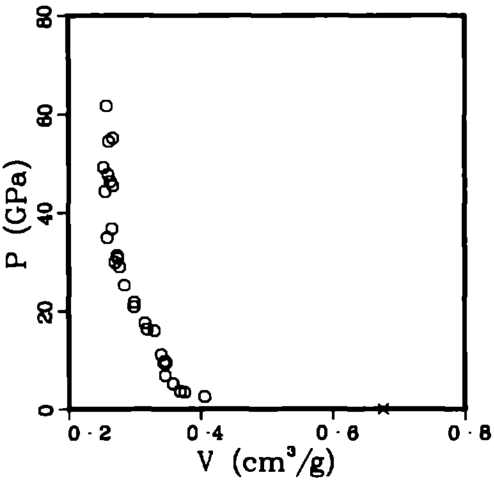
TITANIUM CARBIDE-80 WT% CARBON

Average ρ_0 = 1.480 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.502	2.063	.807	2.501	.4053	2.467	.609	im1 o
1.483	2.281	1.012	3.423	.3751	2.666	.556	im1 o
1.434	2.310	1.090	3.611	.3683	2.715	.528	im1 o
1.522	2.720	1.238	5.125	.3580	2.793	.545	im1 o
1.491	3.074	1.488	6.820	.3460	2.890	.516	im1 o
1.512	3.655	1.736	9.594	.3472	2.880	.525	im1 o
1.486	3.678	1.788	9.772	.3458	2.892	.514	im1 o
1.448	3.620	1.816	9.519	.3442	2.906	.498	im1 o
1.512	3.901	1.895	11.177	.3401	2.940	.514	im1 o
1.449	4.608	2.406	16.065	.3298	3.032	.478	im1 o
1.429	4.576	2.492	16.295	.3187	3.138	.455	im1 o
1.433	4.724	2.586	17.506	.3158	3.166	.453	im1 o
1.521	5.015	2.733	20.847	.2992	3.343	.455	im1 o
1.516	5.126	2.796	21.728	.2998	3.335	.455	im1 o
1.464	5.437	3.175	25.272	.2842	3.519	.416	im1 o
1.466	5.773	3.432	29.046	.2766	3.615	.406	im1 o
1.497	5.795	3.452	29.946	.2701	3.703	.404	im1 o
1.466	5.931	3.544	30.815	.2745	3.643	.402	im1 o
1.468	5.968	3.572	31.294	.2735	3.657	.401	im1 o
1.490	6.178	3.796	34.943	.2588	3.864	.386	im1 o
1.514	6.377	3.810	36.785	.2659	3.761	.403	im1 o
1.496	6.925	4.284	44.381	.2549	3.923	.381	im1 o

(Continued)





TITANIUM CARBIDE-80 WT% CARBON
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.460	7.147	4.364	45.537	.2667	3.749	.389	im1 o
1.474	7.166	4.390	46.370	.2628	3.805	.387	im1 o
1.445	7.276	4.546	47.796	.2597	3.851	.375	im1 o
1.474	7.297	4.576	49.218	.2530	3.953	.373	im1 o
1.501	7.722	4.699	54.465	.2608	3.834	.391	im1 o
1.492	7.836	4.714	55.113	.2670	3.745	.398	im1 o
1.464	8.221	5.126	61.694	.2572	3.889	.376	im1 o

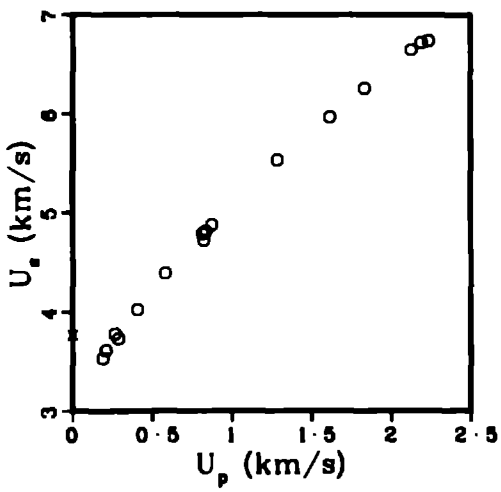
TUNGSTEN , SINTERED-24 WT% INFILTRATED COPPER ,
Elkonite 10W3

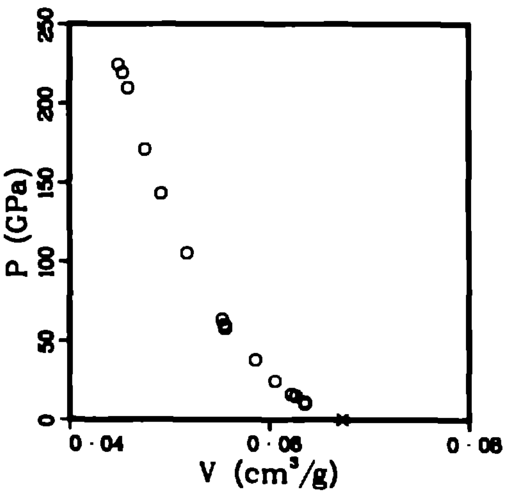
Average ρ_0 = 14.852 g/cm^3 .

Sound velocities longitudinal 4.77 km/s .
shear 2.53 km/s .

References 13 , 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
14.870	3.771	0.000	0.000	.0672	14.870	1.000	ssp x
14.890	3.535	.189	9.948	.0636	15.731	.947	iml o
14.830	3.616	.208	11.154	.0636	15.735	.942	iml o
14.840	3.783	.265	14.877	.0627	15.958	.930	iml o
14.830	3.733	.288	15.944	.0622	16.070	.923	iml o
14.830	4.024	.408	24.348	.0606	16.503	.899	iml o
14.810	4.393	.581	37.800	.0586	17.067	.868	iml o
14.900	4.791	.818	58.394	.0557	17.968	.829	iml o
14.860	4.723	.824	57.831	.0556	18.000	.826	iml o
14.880	4.812	.837	59.931	.0555	18.013	.826	iml o
14.840	4.878	.875	63.341	.0553	18.084	.821	iml o
14.830	5.534	1.285	105.459	.0518	19.315	.768	iml o
14.820	5.970	1.617	143.065	.0492	20.325	.729	iml o
14.860	6.259	1.836	170.764	.0476	21.028	.707	iml o
14.820	6.648	2.128	209.658	.0459	21.797	.680	iml o
14.880	6.722	2.191	219.151	.0453	22.075	.674	iml o
14.890	6.739	2.237	224.469	.0449	22.289	.668	iml o

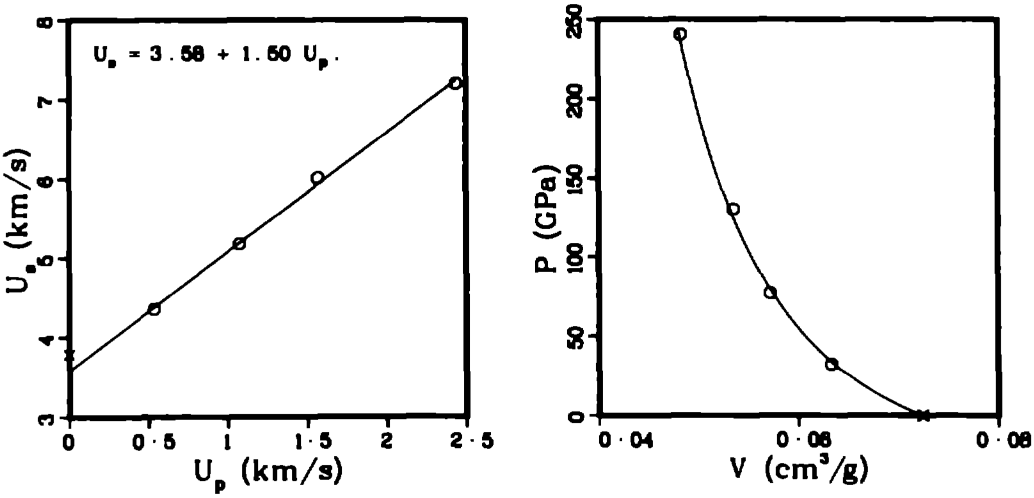




TUNGSTEN, SINTERED-32 WT% INFILTRATED COPPER,
Elkonite 3W3
Average ρ_0 = 13.812 g/cm^3.

Sound velocities longitudinal 4.76 km/s.
shear 2.50 km/s.
References 13, 30

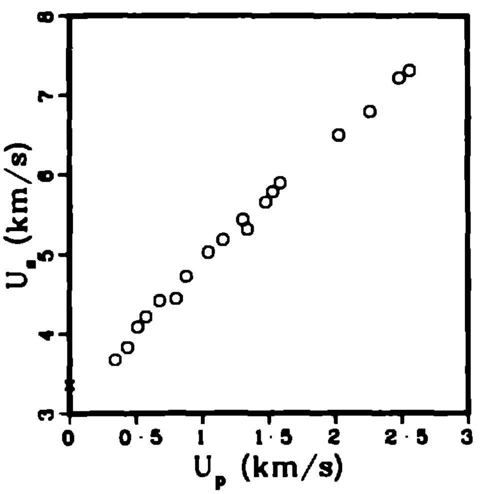
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
13.800	3.785	0.000	0.000	.0725	13.800	1.000	ssp ×
13.860	4.354	.533	32.165	.0633	15.793	.878	iml o
13.870	5.177	1.073	77.047	.0572	17.496	.793	iml o
13.820	6.017	1.568	130.387	.0535	18.691	.739	iml o
13.710	7.203	2.436	240.563	.0483	20.716	.662	iml o

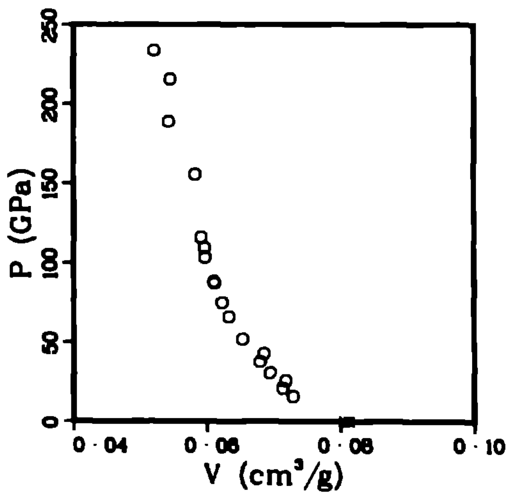


TUNGSTEN, SINTERED-45 WT% INFILTRATED COPPER,
Elkonite 1W3
Average ρ_0 = 12.315 g/cm^3.

Sound velocities longitudinal 4.55 km/s.
shear 2.66 km/s.
References 13, 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
12.420	3.357	0.000	0.000	.0805	12.420	1.000	ssp x
12.440	3.668	.341	15.560	.0729	13.715	.907	iml o
12.410	3.831	.436	20.729	.0714	14.004	.886	iml o
12.170	4.086	.513	25.510	.0719	13.917	.874	iml o
12.430	4.214	.576	30.171	.0695	14.398	.863	iml o
12.450	4.416	.681	37.441	.0679	14.720	.846	iml o
11.950	4.442	.804	42.678	.0685	14.591	.819	iml o
12.460	4.729	.878	51.735	.0654	15.301	.814	iml o
12.500	5.028	1.047	65.804	.0633	15.787	.792	iml o
12.460	5.184	1.158	74.798	.0623	16.044	.777	iml o
12.450	5.434	1.304	88.220	.0610	16.381	.760	iml o
12.240	5.311	1.339	87.044	.0611	16.366	.748	iml o
12.360	5.652	1.479	103.321	.0597	16.741	.738	iml o
12.320	5.785	1.533	109.259	.0597	16.762	.735	iml o
12.360	5.897	1.590	115.890	.0591	16.923	.730	iml o
11.790	6.496	2.031	155.550	.0583	17.153	.687	iml o
12.300	6.792	2.263	189.055	.0542	18.446	.667	iml o
12.020	7.216	2.485	215.540	.0545	18.334	.656	iml o
12.460	7.307	2.564	233.440	.0521	19.196	.649	iml o





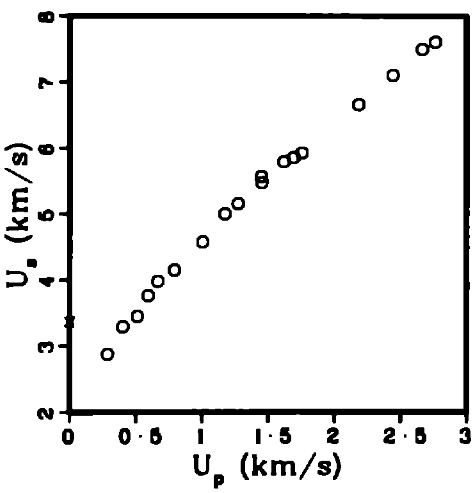
TUNGSTEN, SINTERED-75 WT% INFILTRATED COPPER,
Elkonite 2125C

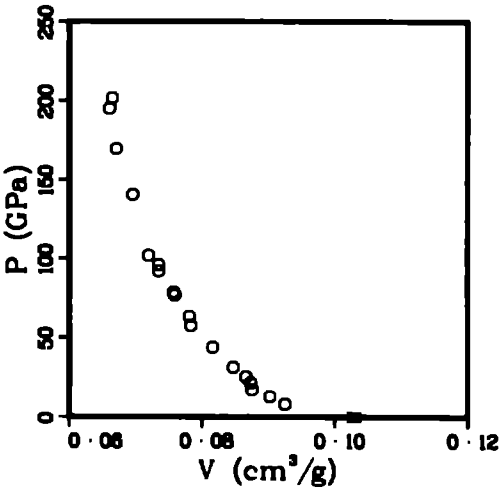
Average ρ_0 = 9.691 g/cm^3.

Sound velocities longitudinal 4.18 km/s.
shear 2.15 km/s.

Reference: 13, 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
9.748	3.363	0.000	0.000	.1026	9.748	1.000	ssp	x
9.734	2.873	.286	7.998	.0925	10.810	.900	iml	o
9.724	3.285	.402	12.841	.0903	11.080	.878	iml	o
9.722	3.441	.512	17.128	.0876	11.421	.851	iml	o
9.642	3.760	.593	21.499	.0874	11.447	.842	iml	o
9.611	3.976	.666	25.450	.0866	11.545	.832	iml	o
9.547	4.143	.792	31.326	.0847	11.803	.809	iml	o
9.551	4.566	1.006	43.872	.0816	12.250	.780	iml	o
9.767	4.998	1.174	57.309	.0783	12.766	.765	iml	o
9.638	5.153	1.274	63.273	.0781	12.803	.753	iml	o
9.762	5.563	1.450	78.744	.0757	13.204	.739	iml	o
9.672	5.470	1.454	76.925	.0759	13.174	.734	iml	o
9.796	5.790	1.621	91.941	.0735	13.605	.720	iml	o
9.669	5.854	1.694	95.884	.0735	13.606	.711	iml	o
9.776	5.924	1.757	101.753	.0720	13.898	.703	iml	o
9.654	6.658	2.186	140.508	.0696	14.373	.672	iml	o
9.775	7.100	2.445	169.689	.0671	14.909	.656	iml	o
9.758	7.500	2.666	195.111	.0661	15.140	.645	iml	o
9.578	7.609	2.766	201.583	.0665	15.048	.636	iml	o





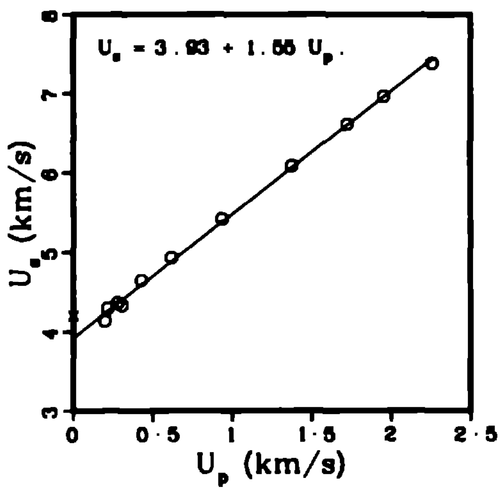
TUNGSTEN CARBIDE, SINTERED-44 WT% INFILTRATED COPPER, Elkonite TC10

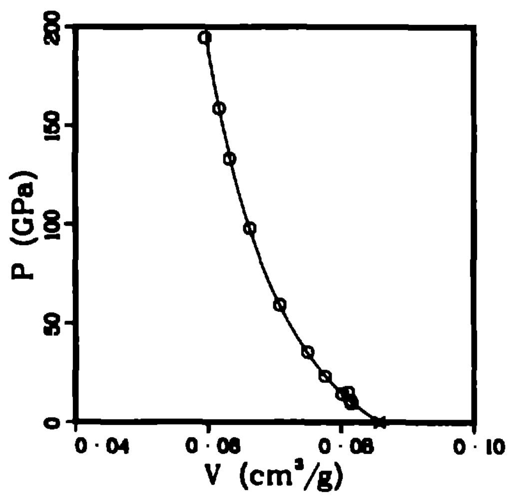
Average ρ_0 = 11.653 g/cm^3.

Sound velocities longitudinal 5.41 km/s.
shear 2.95 km/s.

References 13, 30

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
11.670	4.203	0.000	0.000	.0857	11.670	1.000	ssp	x
11.670	4.135	.198	9.555	.0816	12.257	.952	iml	o
11.660	4.296	.216	10.820	.0815	12.277	.950	iml	o
11.670	4.364	.279	14.209	.0802	12.467	.936	iml	o
11.460	4.330	.305	15.135	.0811	12.328	.930	iml	o
11.690	4.649	.429	23.315	.0776	12.878	.908	iml	o
11.670	4.934	.619	35.642	.0749	13.344	.875	iml	o
11.680	5.416	.936	59.210	.0708	14.120	.827	iml	o
11.670	6.086	1.377	97.800	.0663	15.083	.774	iml	o
11.680	6.609	1.723	133.004	.0633	15.799	.739	iml	o
11.660	6.961	1.954	158.597	.0617	16.210	.719	iml	o
11.660	7.383	2.261	194.640	.0595	16.807	.694	iml	o



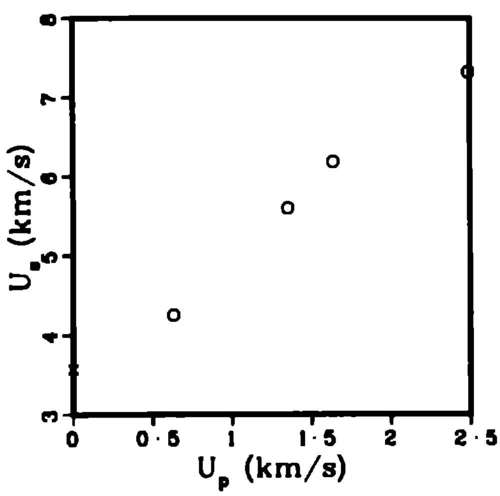


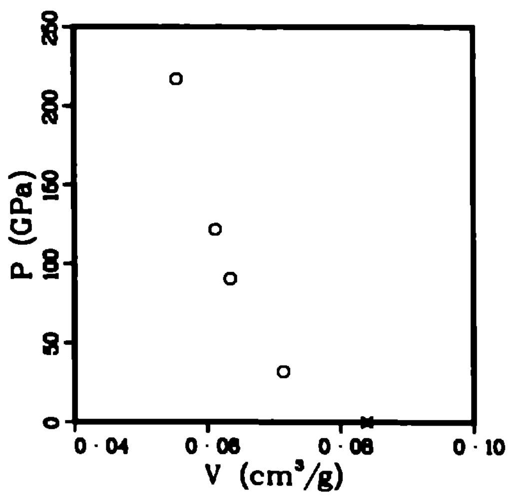
TUNGSTEN CARBIDE, SINTERED-60 WT% INFILTRATED SILVER, Elkonite G-12

Average ρ_0 = 11.936 g/cm^3.

Sound velocities longitudinal 4.37 km/s.
shear 2.18 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
11.900	3.572	0.000	0.000	.0840	11.900	1.000	ssp x
11.920	4.251	.632	32.025	.0714	14.002	.851	iml o
11.950	5.602	1.353	90.575	.0635	15.755	.758	iml o
12.000	6.185	1.639	121.647	.0613	16.326	.735	iml o
11.910	7.324	2.489	217.113	.0554	18.041	.660	iml o





WOODS

BALSA

Average ρ_0 = 0.123 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.118	1.857	1.197	.262	3.0120	.332	.355	im1 o
.116	2.950	2.292	.784	1.9229	.520	.223	im1 o
.118	3.012	2.296	.816	2.0145	.496	.238	im1 o
.118	4.035	3.201	1.524	1.7516	.571	.207	im1 o
.118	4.316	3.278	1.669	2.0381	.491	.241	im1 o
.118	4.107	3.347	1.622	1.5682	.638	.185	im1 o
.158	4.704	3.548	2.637	1.5554	.643	.246	im1 o
.118	6.040	4.132	2.945	2.6771	.374	.316	im1 o
.118	6.371	4.425	3.327	2.5885	.386	.305	im1 o
.157	6.023	4.639	4.387	1.4636	.683	.230	im1 o
.118	6.349	4.649	3.483	2.2691	.441	.268	im1 o
.118	7.085	5.123	4.283	2.3468	.426	.277	im1 o
.161	7.406	5.442	6.489	1.6471	.607	.265	im1 o
.098	6.541	5.468	3.505	1.6739	.597	.164	im1 o
.118	7.786	5.538	5.088	2.4468	.409	.289	im1 o
.118	8.573	5.554	5.619	2.9843	.335	.352	im1 o
.118	7.494	5.907	5.224	1.7947	.557	.212	im1 o
.118	7.467	6.019	5.303	1.6434	.608	.194	im1 o
.118	8.317	6.052	5.939	2.3079	.433	.272	im1 o
.136	9.002	6.068	7.429	2.3965	.417	.326	im1 o
.105	7.762	6.084	4.959	2.0589	.486	.216	im1 o
.118	8.378	6.262	6.191	2.1404	.467	.253	im1 o

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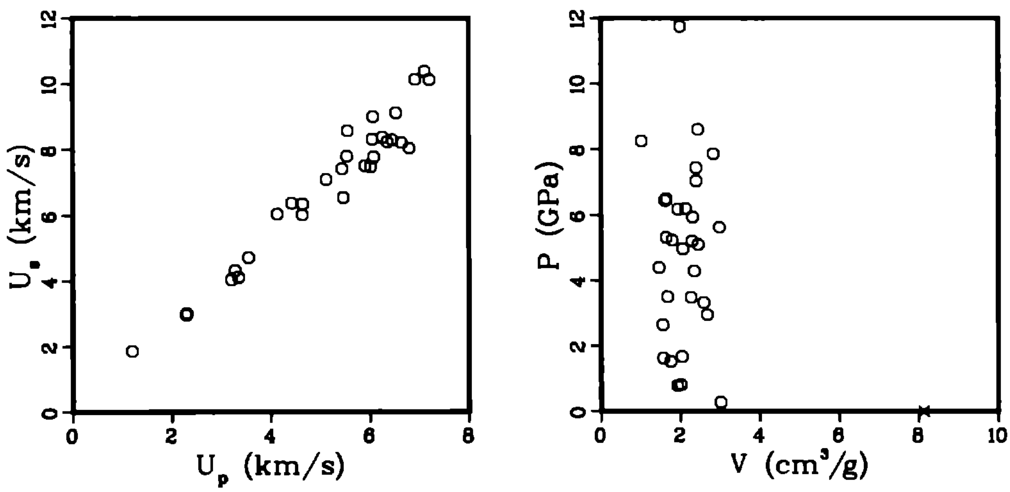


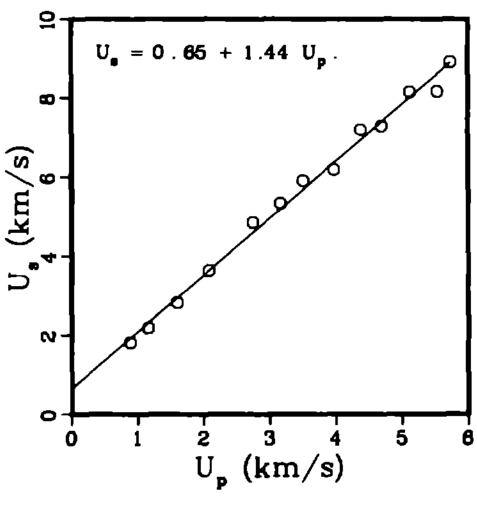
BALSA
(Continued)

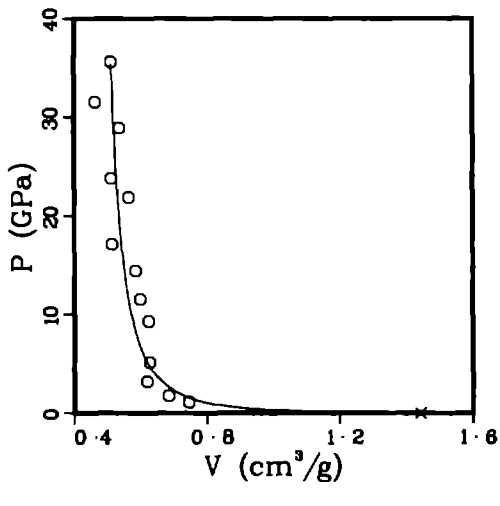
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.118	8.238	6.356	6.179	1.9360	.517	.228	im1 o
.097	8.301	6.453	5.196	2.2951	.436	.223	im1 o
.118	9.118	6.534	7.030	2.4017	.416	.283	im1 o
.118	8.209	6.646	6.438	1.6136	.620	.190	im1 o
.151	8.039	6.800	8.254	1.0207	.980	.154	im1 o
.112	10.134	6.917	7.851	2.8343	.353	.317	im1 o
.159	10.396	7.108	11.749	1.9892	.503	.316	im1 o
.118	10.123	7.204	8.605	2.4437	.409	.288	im1 o

BIRCH

Average $\rho_0 = 0.693$ g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp	
.688	1.816	.885	1.106	.7452	1.342	.513	iml	o
.688	2.184	1.157	1.738	.6835	1.463	.470	iml	o
.703	2.831	1.600	3.184	.6185	1.617	.435	iml	o
.685	3.635	2.072	5.159	.6277	1.593	.430	iml	o
.697	4.855	2.745	9.289	.6235	1.604	.435	iml	o
.682	5.342	3.158	11.505	.5995	1.668	.409	iml	o
.696	5.914	3.509	14.444	.5843	1.711	.407	iml	o
.696	6.188	3.973	17.111	.5143	1.944	.358	iml	o
.694	7.200	4.382	21.896	.5640	1.773	.391	iml	o
.695	7.292	4.696	23.799	.5122	1.952	.356	iml	o
.693	8.152	5.120	28.925	.5367	1.863	.372	iml	o
.697	8.169	5.533	31.504	.4630	2.160	.323	iml	o
.696	8.912	5.738	35.591	.5117	1.954	.356	iml	o

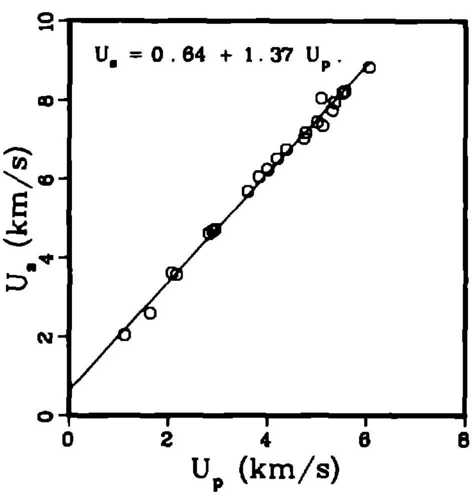


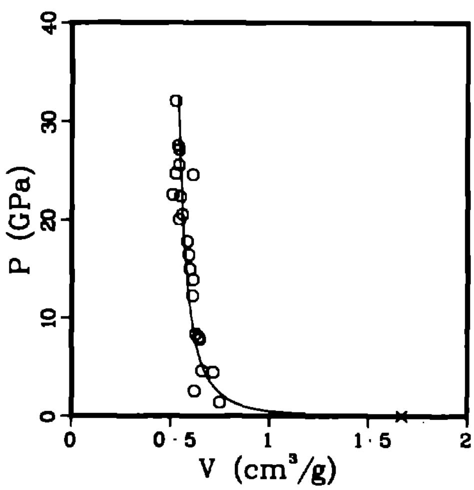


CHERRY , ρ_0 = 0.60 g/cm^3 .

Average ρ_0 = 0.599 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.599	2.044	1.124	1.376	.7514	1.331	.450	im1	o
.599	2.598	1.633	2.541	.6201	1.613	.371	im1	o
.599	3.619	2.066	4.479	.7164	1.396	.429	im1	o
.599	3.574	2.163	4.631	.6591	1.517	.395	im1	o
.599	4.616	2.823	7.806	.6485	1.542	.388	im1	o
.591	4.681	2.897	8.014	.6449	1.551	.381	im1	o
.599	4.729	2.946	8.345	.6294	1.589	.377	im1	o
.599	5.687	3.600	12.263	.6126	1.632	.367	im1	o
.599	6.052	3.831	13.888	.6127	1.632	.367	im1	o
.599	6.239	4.008	14.979	.5970	1.675	.358	im1	o
.599	6.516	4.202	16.401	.5929	1.687	.355	im1	o
.599	6.758	4.389	17.767	.5852	1.709	.351	im1	o
.599	7.043	4.741	20.001	.5457	1.833	.327	im1	o
.599	7.184	4.767	20.513	.5617	1.780	.336	im1	o
.599	7.453	5.004	22.340	.5486	1.823	.329	im1	o
.599	8.048	5.091	24.542	.6134	1.630	.367	im1	o
.599	7.358	5.110	22.522	.5100	1.961	.306	im1	o
.599	7.750	5.308	24.641	.5260	1.901	.315	im1	o
.599	7.951	5.360	25.528	.5440	1.838	.326	im1	o
.599	8.191	5.518	27.074	.5448	1.836	.326	im1	o
.599	8.234	5.572	27.482	.5397	1.853	.323	im1	o
.599	8.839	6.051	32.037	.5266	1.899	.315	im1	o

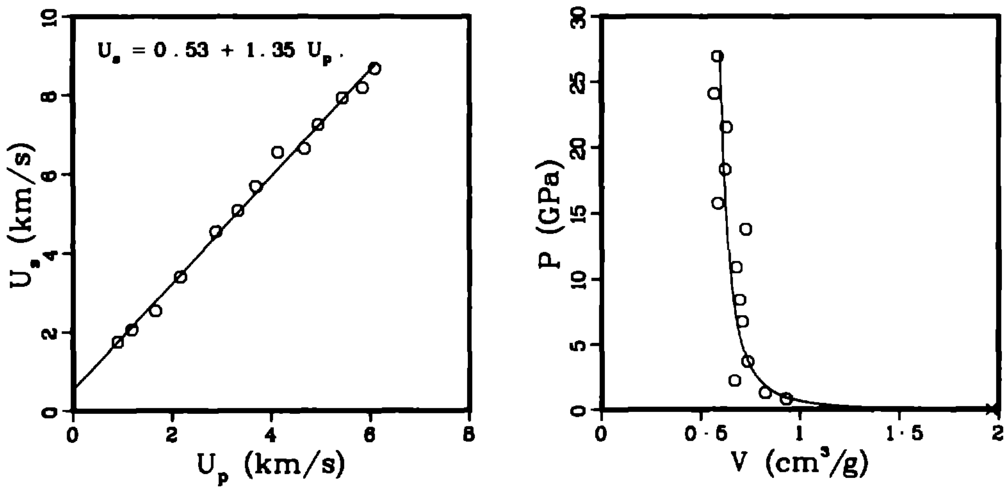




CHERRY , ρ_0 = 0.51 g/cm^3.

Average ρ_0 = 0.509 g/cm^3.

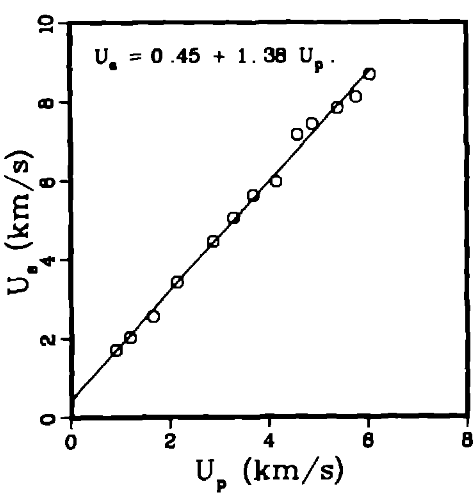
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.522	1.755	.903	.827	.9300	1.075	.485	im1 o
.516	2.067	1.188	1.267	.8241	1.213	.425	im1 o
.517	2.543	1.662	2.185	.6701	1.492	.346	im1 o
.499	3.412	2.161	3.679	.7348	1.361	.367	im1 o
.514	4.546	2.886	6.744	.7104	1.408	.365	im1 o
.497	5.084	3.324	8.399	.6965	1.436	.346	im1 o
.518	5.692	3.691	10.883	.6787	1.473	.352	im1 o
.507	6.557	4.138	13.756	.7277	1.374	.369	im1 o
.507	6.645	4.672	15.740	.5856	1.708	.297	im1 o
.510	7.255	4.948	18.308	.6235	1.604	.318	im1 o
.499	7.932	5.442	21.540	.6291	1.590	.314	im1 o
.502	8.194	5.851	24.067	.5696	1.756	.286	im1 o
.509	8.679	6.096	26.930	.5847	1.710	.298	im1 o

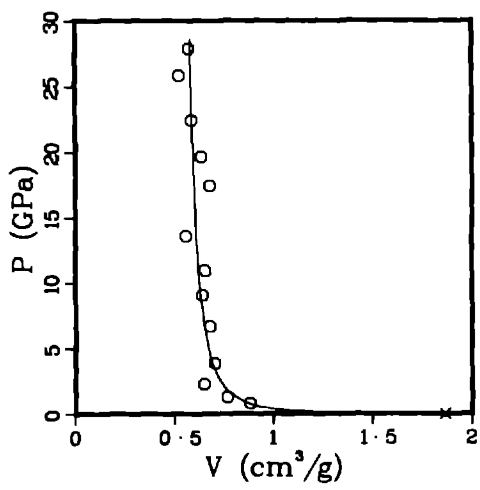


FIR , Douglas

Average ρ_0 = 0.536 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.535	1.707	.903	.825	.8804	1.136	.471	iml	o
.544	2.029	1.185	1.308	.7646	1.308	.416	iml	o
.543	2.558	1.655	2.299	.6501	1.538	.353	iml	o
.528	3.419	2.149	3.879	.7035	1.421	.371	iml	o
.520	4.464	2.888	6.704	.6789	1.473	.353	iml	o
.545	5.061	3.287	9.066	.6432	1.555	.351	iml	o
.526	5.631	3.689	10.926	.6557	1.525	.345	iml	o
.548	5.980	4.146	13.587	.5597	1.787	.307	iml	o
.530	7.164	4.590	17.428	.6779	1.475	.359	iml	o
.541	7.440	4.884	19.658	.6350	1.575	.344	iml	o
.529	7.842	5.403	22.414	.5879	1.701	.311	iml	o
.551	8.119	5.773	25.826	.5244	1.907	.289	iml	o
.529	8.696	6.056	27.859	.5739	1.742	.304	iml	o

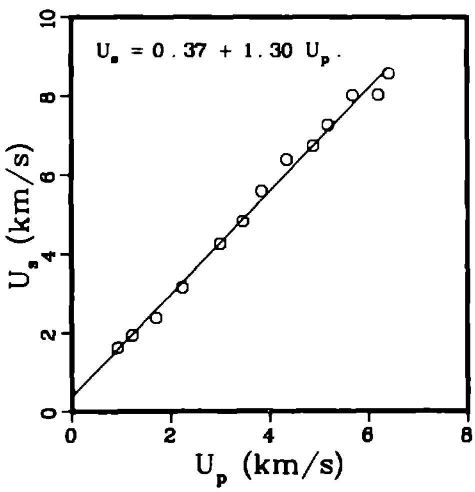


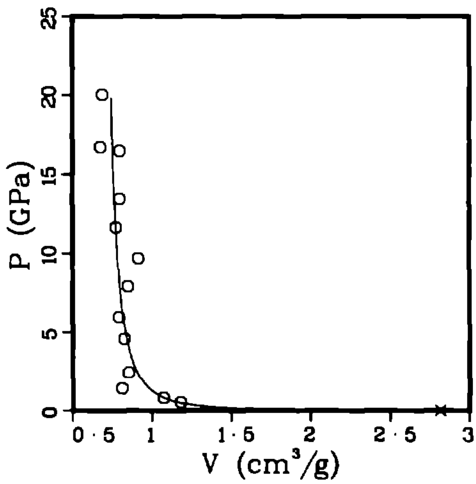


FIR , white

Average ρ_0 = 0.355 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.366	1.623	.922	.548	1.1801	.847	.432	im1 ○
.346	1.935	1.217	.815	1.0724	.932	.371	im1 ○
.351	2.389	1.710	1.434	.8097	1.235	.284	im1 ○
.343	3.165	2.238	2.430	.8539	1.171	.293	im1 ○
.358	4.273	3.010	4.604	.8256	1.211	.296	im1 ○
.357	4.831	3.462	5.971	.7938	1.260	.283	im1 ○
.368	5.599	3.852	7.937	.8479	1.179	.312	im1 ○
.349	6.393	4.351	9.708	.9152	1.093	.319	im1 ○
.355	6.730	4.882	11.664	.7735	1.293	.275	im1 ○
.358	7.266	5.188	13.495	.7989	1.252	.286	im1 ○
.363	7.999	5.684	16.504	.7973	1.254	.289	im1 ○
.336	8.023	6.201	16.716	.6759	1.480	.227	im1 ○
.365	8.563	6.412	20.041	.6882	1.453	.251	im1 ○

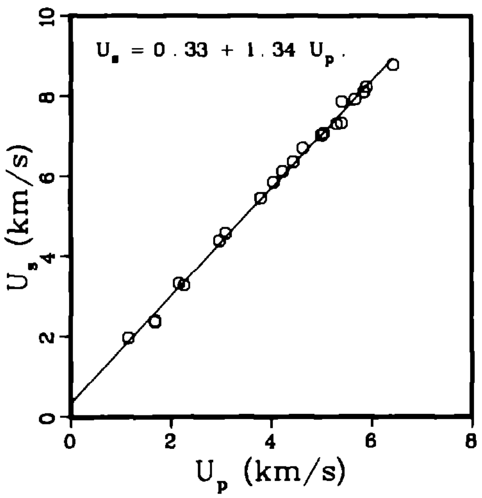


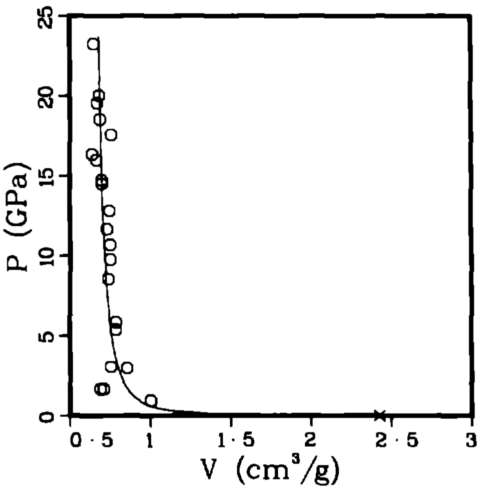


MAHOGANY , Honduras

Average ρ_0 = 0.412 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.412	1.965	1.153	.933	1.0030	.997	.413	iml o
.412	2.386	1.687	1.658	.7111	1.406	.293	iml o
.412	2.361	1.690	1.644	.6898	1.450	.284	iml o
.412	3.331	2.159	2.963	.8540	1.171	.352	iml o
.412	3.274	2.259	3.047	.7525	1.329	.310	iml o
.412	4.383	2.964	5.352	.7858	1.273	.324	iml o
.412	4.572	3.089	5.819	.7873	1.270	.324	iml o
.412	5.463	3.799	8.551	.7393	1.353	.305	iml o
.412	5.854	4.046	9.758	.7496	1.334	.309	iml o
.412	6.121	4.230	10.667	.7498	1.334	.309	iml o
.412	6.357	4.443	11.637	.7308	1.368	.301	iml o
.412	6.699	4.636	12.795	.7475	1.338	.308	iml o
.412	7.028	5.008	14.501	.6976	1.433	.287	iml o
.412	7.081	5.046	14.721	.6975	1.434	.287	iml o
.412	7.311	5.305	15.979	.6660	1.502	.274	iml o
.412	7.338	5.403	16.335	.6400	1.562	.264	iml o
.412	7.866	5.415	17.549	.7563	1.322	.312	iml o
.412	7.924	5.680	18.543	.6874	1.455	.283	iml o
.412	8.096	5.859	19.543	.6707	1.491	.276	iml o
.412	8.226	5.908	20.023	.6840	1.462	.282	iml o
.412	8.778	6.433	23.265	.6484	1.542	.267	iml o

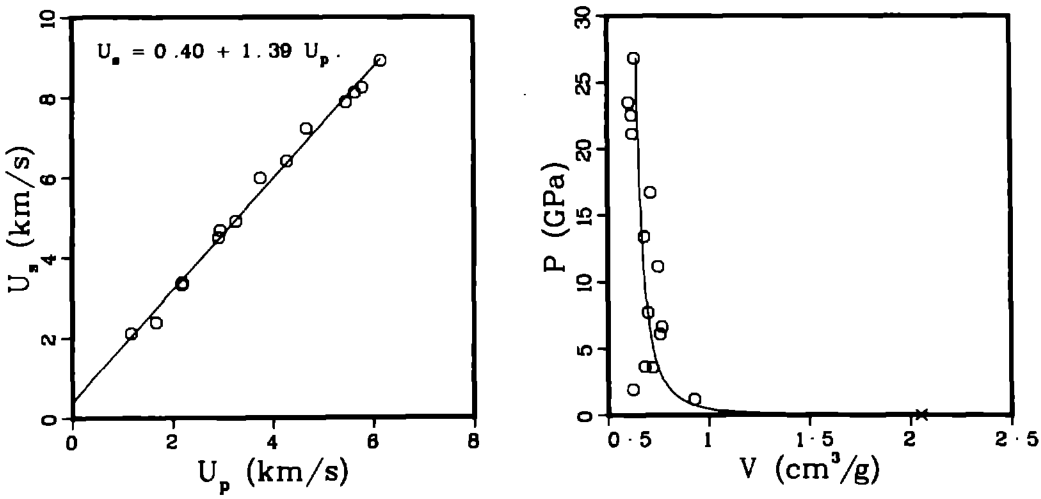




MAHOGANY, Philippine

Average ρ_0 = 0.487 g/cm^3.

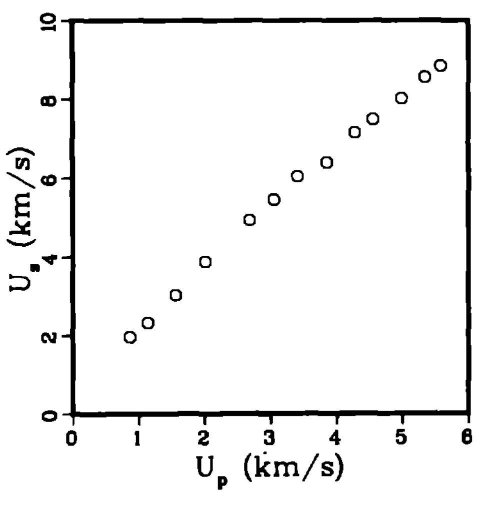
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.481	2.111	1.169	1.187	.9277	1.078	.446	iml o
.485	2.384	1.665	1.925	.6218	1.608	.302	iml o
.497	3.316	2.190	3.609	.6832	1.464	.340	iml o
.482	3.374	2.199	3.576	.7225	1.384	.348	iml o
.464	4.498	2.915	6.084	.7585	1.318	.352	iml o
.481	4.675	2.949	6.631	.7676	1.303	.369	iml o
.481	4.906	3.260	7.693	.6975	1.434	.336	iml o
.497	5.982	3.753	11.158	.7497	1.334	.373	iml o
.488	6.407	4.281	13.385	.6800	1.471	.332	iml o
.495	7.228	4.676	16.730	.7133	1.402	.353	iml o
.492	7.878	5.460	21.163	.6238	1.603	.307	iml o
.493	8.116	5.638	22.559	.6193	1.615	.305	iml o
.493	8.246	5.784	23.514	.6056	1.651	.299	iml o
.489	8.916	6.154	26.831	.6335	1.579	.310	iml o

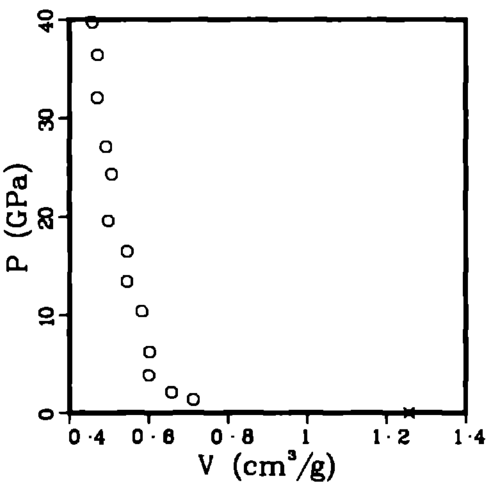


MAPLE

Average ρ_0 = 0.796 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.780	1.960	.870	1.330	.7130	1.403	.556	iml o
.780	2.333	1.136	2.067	.6578	1.520	.513	iml o
.809	3.031	1.561	3.828	.5995	1.668	.485	iml o
.801	3.883	2.009	6.249	.6025	1.660	.483	iml o
.781	4.929	2.688	10.348	.5821	1.718	.455	iml o
.805	5.455	3.059	13.433	.5456	1.833	.439	iml o
.799	6.040	3.411	16.461	.5448	1.836	.435	iml o
.795	6.387	3.857	19.585	.4983	2.007	.396	iml o
.794	7.155	4.277	24.298	.5066	1.974	.402	iml o
.794	7.485	4.555	27.071	.4930	2.028	.391	iml o
.802	8.014	4.991	32.078	.4703	2.126	.377	iml o
.798	8.551	5.338	36.425	.4709	2.124	.376	iml o
.806	8.844	5.578	39.761	.4582	2.183	.369	iml o

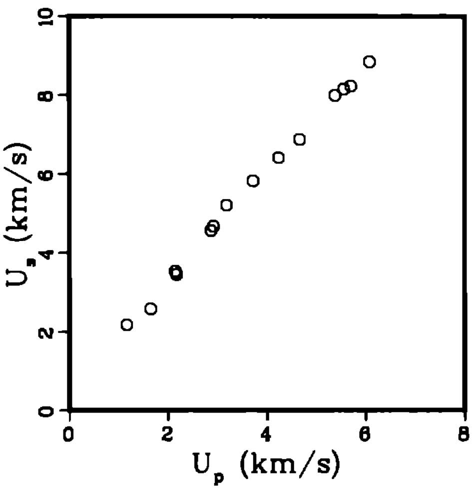


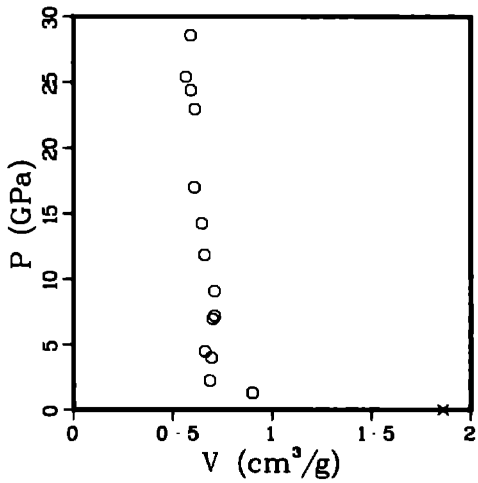


OAK , white

Average ρ_0 = 0.537 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.518	2.179	1.161	1.310	.9019	1.109	.467	iml o
.528	2.583	1.645	2.243	.6878	1.454	.363	iml o
.591	3.529	2.145	4.474	.6636	1.507	.392	iml o
.535	3.449	2.166	3.997	.6953	1.438	.372	iml o
.531	4.568	2.866	6.952	.7017	1.425	.373	iml o
.528	4.672	2.917	7.196	.7114	1.406	.376	iml o
.547	5.208	3.184	9.071	.7105	1.407	.389	iml o
.546	5.818	3.719	11.814	.6608	1.513	.361	iml o
.524	6.410	4.238	14.235	.6467	1.546	.339	iml o
.529	6.881	4.664	16.977	.6091	1.642	.322	iml o
.534	7.988	5.379	22.945	.6116	1.635	.327	iml o
.538	8.151	5.557	24.369	.5915	1.691	.318	iml o
.542	8.227	5.699	25.412	.5669	1.764	.307	iml o
.531	8.852	6.078	28.569	.5902	1.694	.313	iml o

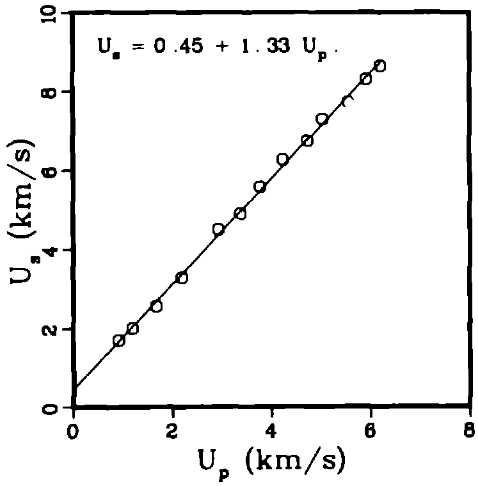


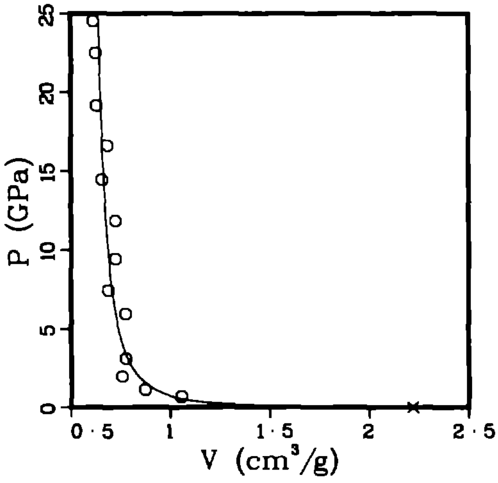


PINE , sugar

Average ρ_0 = 0.450 g/cm^3 .

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.440	1.703	.913	.684	1.0543	.949	.464	im1 o
.461	2.002	1.198	1.106	.8711	1.148	.402	im1 o
.457	2.561	1.676	1.962	.7562	1.322	.346	im1 o
.429	3.291	2.196	3.100	.7756	1.289	.333	im1 o
.451	4.500	2.931	5.948	.7731	1.293	.349	im1 o
.451	4.895	3.377	7.455	.6876	1.454	.310	im1 o
.449	5.580	3.769	9.443	.7228	1.383	.325	im1 o
.447	6.261	4.235	11.852	.7239	1.381	.324	im1 o
.453	6.738	4.736	14.456	.6559	1.525	.297	im1 o
.453	7.292	5.030	16.615	.6848	1.460	.310	im1 o
.446	7.724	5.555	19.136	.6296	1.588	.281	im1 o
.458	8.295	5.922	22.498	.6246	1.601	.286	im1 o
.458	8.633	6.203	24.526	.6146	1.627	.281	im1 o

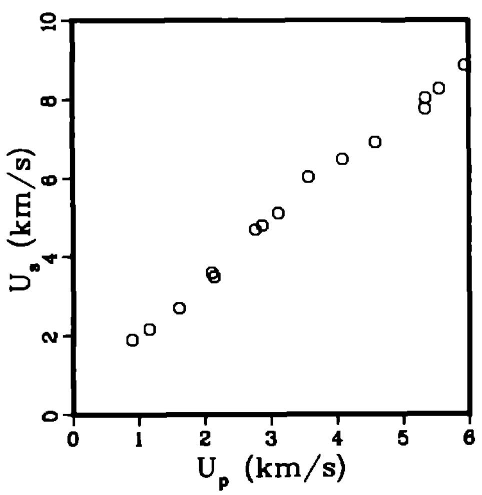


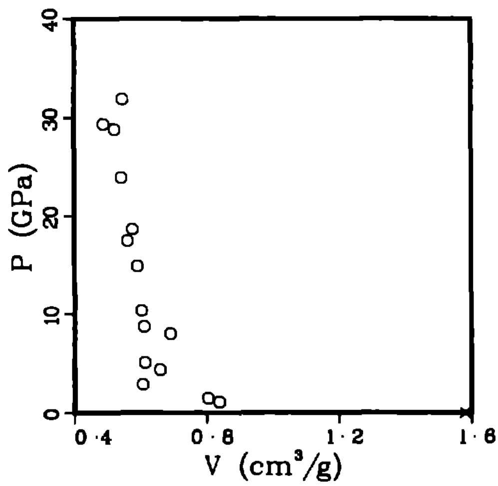


WALNUT

Average ρ_0 = 0.632 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.633	1.901	.893	1.075	.8377	1.194	.530	im1	o
.583	2.168	1.152	1.456	.8038	1.244	.469	im1	o
.667	2.694	1.605	2.884	.6060	1.650	.404	im1	o
.675	3.592	2.107	5.109	.6125	1.633	.413	im1	o
.586	3.489	2.143	4.381	.6583	1.519	.386	im1	o
.673	4.693	2.767	8.739	.6098	1.640	.410	im1	o
.582	4.797	2.871	8.015	.6899	1.450	.402	im1	o
.650	5.119	3.115	10.365	.6023	1.660	.391	im1	o
.692	6.031	3.565	14.878	.5909	1.692	.409	im1	o
.660	6.479	4.081	17.451	.5608	1.783	.370	im1	o
.587	6.926	4.585	18.641	.5758	1.737	.338	im1	o
.577	7.760	5.336	23.892	.5414	1.847	.312	im1	o
.685	8.028	5.341	29.371	.4886	2.047	.335	im1	o
.629	8.266	5.550	28.856	.5224	1.914	.329	im1	o
.605	8.868	5.940	31.869	.5457	1.832	.330	im1	o





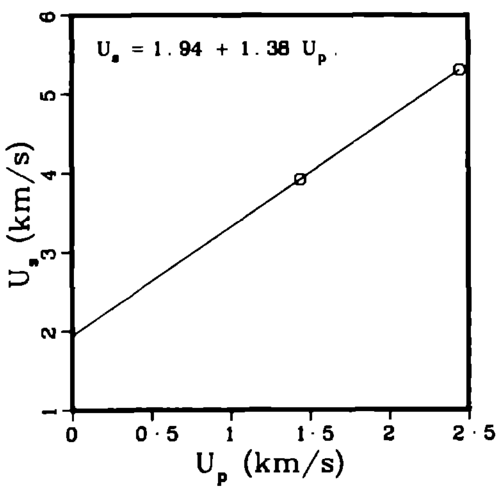
LIQUIDS

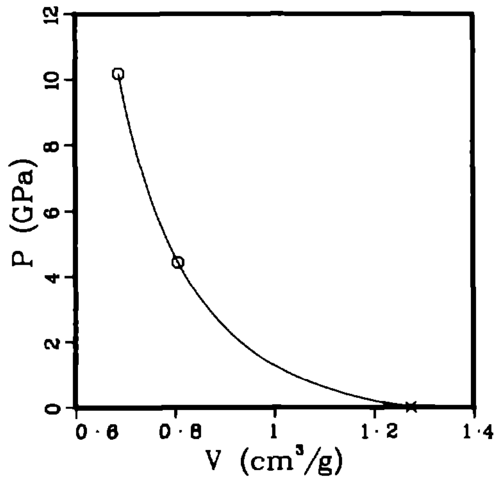
ACETONE, C_3H_6O

Average ρ_0 = 0.785 g/cm^3.

References 6, 23

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.785	3.922	1.439	4.430	.8065	1.240	.633	im1 o
.785	5.306	2.445	10.184	.6869	1.456	.539	im1 o



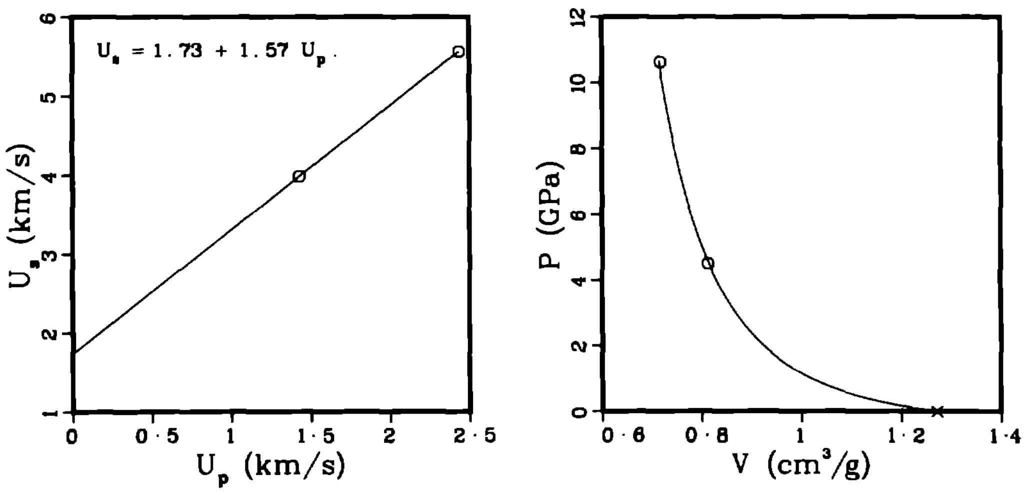


ALCOHOL, ethyl, C_2H_6O

Average ρ_0 = 0.786 g/cm^3.

References 6, 23

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.789	3.982	1.430	4.493	.8123	1.231	.641	im1 o
.784	5.563	2.436	10.624	.7170	1.395	.562	im1 o

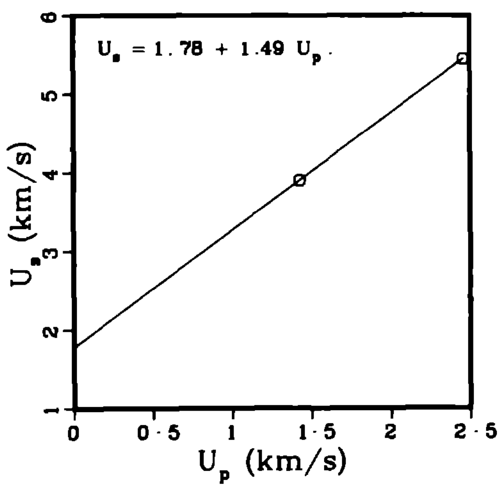


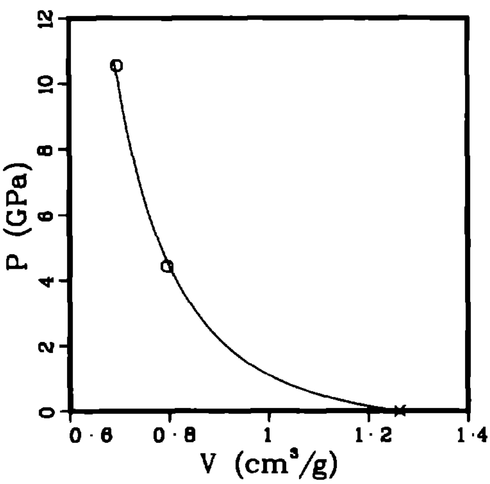
ALCOHOL, methyl, CH_4O

Average ρ_0 = 0.792 g/cm^3.

References 6, 23

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.797	3.903	1.426	4.436	.7963	1.256	.635	iml o
.787	5.444	2.461	10.544	.6962	1.436	.548	iml o



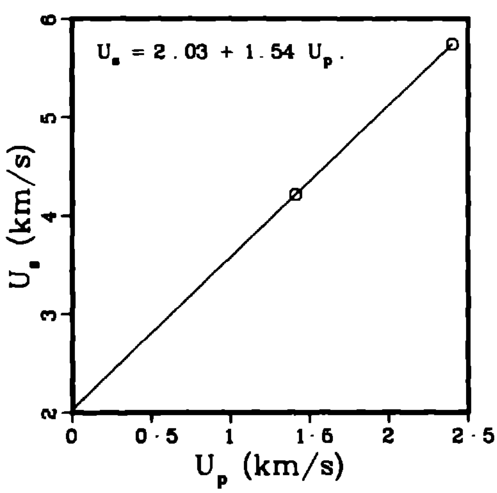


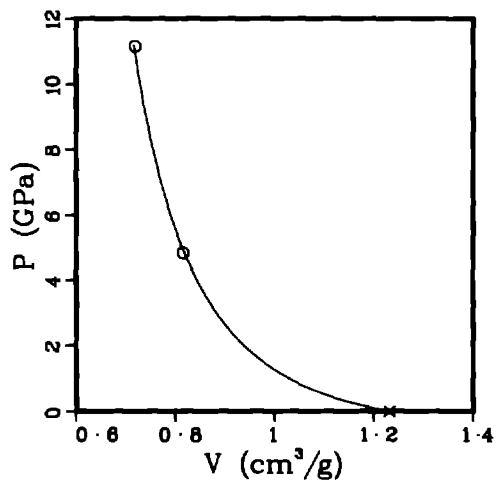
ALCOHOL, n-amyl, $C_5H_{12}O$

Average ρ_0 = 0.812 g/cm^3.

References 6, 23

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.815	4.209	1.410	4.837	.8160	1.226	.665	im1 o
.809	5.740	2.402	11.154	.7188	1.391	.582	im1 o



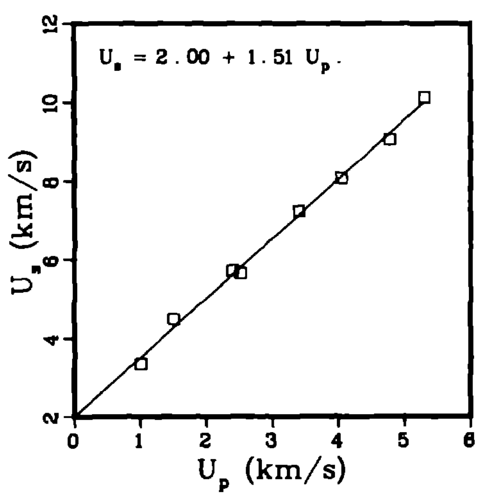


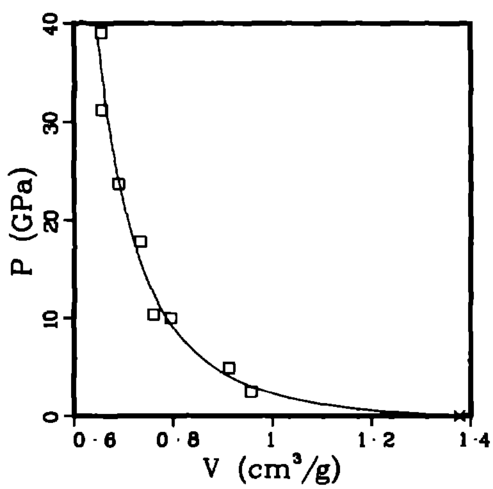
AMMONIA, liquid, T_0=203K, NH_3

Average ρ_0 = 0.726 g/cm^3.

Reference 55

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.730	3.360	1.010	2.477	.9581	1.044	.699	im2 □
.727	4.490	1.510	4.929	.9129	1.095	.664	im2 □
.730	5.730	2.400	10.039	.7961	1.256	.581	im2 □
.729	5.660	2.520	10.398	.7610	1.314	.555	im2 □
.723	7.240	3.400	17.797	.7336	1.363	.530	im2 □
.723	8.080	4.050	23.659	.6899	1.450	.499	im2 □
.720	9.070	4.780	31.215	.6569	1.522	.473	im2 □
.726	10.130	5.310	39.052	.6554	1.526	.476	im2 □





BENZENE , C_6H_6

Average ρ_0 = 0.875 g/cm^3 .

Sound velocities longitudinal 1.31 km/s .
shear 0.00 km/s .

References 6 , 23 , 24 , 25 , 26 , 56

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
.879	1.310	0.000	0.000	1.1377	.879	1.000	ssp	×
.877	2.780	.770	1.877	.8244	1.213	.723	im2	□
.870	2.960	.890	2.292	.8038	1.244	.699	im2	□
.869	2.720	.890	2.104	.7742	1.292	.673	im2	□
.870	3.310	1.050	3.024	.7848	1.274	.683	im2	□
.879	3.470	1.120	3.416	.7705	1.298	.677	im2	□
.875	3.440	1.120	3.371	.7708	1.297	.674	im2	□
.880	3.840	1.360	4.596	.7339	1.363	.646	im2	□
.883	4.051	1.393	4.983	.7431	1.346	.656	im1	○
.885	4.050	1.450	5.197	.7254	1.379	.642	im2	□
.866	3.890	1.450	4.885	.7243	1.381	.627	im2	□
.877	4.050	1.480	5.257	.7236	1.382	.635	im2	□
.881	4.090	1.590	5.729	.6938	1.441	.611	im2	□
.869	4.380	1.770	6.737	.6857	1.458	.596	im2	□
.869	4.520	1.850	7.267	.6798	1.471	.591	im2	□
.885	4.790	1.900	8.054	.6817	1.467	.603	im2	□
.871	4.770	1.940	8.060	.6812	1.468	.593	im2	□
.870	5.000	2.160	9.396	.6529	1.532	.568	im2	□
.870	5.280	2.290	10.519	.6509	1.536	.566	im2	□

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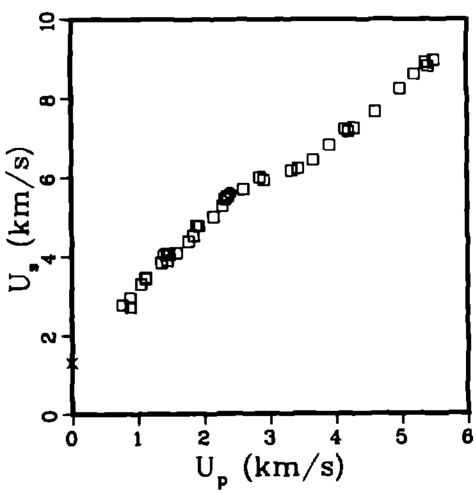
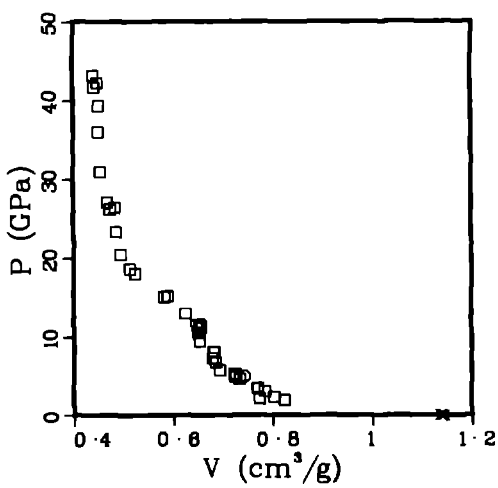




BENZENE , C_6H_6
(Continued)

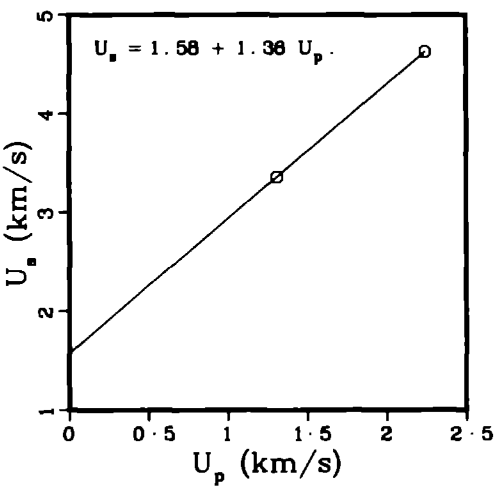
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.875	5.460	2.330	11.132	.6552	1.526	.573	im2 □
.880	5.520	2.370	11.513	.6485	1.542	.571	im2 □
.866	5.592	2.408	11.661	.6575	1.521	.569	im1 ○
.868	5.710	2.610	12.936	.6255	1.599	.543	im2 □
.887	6.000	2.860	15.221	.5900	1.695	.523	im2 □
.871	5.930	2.920	15.082	.5828	1.716	.508	im2 □
.876	6.170	3.340	18.052	.5236	1.910	.459	im2 □
.870	6.220	3.440	18.615	.5137	1.947	.447	im2 □
.870	6.430	3.660	20.474	.4952	2.020	.431	im2 □
.874	6.820	3.920	23.366	.4865	2.055	.425	im2 □
.881	7.230	4.150	26.434	.4835	2.068	.426	im2 □
.872	7.160	4.200	26.223	.4741	2.109	.413	im2 □
.871	7.250	4.290	27.090	.4687	2.133	.408	im2 □
.875	7.660	4.610	30.899	.4551	2.198	.398	im2 □
.876	8.240	4.990	36.019	.4502	2.221	.394	im2 □
.876	8.610	5.210	39.296	.4508	2.218	.395	im2 □
.881	8.910	5.380	42.231	.4497	2.224	.396	im2 □
.871	8.820	5.420	41.638	.4426	2.259	.385	im2 □
.874	8.970	5.510	43.197	.4413	2.266	.386	im2 □

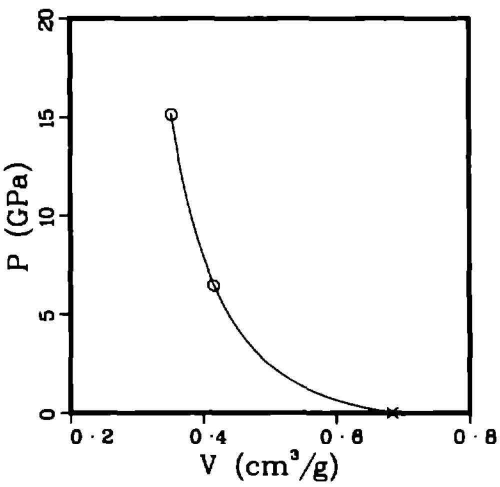
BROMOETHANE, C_2H_5Br

Average ρ_0 = 1.463 g/cm^3.

References 6, 23

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.466	3.359	1.311	6.456	.4159	2.404	.610	im1 o
1.460	4.624	2.242	15.136	.3528	2.834	.515	im1 o

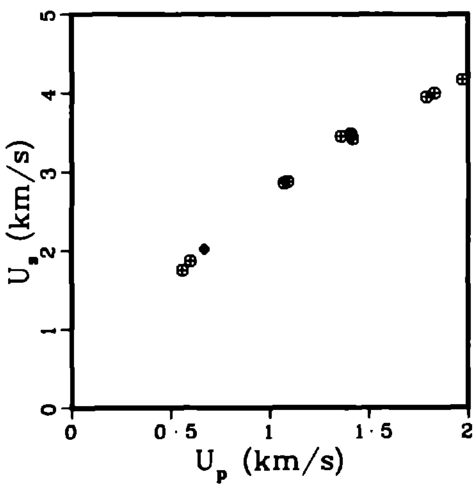


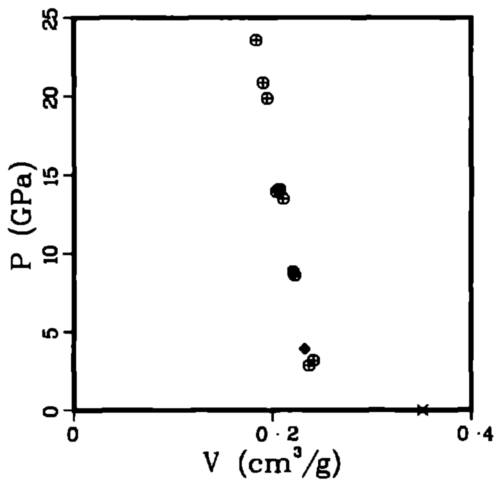


BROMOFORM , $CHBr_3$

Average ρ_0 = 2.849 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
2.870	1.750	.560	2.813	.2369	4.221	.680	s f 1 ⊕
2.810	1.870	.600	3.153	.2417	4.138	.679	s f 1 ⊕
2.870	2.020	.670	3.884	.2329	4.294	.668	w d g ◆
2.810	2.860	1.070	8.599	.2227	4.490	.626	s f 1 ⊕
2.810	2.880	1.090	8.821	.2212	4.521	.622	s f 1 ⊕
2.876	3.450	1.360	13.494	.2106	4.747	.606	s f 1 ⊕
2.870	3.480	1.410	14.083	.2073	4.825	.595	s f 1 ⊕
2.870	3.470	1.410	14.042	.2069	4.834	.594	s f 1 ⊕
2.870	3.420	1.420	13.938	.2038	4.908	.585	s f 1 ⊕
2.810	3.950	1.790	19.868	.1946	5.139	.547	s f 1 ⊕
2.850	4.000	1.830	20.862	.1904	5.253	.542	s f 1 ⊕
2.870	4.170	1.970	23.577	.1838	5.440	.528	s f 1 ⊕





CARBON DISULFIDE, CS_2

Average ρ_0 = 1.257 g/cm^3.

Sound velocities longitudinal 1.16 km/s.
shear 0.00 km/s.

References 6, 23, 24, 25, 26

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.263	1.160	0.000	0.000	.7918	1.263	1.000	ssp ×
1.260	2.470	.750	2.334	.5527	1.809	.696	im2 □
1.251	2.590	.860	2.786	.5339	1.873	.668	im2 □
1.249	2.410	.860	2.589	.5149	1.942	.643	im2 □
1.251	2.940	1.010	3.715	.5248	1.906	.656	im2 □
1.257	3.060	1.070	4.116	.5174	1.933	.650	im2 □
1.263	3.090	1.080	4.215	.5150	1.942	.650	im2 □
1.264	3.390	1.310	5.613	.4854	2.060	.614	im2 □
1.268	3.330	1.362	5.751	.4661	2.146	.591	im1 ○
1.245	3.430	1.390	5.936	.4777	2.093	.595	im2 □
1.272	3.470	1.400	6.179	.4690	2.132	.597	im2 □
1.260	3.470	1.420	6.209	.4689	2.133	.591	im2 □
1.266	3.510	1.520	6.754	.4478	2.233	.567	im2 □
1.249	3.530	1.720	7.583	.4105	2.436	.513	im2 □
1.249	3.550	1.810	8.025	.3924	2.548	.490	im2 □
1.272	3.650	1.870	8.682	.3834	2.608	.488	im2 □
1.253	3.620	1.910	8.663	.3770	2.653	.472	im2 □
1.251	3.780	2.130	10.072	.3489	2.866	.437	im2 □
1.251	4.020	2.250	11.315	.3520	2.841	.440	im2 □

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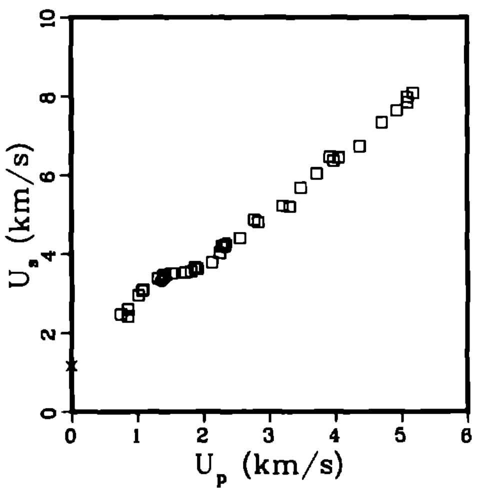

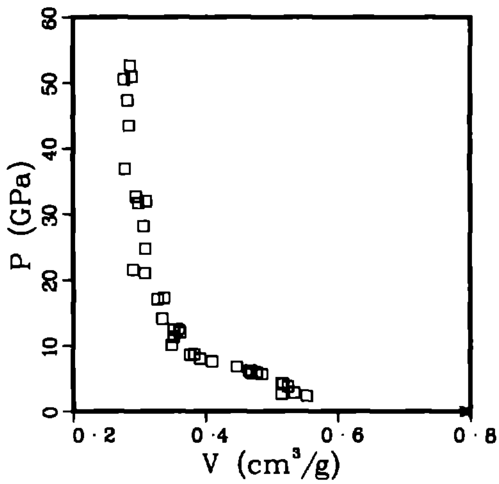

CARBON DISULFIDE, CS_2
(Continued)

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.257	4.180	2.280	11.980	.3616	2.765	.455	im2 □
1.264	4.200	2.330	12.370	.3522	2.839	.445	im2 □
1.244	4.268	2.351	12.482	.3611	2.770	.449	im1 ○
1.248	4.400	2.560	14.057	.3351	2.984	.418	im2 □
1.275	4.860	2.770	17.164	.3373	2.965	.430	im2 □
1.253	4.800	2.830	17.021	.3275	3.053	.410	im2 □
1.258	5.230	3.200	21.054	.3085	3.241	.388	im2 □
1.251	5.200	3.310	21.532	.2905	3.442	.363	im2 □
1.251	5.680	3.480	24.728	.3096	3.230	.387	im2 □
1.255	6.040	3.720	28.198	.3061	3.267	.384	im2 □
1.266	6.460	3.920	32.059	.3106	3.220	.393	im2 □
1.254	6.360	3.980	31.742	.2984	3.351	.374	im2 □
1.253	6.440	4.060	32.761	.2949	3.390	.370	im2 □
1.257	6.730	4.370	36.968	.2790	3.585	.351	im2 □
1.258	7.340	4.710	43.491	.2848	3.511	.358	im2 □
1.258	7.640	4.930	47.383	.2820	3.547	.355	im2 □
1.253	7.980	5.090	50.895	.2890	3.460	.362	im2 □
1.266	7.840	5.090	50.520	.2771	3.609	.351	im2 □
1.255	8.090	5.180	52.592	.2866	3.489	.360	im2 □

CARBON TETRACHLORIDE , CCl_4

Average ρ_0 = 1.585 g/cm^3 .

Sound velocities longitudinal .93 km/s .
shear 0.00 km/s .

References 6 , 23 , 24 , 25 , 26 , 56

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.590	.930	0.000	0.000	.6289	1.590	1.000	ssp ×
1.590	2.320	.720	2.656	.4337	2.305	.690	im2 □
1.571	2.470	.830	3.221	.4226	2.366	.664	im2 □
1.577	2.270	.840	3.007	.3995	2.503	.630	im2 □
1.571	2.790	.970	4.252	.4152	2.408	.652	im2 □
1.586	2.910	1.030	4.754	.4073	2.455	.646	im2 □
1.594	2.950	1.040	4.890	.4062	2.462	.647	im2 □
1.596	3.280	1.250	6.544	.3878	2.579	.619	im2 □
1.590	3.468	1.275	7.031	.3977	2.514	.632	im1 ○
1.606	3.460	1.330	7.390	.3833	2.609	.616	im2 □
1.571	3.320	1.330	6.937	.3815	2.621	.599	im2 □
1.591	3.440	1.360	7.443	.3800	2.631	.605	im2 □
1.598	3.500	1.450	8.110	.3665	2.728	.586	im2 □
1.577	3.740	1.610	9.496	.3611	2.769	.570	im2 □
1.571	3.860	1.690	10.248	.3578	2.794	.562	im2 □
1.606	4.080	1.730	11.336	.3586	2.788	.576	im2 □
1.580	4.070	1.770	11.382	.3577	2.796	.565	im2 □
1.571	4.270	1.970	13.215	.3429	2.917	.539	im2 □
1.571	4.520	2.070	14.699	.3450	2.898	.542	im2 □

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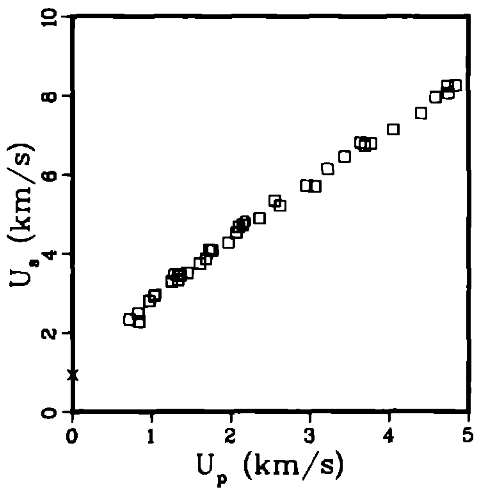
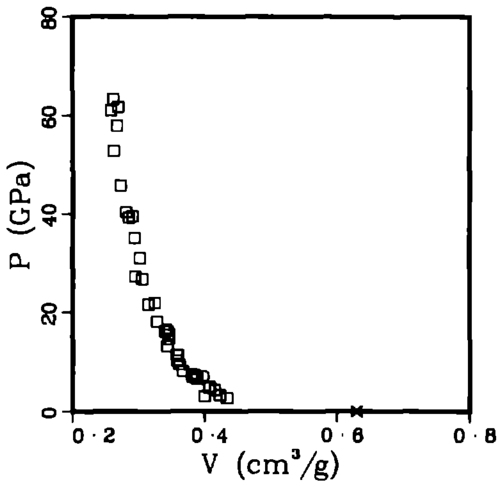




CARBON TETRACHLORIDE, CCl_4
(Continued)

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.586	4.660	2.100	15.521	.3464	2.887	.549	im2 □
1.596	4.710	2.150	16.162	.3406	2.936	.544	im2 □
1.587	4.792	2.179	16.571	.3436	2.910	.545	im1 ○
1.574	4.880	2.360	18.127	.3281	3.048	.516	im2 □
1.610	5.340	2.550	21.923	.3245	3.082	.522	im2 □
1.580	5.210	2.620	21.567	.3146	3.178	.497	im2 □
1.588	5.720	2.950	26.796	.3050	3.279	.484	im2 □
1.571	5.690	3.060	27.353	.2942	3.399	.462	im2 □
1.571	6.130	3.220	31.009	.3022	3.309	.475	im2 □
1.584	6.440	3.440	35.091	.2941	3.400	.466	im2 □
1.598	6.800	3.640	39.554	.2908	3.439	.465	im2 □
1.582	6.720	3.690	39.229	.2850	3.509	.451	im2 □
1.580	6.780	3.770	40.386	.2810	3.559	.444	im2 □
1.586	7.130	4.050	45.798	.2724	3.671	.432	im2 □
1.588	7.550	4.400	52.753	.2627	3.806	.417	im2 □
1.588	7.960	4.580	57.893	.2674	3.740	.425	im2 □
1.580	8.240	4.740	61.711	.2688	3.720	.425	im2 □
1.598	8.060	4.740	61.051	.2578	3.879	.412	im2 □
1.584	8.260	4.840	63.326	.2614	3.826	.414	im2 □

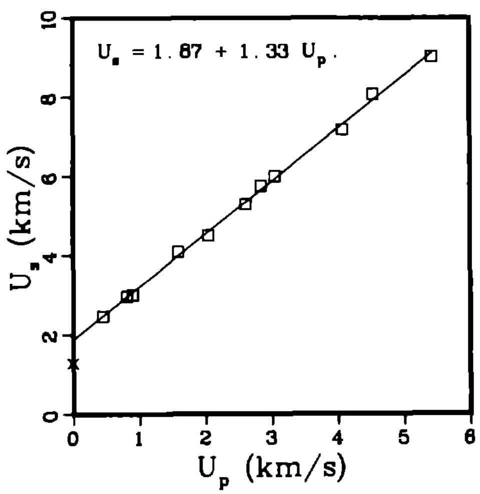
CYCLOHEXADIENE, 1-3, C_6H_8

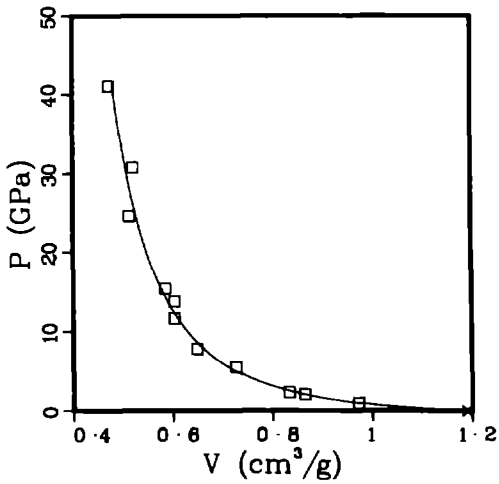
Average ρ_0 = 0.840 g/cm^3.

Sound velocities longitudinal 1.28 km/s.
shear 0.00 km/s.

Reference 57

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.840	1.280	0.000	0.000	1.1905	.840	1.000	ssp ×
.840	2.460	.450	.930	.9727	1.028	.817	im2 □
.840	2.960	.810	2.014	.8647	1.156	.726	im2 □
.840	3.000	.900	2.268	.8333	1.200	.700	im2 □
.840	4.090	1.590	5.463	.7277	1.374	.611	im2 □
.840	4.510	2.050	7.766	.6494	1.540	.545	im2 □
.840	5.300	2.610	11.620	.6042	1.655	.508	im2 □
.840	5.760	2.840	13.741	.6035	1.657	.507	im2 □
.840	6.000	3.050	15.372	.5853	1.708	.492	im2 □
.840	7.170	4.080	24.573	.5131	1.949	.431	im2 □
.840	8.070	4.540	30.776	.5207	1.920	.437	im2 □
.840	9.010	5.430	41.096	.4730	2.114	.397	im2 □





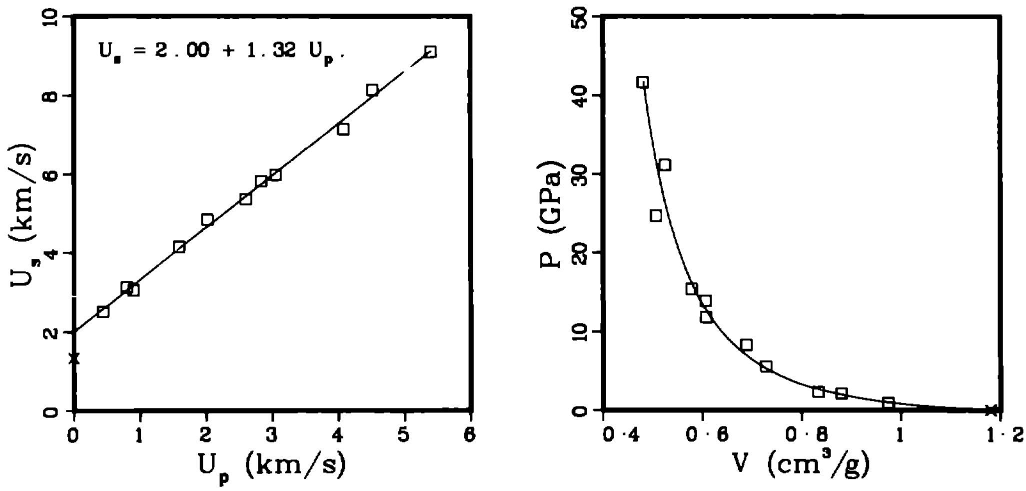
CYCLOHEXADIENE, 1-4, C_6H_8

Average ρ_0 = 0.847 g/cm^3.

Sound velocities longitudinal 1.34 km/s.
shear 0.00 km/s.

Reference 57

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.847	1.340	0.000	0.000	1.1806	.847	1.000	ssp ×
.847	2.520	.440	.939	.9745	1.026	.825	im2 □
.847	3.140	.800	2.128	.8798	1.137	.745	im2 □
.847	3.060	.900	2.333	.8334	1.200	.706	im2 □
.847	4.150	1.590	5.589	.7283	1.373	.617	im2 □
.847	4.850	2.020	8.298	.6889	1.452	.584	im2 □
.847	5.360	2.600	11.804	.6079	1.645	.515	im2 □
.847	5.820	2.830	13.951	.6065	1.649	.514	im2 □
.847	5.980	3.050	15.448	.5785	1.729	.490	im2 □
.847	7.150	4.080	24.709	.5069	1.973	.429	im2 □
.847	8.140	4.520	31.164	.5251	1.905	.445	im2 □
.847	9.110	5.400	41.667	.4808	2.080	.407	im2 □



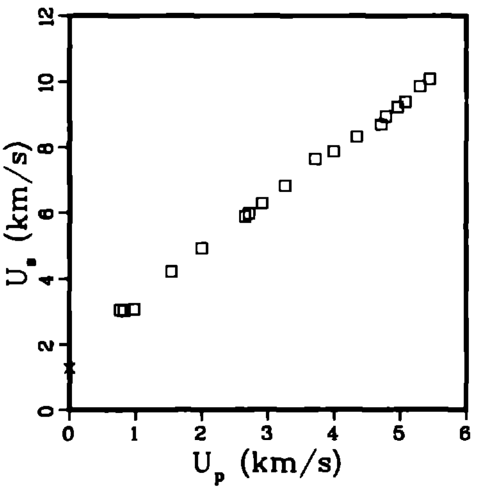
CYCLOHEXANE, C_6H_{12}

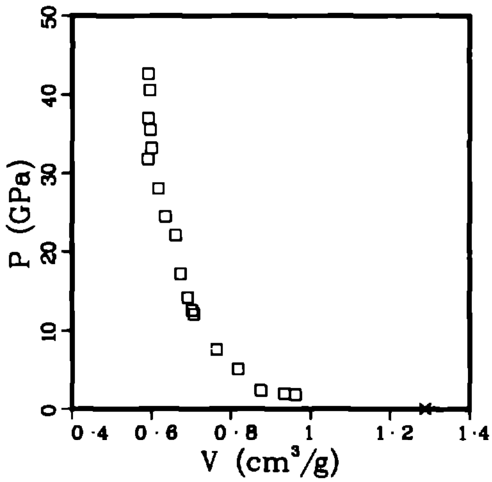
Average ρ_0 = 0.776 g/cm^3.

Sound velocities longitudinal 1.26 km/s.
shear 0.00 km/s.

Reference 57

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.776	1.260	0.000	0.000	1.2887	.776	1.000	ssp ×
.776	3.040	.770	1.816	.9623	1.039	.747	im2 □
.776	3.020	.830	1.945	.9345	1.070	.725	im2 □
.776	3.060	.980	2.327	.8760	1.142	.680	im2 □
.776	4.210	1.540	5.031	.8173	1.224	.634	im2 □
.776	4.910	2.000	7.620	.7637	1.309	.593	im2 □
.776	5.870	2.650	12.071	.7069	1.415	.549	im2 □
.776	5.960	2.710	12.534	.7027	1.423	.545	im2 □
.776	6.280	2.910	14.181	.6915	1.446	.537	im2 □
.776	6.820	3.260	17.253	.6727	1.487	.522	im2 □
.776	7.640	3.720	22.055	.6612	1.512	.513	im2 □
.776	7.870	4.000	24.428	.6337	1.578	.492	im2 □
.776	8.320	4.340	28.020	.6165	1.622	.478	im2 □
.776	8.700	4.710	31.798	.5910	1.692	.459	im2 □
.776	8.950	4.780	33.198	.6004	1.666	.466	im2 □
.776	9.230	4.960	35.526	.5962	1.677	.463	im2 □
.776	9.390	5.080	37.016	.5915	1.691	.459	im2 □
.776	9.860	5.300	40.552	.5960	1.678	.462	im2 □
.776	10.080	5.450	42.630	.5919	1.689	.459	im2 □





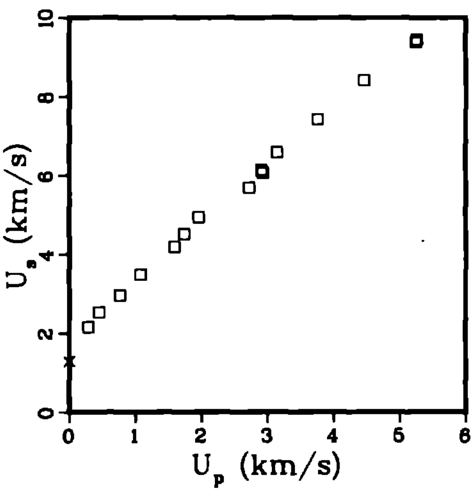
CYCLOHEXENE, C_6H_{10}

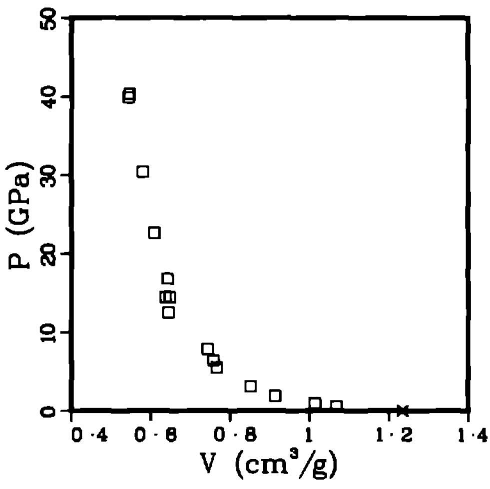
Average ρ_0 = 0.810 g/cm^3.

Sound velocities	longitudinal	1.28 km/s.
	shear	0.00 km/s.

Reference 57

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.810	1.280	0.000	0.000	1.2346	.810	1.000	ssp ×
.810	2.150	.290	.505	1.0680	.936	.865	im2 □
.810	2.520	.450	.919	1.0141	.986	.821	im2 □
.810	2.960	.770	1.846	.9134	1.095	.740	im2 □
.810	3.490	1.080	3.053	.8525	1.173	.691	im2 □
.810	4.190	1.590	5.396	.7661	1.305	.621	im2 □
.810	4.510	1.740	6.356	.7583	1.319	.614	im2 □
.810	4.930	1.960	7.827	.7437	1.345	.602	im2 □
.810	5.690	2.720	12.536	.6444	1.552	.522	im2 □
.810	6.130	2.910	14.449	.6485	1.542	.525	im2 □
.810	6.060	2.930	14.382	.6377	1.568	.517	im2 □
.810	6.580	3.150	16.789	.6436	1.554	.521	im2 □
.810	7.420	3.760	22.598	.6090	1.642	.493	im2 □
.810	8.420	4.460	30.418	.5806	1.722	.470	im2 □
.810	9.380	5.250	39.888	.5436	1.840	.440	im2 □
.810	9.450	5.270	40.339	.5461	1.831	.442	im2 □



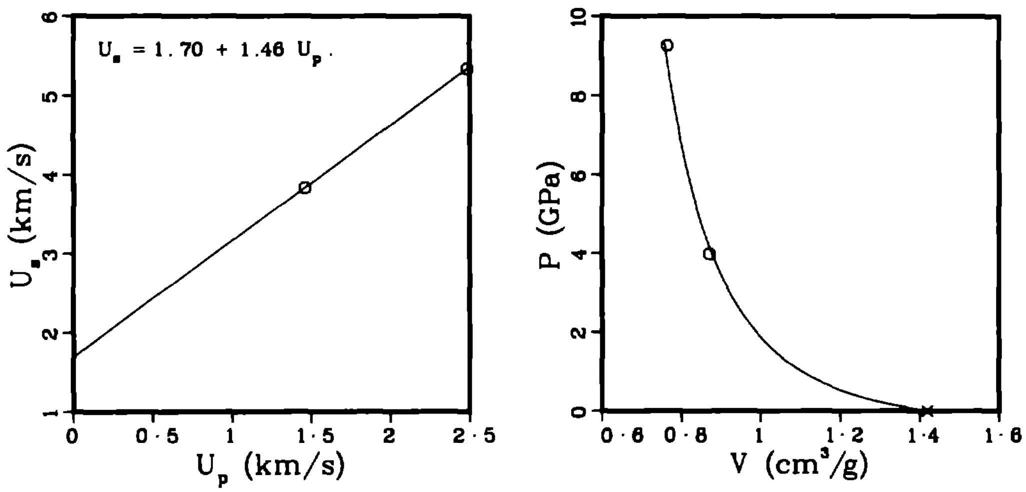


ETHER , ethyl , $C_4H_{10}O$

Average ρ_0 = 0.704 g/cm^3 .

References 6 , 23

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.711	3.834	1.460	3.980	.8709	1.148	.619	iml o
.698	5.335	2.485	9.254	.7653	1.307	.534	iml o

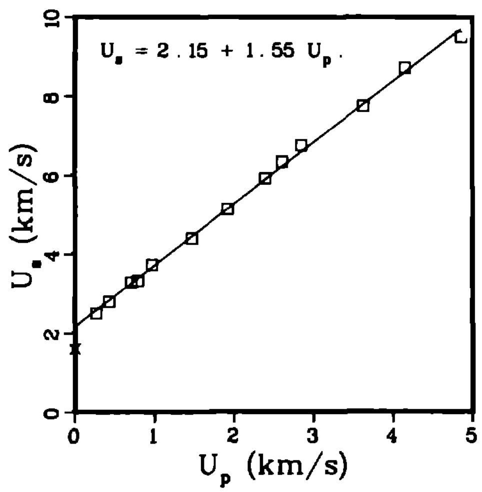


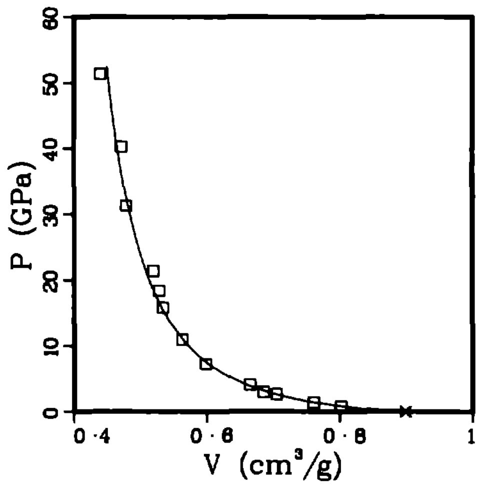
ETHYLENE GLYCOL, $C_2H_6O_2$

Average ρ_0 = 1.112 g/cm^3.

Sound velocities longitudinal 1.60 km/s.
shear 0.00 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.112	1.600	0.000	0.000	.8993	1.112	1.000	ssp ×
1.112	2.490	.270	.748	.8018	1.247	.892	im2 □
1.112	2.790	.430	1.334	.7607	1.315	.846	im2 □
1.112	3.280	.710	2.590	.7046	1.419	.784	im2 □
1.112	3.320	.790	2.917	.6853	1.459	.762	im2 □
1.112	3.720	.970	4.013	.6648	1.504	.739	im2 □
1.112	4.390	1.470	7.176	.5982	1.672	.665	im2 □
1.112	5.130	1.920	10.953	.5627	1.777	.626	im2 □
1.112	5.910	2.400	15.773	.5341	1.872	.594	im2 □
1.112	6.330	2.610	18.372	.5285	1.892	.588	im2 □
1.112	6.750	2.850	21.392	.5196	1.925	.578	im2 □
1.112	7.750	3.630	31.283	.4781	2.092	.532	im2 □
1.112	8.720	4.150	40.241	.4713	2.122	.524	im2 □
1.112	9.500	4.860	51.341	.4392	2.277	.488	im2 □





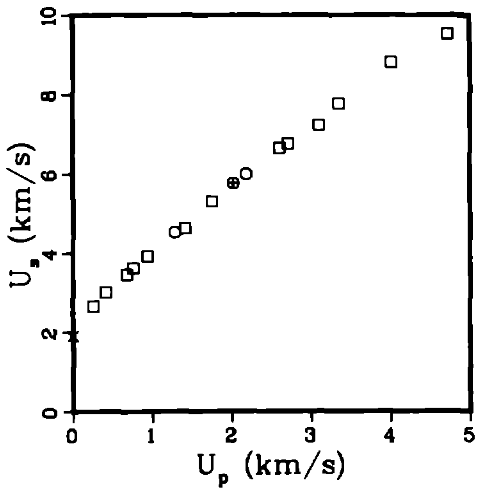
GLYCEROL, $C_3H_8O_3$

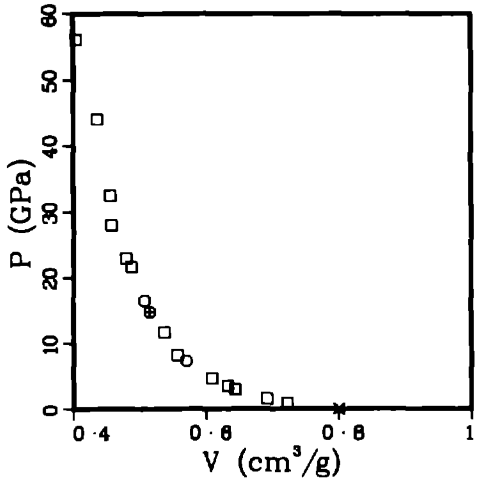
Average ρ_0 = 1.250 g/cm^3.

Sound velocities longitudinal 1.90 km/s.
shear 0.00 km/s.

References 6, 23

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.248	1.900	0.000	0.000	.8013	1.248	1.000	ssp ×
1.248	2.650	.260	.860	.7227	1.384	.902	im2 □
1.248	3.000	.410	1.535	.6918	1.446	.863	im2 □
1.248	3.460	.680	2.936	.6438	1.553	.803	im2 □
1.248	3.620	.760	3.433	.6331	1.580	.790	im2 □
1.248	3.920	.940	4.599	.6091	1.642	.760	im2 □
1.259	4.525	1.278	7.281	.5700	1.755	.718	im1 ○
1.248	4.620	1.410	8.130	.5567	1.796	.695	im2 □
1.248	5.310	1.750	11.597	.5372	1.861	.670	im2 □
1.261	5.770	2.020	14.697	.5154	1.940	.650	sf1 ⊕
1.253	5.997	2.184	16.411	.5074	1.971	.636	im1 ○
1.248	6.650	2.600	21.578	.4880	2.049	.609	im2 □
1.248	6.760	2.710	22.863	.4801	2.083	.599	im2 □
1.248	7.220	3.100	27.933	.4572	2.187	.571	im2 □
1.248	7.770	3.350	32.485	.4558	2.194	.569	im2 □
1.248	8.800	4.010	44.039	.4362	2.293	.544	im2 □
1.248	9.530	4.720	56.137	.4044	2.473	.505	im2 □



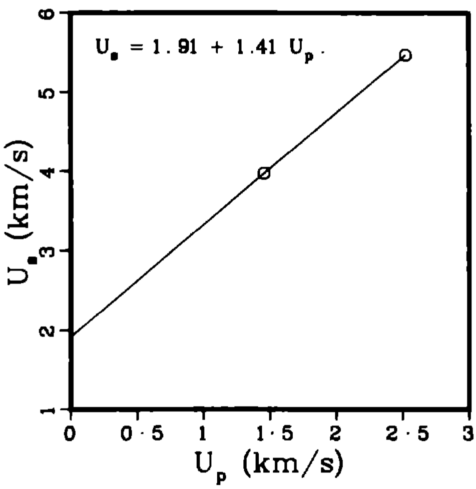


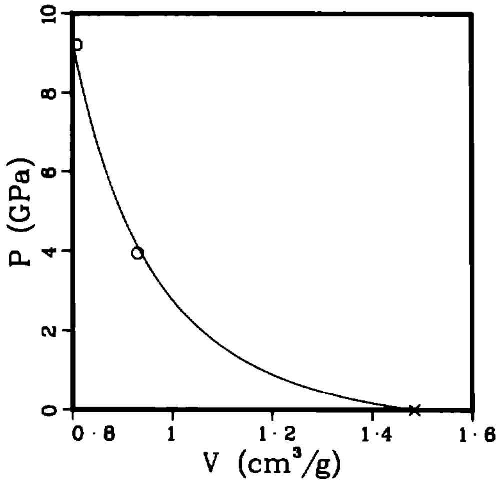
HEXANE, C_6H_{14}

Average ρ_0 = 0.673 g/cm^3.

References 6, 23

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.680	3.972	1.459	3.941	.9304	1.075	.633	iml o
.667	5.474	2.524	9.216	.8080	1.238	.539	iml o





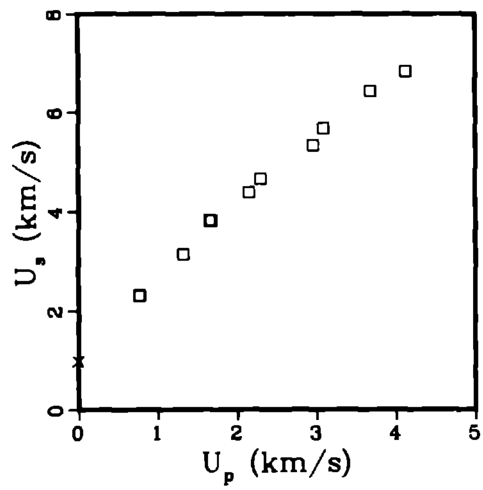
METHANE, dibromo-, CH_2Br_2

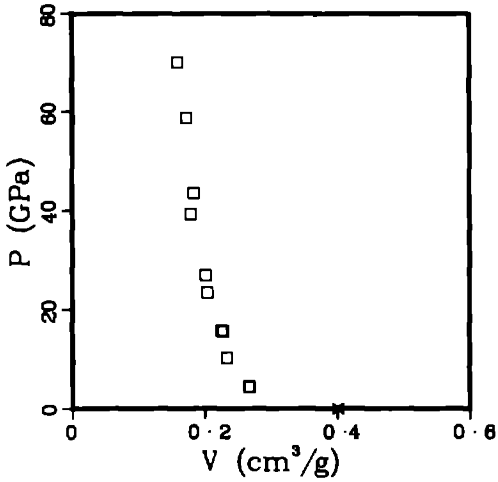
Average ρ_0 = 2.491 g/cm^3.

Sound velocities longitudinal .98 km/s.
shear 0.00 km/s.

Reference 59

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.495	.980	0.000	0.000	.4008	2.495	1.000	ssp ×
2.491	2.310	.770	4.431	.2676	3.737	.667	im2 □
2.489	2.300	.770	4.408	.2673	3.742	.665	im2 □
2.486	3.140	1.320	10.304	.2332	4.289	.580	im2 □
2.492	3.830	1.650	15.748	.2284	4.378	.569	im2 □
2.491	3.820	1.670	15.891	.2259	4.426	.563	im2 □
2.491	4.380	2.150	23.458	.2044	4.893	.509	im2 □
2.510	4.670	2.300	26.960	.2022	4.946	.507	im2 □
2.490	5.340	2.960	39.358	.1790	5.587	.446	im2 □
2.482	5.680	3.090	43.562	.1837	5.443	.456	im2 □
2.481	6.440	3.680	58.798	.1727	5.789	.429	im2 □
2.491	6.830	4.120	70.096	.1593	6.278	.397	im2 □





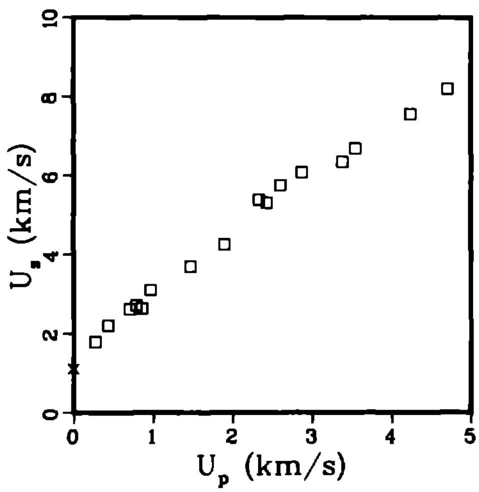
METHANE, dichloro-, CH_2Cl_2

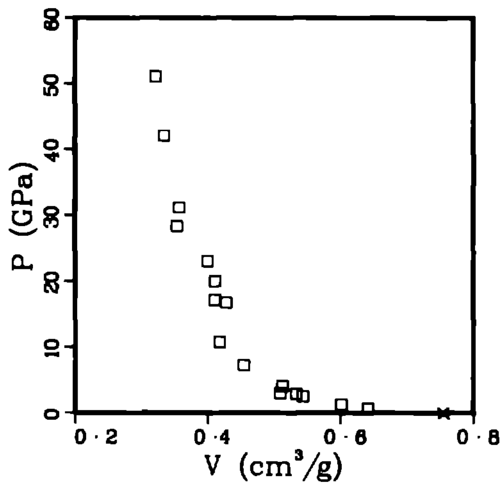
Average ρ_0 = 1.325 g/cm^3.

Sound velocities longitudinal 1.11 km/s.
shear 0.00 km/s.

Reference 60

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.323	1.110	0.000	0.000	.7559	1.323	1.000	ssp ×
1.323	1.790	.270	.639	.6418	1.558	.849	im2 □
1.337	2.200	.430	1.265	.6018	1.662	.805	im2 □
1.337	2.600	.710	2.468	.5437	1.839	.727	im2 □
1.326	2.700	.790	2.828	.5335	1.874	.707	im2 □
1.321	2.630	.860	2.988	.5095	1.963	.673	im2 □
1.340	3.100	.970	4.029	.5128	1.950	.687	im2 □
1.326	3.700	1.470	7.212	.4545	2.200	.603	im2 □
1.323	4.250	1.900	10.683	.4179	2.393	.553	im2 □
1.326	5.390	2.330	16.653	.4281	2.336	.568	im2 □
1.322	5.320	2.430	17.090	.4109	2.434	.543	im2 □
1.335	5.760	2.600	19.993	.4109	2.433	.549	im2 □
1.322	6.080	2.870	23.068	.3994	2.504	.528	im2 □
1.321	6.350	3.380	28.353	.3541	2.824	.468	im2 □
1.314	6.690	3.550	31.207	.3572	2.800	.469	im2 □
1.313	7.560	4.240	42.087	.3345	2.990	.439	im2 □
1.323	8.200	4.710	51.097	.3217	3.108	.426	im2 □





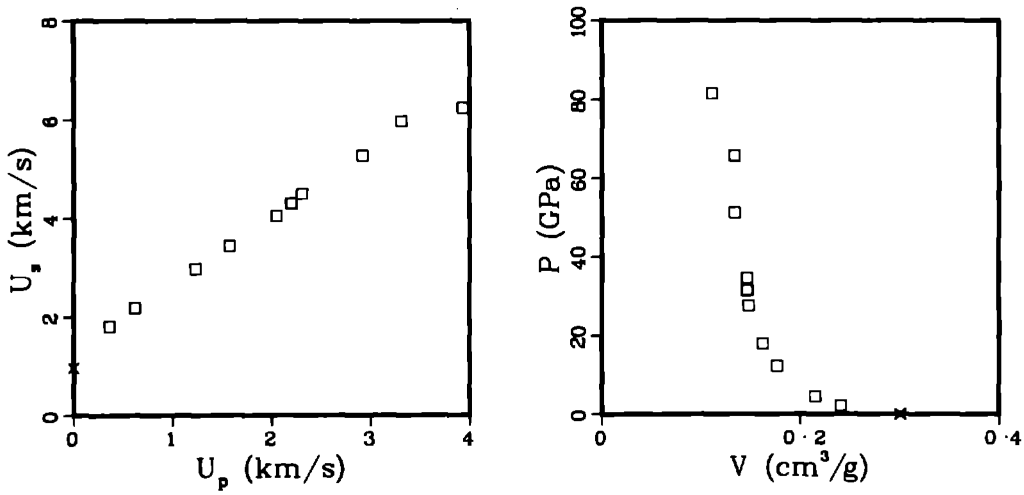
METHANE , diiodo- , CH_2I_2

Average ρ_0 = 3.325 g/cm^3 .

Sound velocities longitudinal .96 km/s .
shear 0.00 km/s .

Reference 59

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
3.325	.960	0.000	0.000	.3008	3.325	1.000	ssp ×
3.325	1.810	.360	2.167	.2409	4.151	.801	im2 □
3.325	2.180	.620	4.494	.2152	4.646	.716	im2 □
3.325	2.980	1.230	12.187	.1766	5.662	.587	im2 □
3.325	3.440	1.580	18.072	.1626	6.149	.541	im2 □
3.325	4.040	2.050	27.538	.1481	6.750	.493	im2 □
3.325	4.300	2.200	31.455	.1469	6.808	.488	im2 □
3.325	4.290	2.200	31.381	.1465	6.825	.487	im2 □
3.325	4.500	2.310	34.563	.1464	6.832	.487	im2 □
3.325	5.270	2.920	51.166	.1341	7.456	.446	im2 □
3.325	5.970	3.310	65.704	.1340	7.462	.446	im2 □
3.325	6.240	3.930	81.540	.1113	8.982	.370	im2 □



METHANE , trichloro– , chloroform , $CHCl_3$

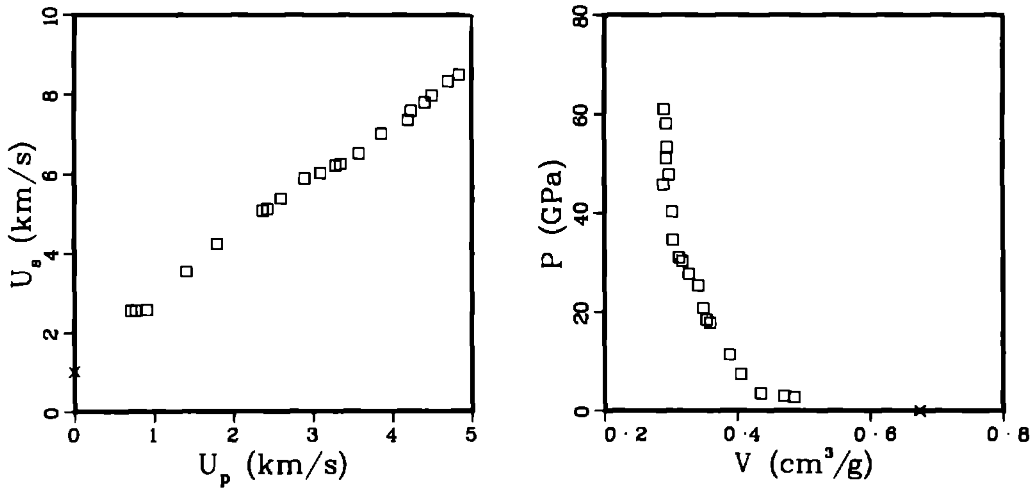
Average ρ_0 = 1.483 g/cm³ .

Sound velocities	longitudinal	1.00 km/s .
	shear	0.00 km/s .

References 58 , 59

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.483	1.000	0.000	0.000	.6743	1.483	1.000	ssp ×
1.483	2.540	.710	2.674	.4858	2.058	.720	im2 □
1.483	2.550	.770	2.912	.4707	2.125	.698	im2 □
1.483	2.570	.910	3.468	.4355	2.296	.646	im2 □
1.483	3.530	1.410	7.381	.4050	2.469	.601	im2 □
1.483	4.240	1.800	11.318	.3880	2.577	.575	im2 □
1.483	5.070	2.370	17.820	.3591	2.785	.533	im2 □
1.483	5.110	2.430	18.415	.3536	2.828	.524	im2 □
1.483	5.380	2.600	20.744	.3484	2.870	.517	im2 □
1.483	5.880	2.900	25.288	.3417	2.926	.507	im2 □
1.483	6.020	3.100	27.676	.3271	3.057	.485	im2 □
1.483	6.210	3.290	30.299	.3171	3.154	.470	im2 □
1.483	6.240	3.350	31.001	.3123	3.202	.463	im2 □
1.483	6.510	3.580	34.563	.3035	3.295	.450	im2 □
1.483	7.010	3.870	40.232	.3020	3.311	.448	im2 □
1.483	7.350	4.200	45.780	.2890	3.460	.429	im2 □
1.483	7.590	4.240	47.725	.2976	3.360	.441	im2 □
1.483	7.800	4.410	51.012	.2931	3.412	.435	im2 □
1.483	7.980	4.500	53.255	.2941	3.401	.436	im2 □

(Continued)



METHANE, trichloro-, chloroform, $CHCl_3$
(Continued)

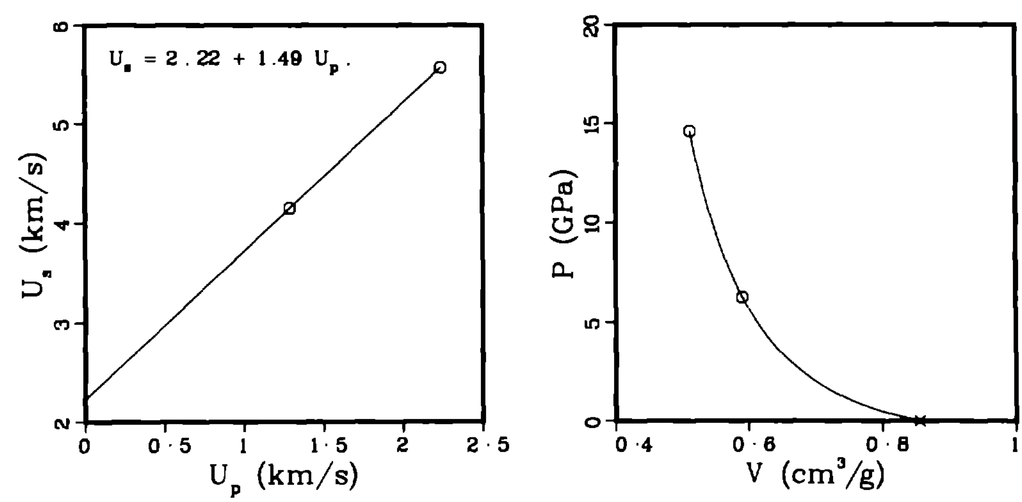
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.483	8.320	4.700	57.991	.2934	3.408	.435	im2 □
1.483	8.490	4.840	60.939	.2899	3.449	.430	im2 □

MONONITROTOLUENE

Average ρ_0 = 1.168 g/cm^3.

References 6, 23

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.168	4.150	1.289	6.248	.5902	1.694	.689	iml o
1.168	5.572	2.241	14.585	.5118	1.954	.598	iml o



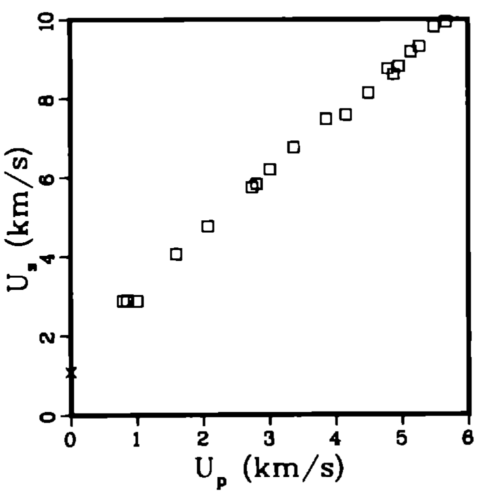
N-HEXANE , C_6H_{14}

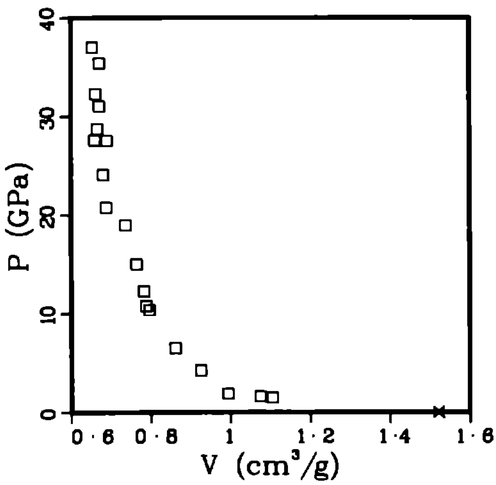
Average ρ_0 = 0.657 g/cm^3 .

Sound velocities longitudinal 1.09 km/s .
shear 0.00 km/s .

References 57 , 58

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.657	1.090	0.000	0.000	1.5221	.657	1.000	ssp ×
.657	2.880	.790	1.495	1.1046	.905	.726	im2 □
.657	2.890	.850	1.614	1.0744	.931	.706	im2 □
.657	2.880	1.000	1.892	.9936	1.006	.653	im2 □
.657	4.060	1.590	4.241	.9260	1.080	.608	im2 □
.657	4.770	2.070	6.487	.8615	1.161	.566	im2 □
.657	5.750	2.740	10.351	.7968	1.255	.523	im2 □
.657	5.830	2.810	10.763	.7884	1.268	.518	im2 □
.657	6.200	3.010	12.261	.7831	1.277	.515	im2 □
.657	6.770	3.370	14.989	.7644	1.308	.502	im2 □
.657	7.480	3.860	18.969	.7366	1.358	.484	im2 □
.657	7.590	4.160	20.744	.6878	1.454	.452	im2 □
.657	8.140	4.500	24.066	.6806	1.469	.447	im2 □
.657	8.760	4.790	27.568	.6898	1.450	.453	im2 □
.657	8.610	4.880	27.605	.6594	1.517	.433	im2 □
.657	8.820	4.960	28.742	.6661	1.501	.438	im2 □
.657	9.190	5.140	31.034	.6708	1.491	.441	im2 □
.657	9.320	5.270	32.269	.6614	1.512	.435	im2 □
.657	9.820	5.490	35.420	.6711	1.490	.441	im2 □
.657	9.940	5.670	37.028	.6538	1.529	.430	im2 □





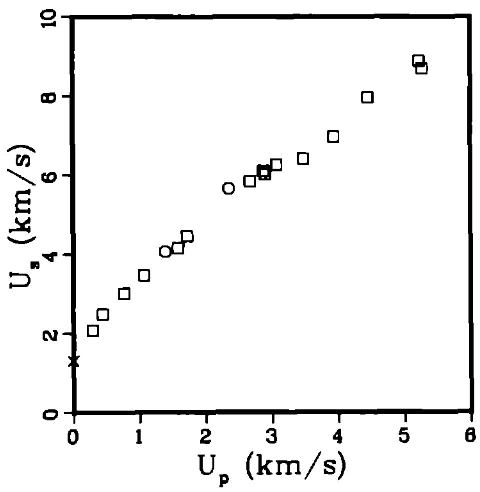
TOLUENE, $C_6H_5CH_3$

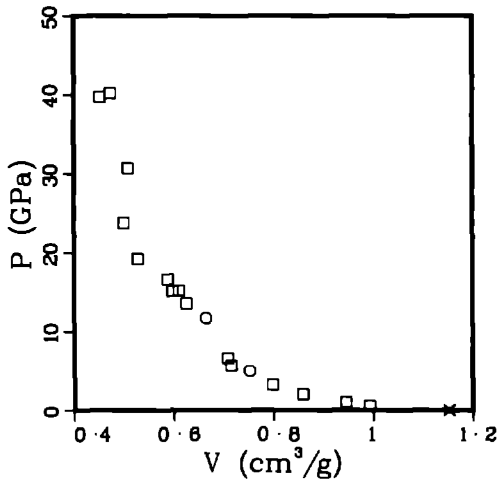
Average ρ_0 = 0.868 g/cm³.

Sound velocities	longitudinal	1.31 km/s.
	shear	0.00 km/s.

References 6, 23, 57

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
.867	1.310	0.000	0.000	1.1534	.867	1.000	ssp ×
.867	2.080	.290	.523	.9926	1.007	.861	im2 □
.867	2.490	.450	.971	.9450	1.058	.819	im2 □
.867	3.010	.770	2.009	.8583	1.165	.744	im2 □
.867	3.470	1.070	3.219	.7977	1.254	.692	im2 □
.876	4.071	1.387	4.946	.7526	1.329	.659	im1 ○
.867	4.160	1.580	5.699	.7153	1.398	.620	im2 □
.867	4.460	1.720	6.651	.7086	1.411	.614	im2 □
.879	5.661	2.351	11.699	.6652	1.503	.585	im1 ○
.867	5.840	2.670	13.519	.6261	1.597	.543	im2 □
.867	6.100	2.870	15.179	.6107	1.637	.530	im2 □
.867	6.020	2.900	15.136	.5978	1.673	.518	im2 □
.867	6.260	3.070	16.662	.5878	1.701	.510	im2 □
.867	6.400	3.470	19.254	.5280	1.894	.458	im2 □
.867	6.960	3.940	23.775	.5005	1.998	.434	im2 □
.867	7.960	4.450	30.711	.5086	1.966	.441	im2 □
.867	8.870	5.230	40.220	.4733	2.113	.410	im2 □
.867	8.680	5.280	39.735	.4518	2.213	.392	im2 □





WATER, H_2O

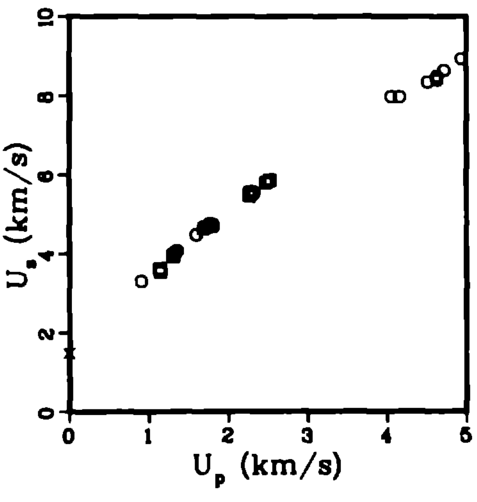
Average ρ_0 = 0.998 g/cm^3.

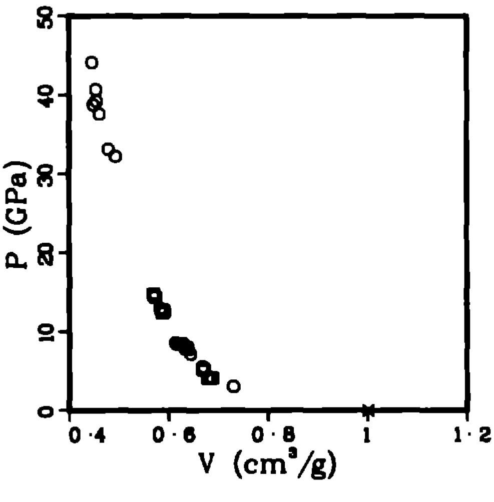
Sound velocities longitudinal 1.48 km/s.
shear 0.00 km/s.

References 6, 23, 60

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
.998	1.480	0.000	0.000	1.0018	.998	1.000	ssp ×
.998	3.314	.900	2.977	.7297	1.370	.728	im1 ○
.998	3.617	1.136	4.101	.6873	1.455	.686	im2 □
.998	3.608	1.140	4.105	.6854	1.459	.684	im2 □
.998	3.620	1.144	4.133	.6853	1.459	.684	im2 □
.998	3.534	1.144	4.035	.6776	1.476	.676	im2 □
.998	3.944	1.306	5.141	.6702	1.492	.669	im2 □
.998	3.936	1.311	5.150	.6683	1.496	.667	im2 □
.998	3.972	1.316	5.217	.6700	1.492	.669	im2 □
.998	4.044	1.339	5.405	.6701	1.492	.669	im1 ○
.998	4.077	1.357	5.523	.6684	1.496	.667	im1 ○
.998	4.482	1.600	7.158	.6442	1.552	.643	im1 ○
.998	4.635	1.689	7.813	.6369	1.570	.636	im2 □
.998	4.674	1.713	7.991	.6348	1.575	.634	im2 □
.998	4.700	1.741	8.168	.6307	1.586	.630	im1 ○
.998	4.720	1.749	8.240	.6306	1.586	.629	im1 ○
.998	4.755	1.773	8.415	.6283	1.592	.627	im1 ○
.998	4.727	1.779	8.393	.6249	1.600	.624	im2 □
.998	4.715	1.792	8.432	.6212	1.610	.620	im2 □

(Continued)





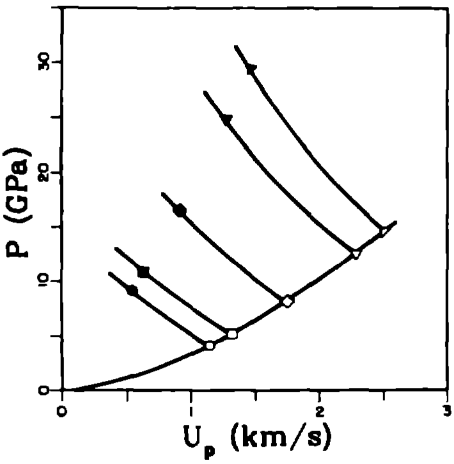
WATER, H_2O
(Continued)

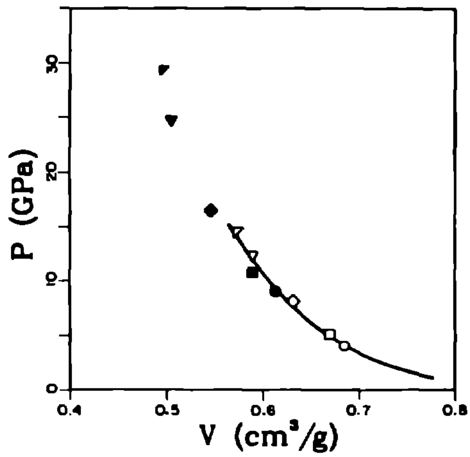
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.000	4.689	1.814	8.506	.6131	1.631	.613	im1 ○
.998	5.481	2.266	12.395	.5877	1.701	.587	im2 □
.998	5.466	2.266	12.361	.5866	1.705	.585	im2 □
.998	5.545	2.274	12.584	.5911	1.692	.590	im2 □
.998	5.534	2.275	12.567	.5900	1.695	.589	im1 ○
.998	5.558	2.299	12.752	.5875	1.702	.586	im2 □
.998	5.537	2.310	12.767	.5839	1.713	.583	im1 ○
.998	5.559	2.324	12.896	.5830	1.715	.582	im1 ○
.998	5.804	2.479	14.359	.5740	1.742	.573	im2 □
.998	5.839	2.514	14.650	.5706	1.753	.569	im2 □
.998	5.869	2.530	14.819	.5701	1.754	.569	im2 □
.998	7.973	4.051	32.240	.4928	2.029	.492	im1 ○
.998	7.973	4.160	33.108	.4791	2.087	.478	im1 ○
.998	8.349	4.514	37.620	.4602	2.173	.459	im1 ○
.998	8.388	4.632	38.783	.4486	2.229	.448	im1 ○
.998	8.487	4.633	39.249	.4549	2.198	.454	im1 ○
.998	8.635	4.722	40.701	.4540	2.203	.453	im1 ○
1.000	8.929	4.942	44.127	.4465	2.240	.447	im1 ○

WATER, reflected-shock data
ρ_0 = **0.998 g/cm³.**

Initial Shock				Reflected Shock				
U_{p1} (km/s)	V_1 (cm³/g)	P_1 (GPa)		U_{p2} (km/s)	V_2 (cm³/g)	P_2 (GPa)		Std.[a]
1.136	0.687	4.09	○	0.536	0.613	9.02	●	Al
1.140	0.686	4.10		0.538	0.613	9.06		
1.144	0.685	4.13		0.535	0.611	9.00		
1.144	0.677	4.03		0.552	0.611	9.33		
1.306	0.670	5.14	□	0.628	0.589	10.80	■	Al
1.311	0.668	5.14		0.634	0.589	10.91		
1.316	0.670	5.21		0.635	0.589	10.93		
1.689	0.637	7.81	◇	0.879	0.555	15.93	◆	Al
1.713	0.635	7.98		0.885	0.550	16.05		
1.792	0.621	8.42		0.941	0.539	17.25		
1.779	0.625	8.39		0.923	0.538	16.87		
2.266	0.587	12.35	▽	1.285	0.512	25.21	▼	Al
2.266	0.588	12.38		1.277	0.509	25.02		
2.274	0.591	12.57		1.234	0.496	23.98		
2.299	0.587	12.74		1.283	0.504	25.17		
2.479	0.574	14.38	◸	1.452	0.504	29.57	◤	Al
2.514	0.571	14.64		1.449	0.493	29.32		
2.530	0.570	14.80		1.456	0.492	29.50		

[a]Standard used for reflected-shock measurements was 2024 aluminum alloy (Al).





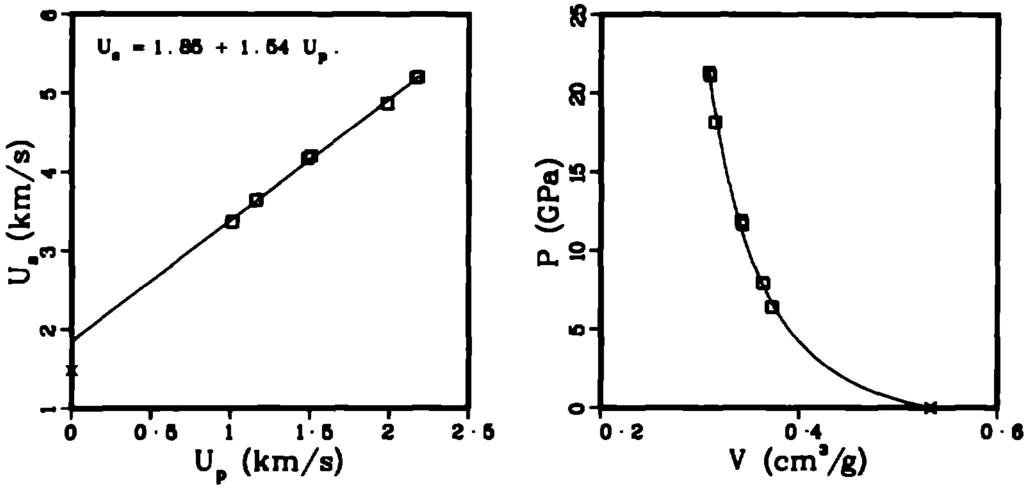
AQUEOUS SOLUTIONS

CESIUM CHLORIDE, 7.0 molar aqueous solution

Average ρ_0 = 1.877 g/cm^3.

Sound velocities longitudinal 1.48 km/s.
shear 0.00 km/s.

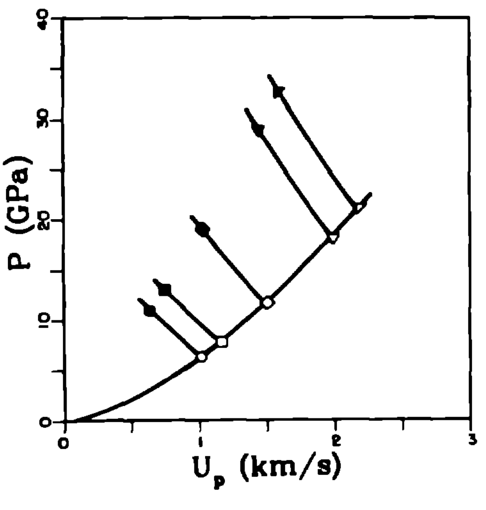
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.877	1.480	0.000	0.000	.5328	1.877	1.000	ssp ×
1.877	3.364	1.008	6.365	.3731	2.680	.700	im2 □
1.877	3.366	1.013	6.400	.3724	2.685	.699	im2 □
1.877	3.641	1.156	7.900	.3636	2.750	.683	im2 □
1.877	3.646	1.163	7.959	.3628	2.756	.681	im2 □
1.877	4.172	1.487	11.644	.3429	2.917	.644	im2 □
1.877	4.202	1.508	11.894	.3416	2.928	.641	im2 □
1.877	4.864	1.987	18.141	.3151	3.173	.591	im2 □
1.877	4.868	1.988	18.165	.3152	3.173	.592	im2 □
1.877	5.190	2.168	21.120	.3102	3.224	.582	im2 □
1.877	5.201	2.184	21.321	.3090	3.236	.580	im2 □

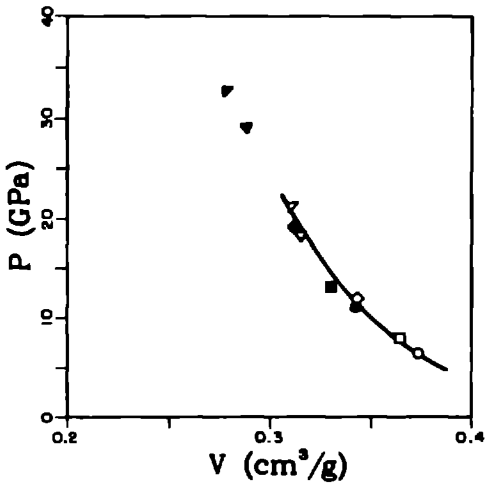


CESIUM CHLORIDE, 7.0 molar aqueous solution, reflected-shock data
ρ_0 = 1.877 g/cm^3.

Initial Shock				Reflected Shock				
U_{p1} (km/s)	V_1 (cm^3/g)	P_1 (GPa)		U_{p2} (km/s)	V_2 (cm^3/g)	P_2 (GPa)		Std.[a]
1.008	0.373	6.37	○	0.636	0.343	10.95	●	Al
1.013	0.372	6.40		0.634	0.341	10.90		Al
1.156	0.364	7.90	□	0.742	0.331	13.07	■	Al
1.163	0.363	7.96		0.746	0.329	13.14		Al
1.487	0.343	11.64	◇	1.023	0.314	19.08	◆	Al
1.508	0.342	11.89		1.024	0.309	19.10		Al
1.987	0.315	18.14	▽	1.434	0.287	28.95	▼	Al
1.988	0.315	18.17		1.437	0.288	29.03		Al
2.168	0.310	21.12	▽	1.598	0.283	33.23	▼	Al
2.184	0.309	21.31		1.556	0.272	32.12		Al

[a]Standard used for reflected-shock measurements was 2024 aluminum alloy (Al).



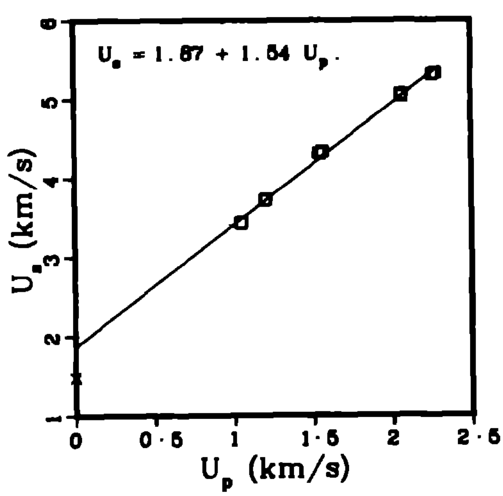


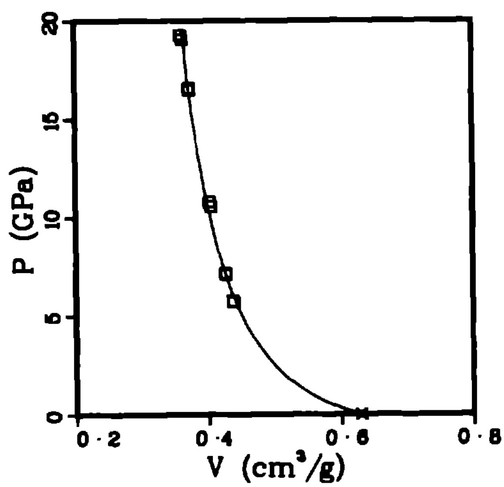
CESIUM CHLORIDE, 4.7 molar aqueous solution

Average ρ_0 = 1.587 g/cm^3.

Sound velocities longitudinal 1.48 km/s.
shear 0.00 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.587	1.480	0.000	0.000	.6301	1.587	1.000	ssp ×
1.587	3.430	1.047	5.699	.4378	2.284	.695	im2 □
1.587	3.437	1.051	5.733	.4374	2.286	.694	im2 □
1.587	3.718	1.200	7.081	.4287	2.343	.677	im2 □
1.587	3.734	1.207	7.153	.4284	2.345	.677	im2 □
1.587	4.311	1.542	10.550	.4047	2.471	.642	im2 □
1.587	4.336	1.565	10.769	.4027	2.483	.639	im2 □
1.587	5.067	2.062	16.581	.3737	2.676	.593	im2 □
1.587	5.038	2.063	16.494	.3721	2.687	.591	im2 □
1.587	5.310	2.260	19.045	.3619	2.763	.574	im2 □
1.587	5.325	2.278	19.251	.3606	2.773	.572	im2 □

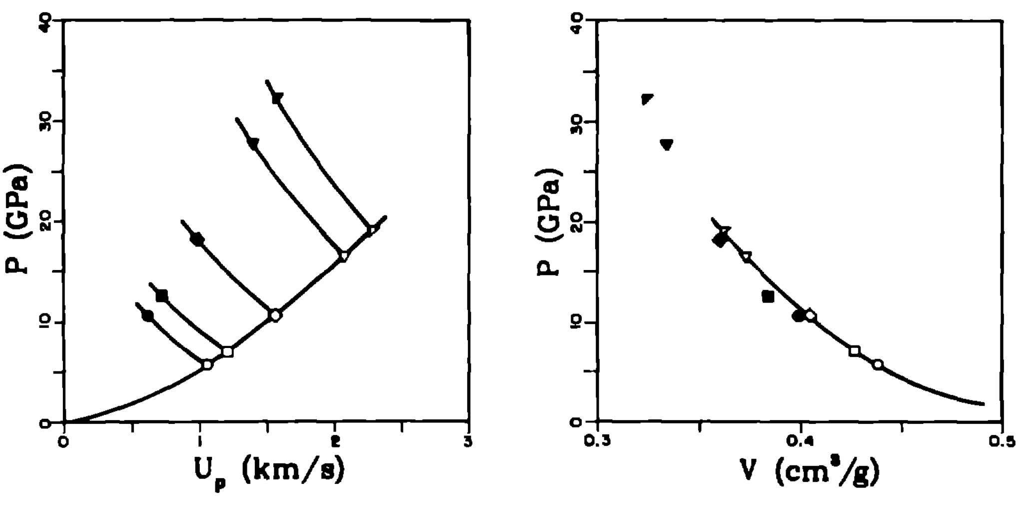




CESIUM CHLORIDE, 4.7 molar aqueous solution, reflected-shock data
ρ_0 = 1.587 g/cm³.

Initial Shock				Reflected Shock						
U_{p1} (km/s)	V_1 (cm³/g)	P_1 (GPa)		U_{p2} (km/s)	V_2 (cm³/g)	P_2 (GPa)		Std.[a]	I_1	I_2
1.047	0.438	5.70	○	0.620	0.401	10.63	●	Al		
1.051	0.437	5.73	○	0.616	0.398	10.56	●	Al	[illegible]	[illegible]
1.200	0.427	7.08	□	0.718	0.384	12.58	■	Al		
1.207	0.426	7.15	□	0.720	0.383	12.61	■	Al	[illegible]	[illegible]
1.542	0.405	10.55	◇	0.984	0.364	18.34	◆	Al		
1.565	0.403	10.77	◇	0.983	0.357	18.19	◆	Al		
2.062	0.374	16.58	▽	1.387	0.333	27.74	▼	Al		
2.063	0.372	16.50	▽	1.395	0.334	27.94	▼	Al		
2.260	0.362	19.05	◸	1.551	0.324	31.99	◤	Al		
2.278	0.361	19.25	◸	1.577	0.324	32.83	◤	Al		

[a]Standard used for reflected-shock measurements was 2024 aluminum alloy (Al).

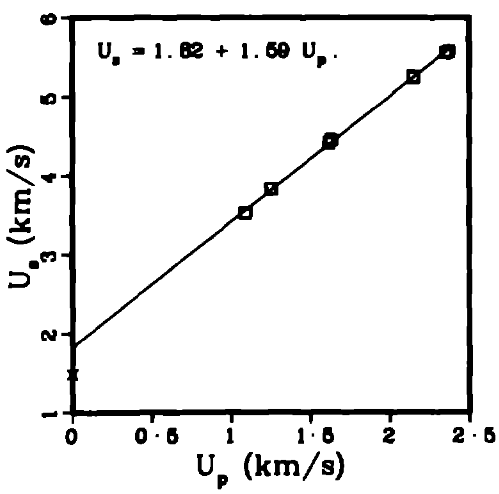


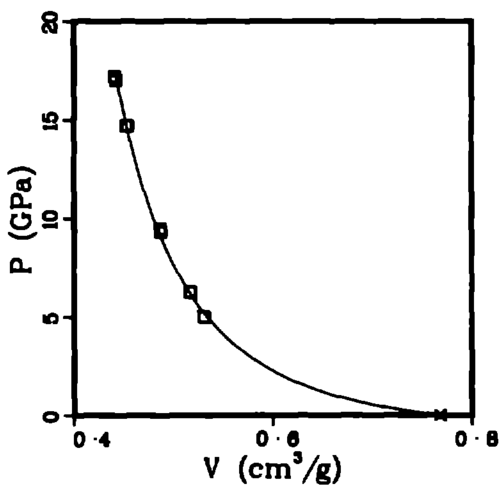
CESIUM CHLORIDE, 2.4 molar aqueous solution

Average ρ_0 = 1.302 g/cm^3.

Sound velocities	longitudinal	1.48 km/s.
	shear	0.00 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.302	1.480	0.000	0.000	.7680	1.302	1.000	ssp ×
1.302	3.522	1.088	4.989	.5308	1.884	.691	im2 □
1.302	3.532	1.092	5.022	.5306	1.885	.691	im2 □
1.302	3.826	1.249	6.222	.5173	1.933	.674	im2 □
1.302	3.835	1.256	6.271	.5165	1.936	.672	im2 □
1.302	4.417	1.616	9.294	.4871	2.053	.634	im2 □
1.302	4.459	1.632	9.475	.4869	2.054	.634	im2 □
1.302	5.260	2.148	14.711	.4544	2.201	.592	im2 □
1.302	5.241	2.152	14.685	.4527	2.209	.589	im2 □
1.302	5.552	2.354	17.016	.4424	2.260	.576	im2 □
1.302	5.573	2.372	17.211	.4411	2.267	.574	im2 □

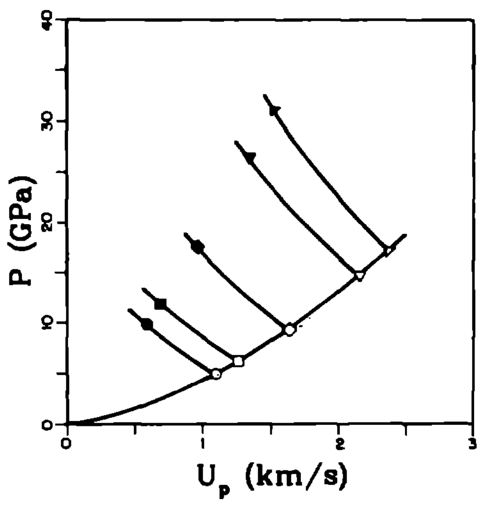


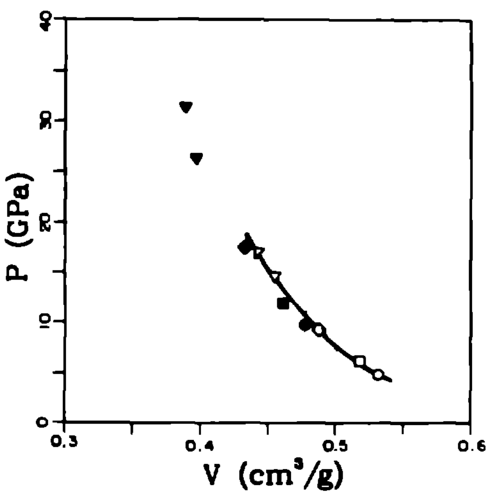


CESIUM CHLORIDE, 2.4 molar aqueous solution, reflected-shock data
ρ_0 = 1.302 g/cm^3.

Initial Shock				Reflected Shock				
U_{p1} (km/s)	V_1 (cm^3/g)	P_1 (GPa)		U_{p2} (km/s)	V_2 (cm^3/g)	P_2 (GPa)		Std.[a]
1.088	0.531	4.99	○	0.580	0.478	9.86	●	Al
1.092	0.531	5.02		0.579	0.476	9.84		Al
1.249	0.517	6.22	□	0.686	0.462	11.94	■	Al
1.256	0.516	6.27		0.688	0.460	11.97		Al
1.616	0.487	9.29	◇	0.953	0.434	17.52	◇	Al
1.632	0.487	9.48		0.954	0.430	17.55		Al
2.148	0.454	14.71	▽	1.358	0.403	27.01	▼	Al
2.152	0.453	14.68		1.312	0.390	25.89		Al
2.354	0.442	17.01	▽	1.503	0.390	30.83	▼	Al
2.372	0.441	17.21		1.524	0.390	31.27		Al

[a]Standard used for reflected-shock measurements was 2024 aluminum alloy (Al).



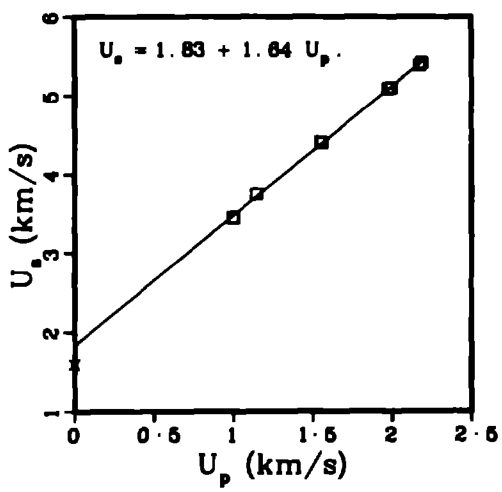


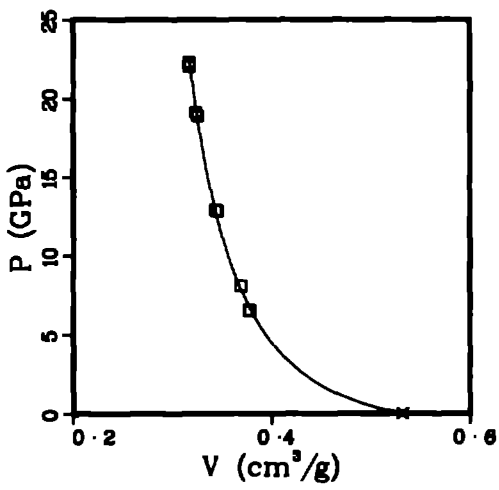
ZINC CHLORIDE, 9.1 molar aqueous solution

Average ρ_0 = 1.880 g/cm^3.

Sound velocities longitudinal 1.59 km/s.
shear 0.00 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.880	1.590	0.000	0.000	.5319	1.880	1.000	ssp ×
1.880	3.447	.999	6.474	.3778	2.647	.710	im2 □
1.880	3.451	1.002	6.501	.3775	2.649	.710	im2 □
1.880	3.741	1.144	8.046	.3693	2.708	.694	im2 □
1.880	4.409	1.548	12.831	.3452	2.897	.649	im2 □
1.880	4.398	1.558	12.882	.3435	2.911	.646	im2 □
1.880	5.086	1.974	18.875	.3255	3.073	.612	im2 □
1.880	5.096	1.995	19.113	.3237	3.089	.609	im2 □
1.880	5.385	2.175	22.019	.3171	3.154	.596	im2 □
1.880	5.418	2.188	22.287	.3171	3.154	.596	im2 □

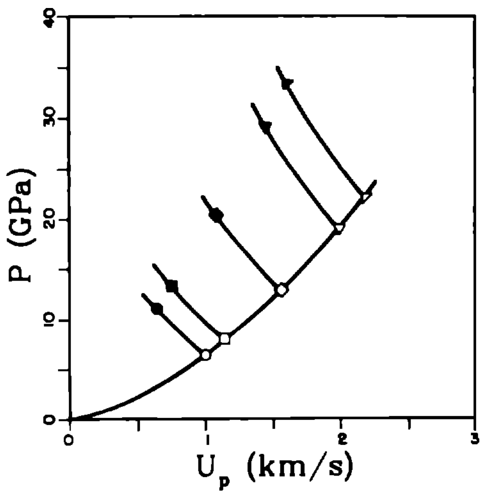


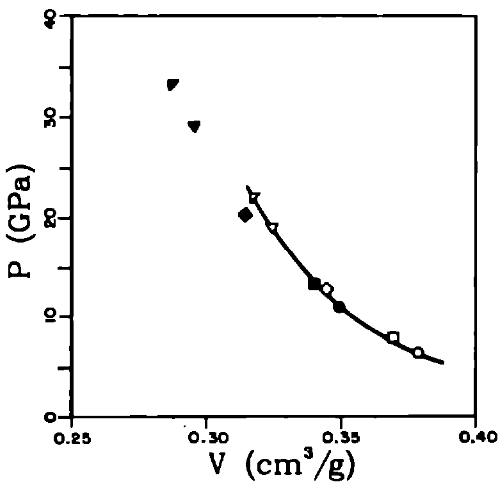


ZINC CHLORIDE, 9.1 molar aqueous solution, reflected-shock data
ρ_0 = 1.880 g/cm^3.

Initial Shock				Reflected Shock				
U_{p1} (km/s)	V_1 (cm^3/g)	P_1 (GPa)		U_{p2} (km/s)	V_2 (cm^3/g)	P_2 (GPa)		Std.[a]
0.999	0.378	6.47	○	0.640	0.349	11.03	●	Al
1.002	0.378	6.50		0.641	0.349	11.04		Al
1.444	0.369	8.03	□	0.757	0.340	13.38	■	Al
1.548	0.345	12.83	◇	1.060	0.311	19.91	◆	Al
1.558	0.343	12.93		1.100	0.317	20.82		Al
1.974	0.325	18.87	▽	1.445	0.298	29.22	▼	Al
1.995	0.323	19.17		1.439	0.292	29.08		Al
2.175	0.317	22.02	▽	1.609	0.289	33.52	▼	Al
2.188	0.317	22.28		1.596	0.285	33.17		Al

[a]Standard used for reflected-shock measurements was 2024 aluminum alloy (Al).



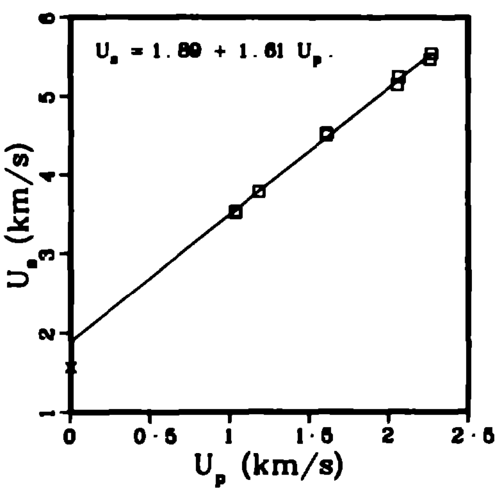


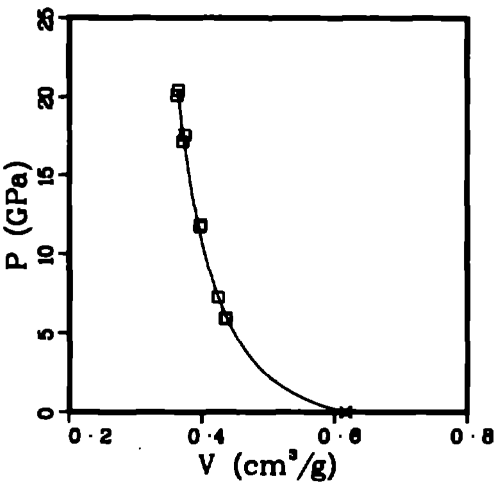
ZINC CHLORIDE, 6.2 molar aqueous solution

Average ρ_0 = 1.621 g/cm^3.

Sound velocities longitudinal 1.57 km/s.
shear 0.00 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.621	1.570	0.000	0.000	.6169	1.621	1.000	ssp ×
1.621	3.516	1.033	5.888	.4357	2.295	.706	im2 □
1.621	3.537	1.034	5.928	.4366	2.291	.708	im2 □
1.621	3.785	1.183	7.258	.4241	2.358	.687	im2 □
1.621	4.505	1.605	11.721	.3971	2.518	.644	im2 □
1.621	4.534	1.610	11.833	.3978	2.514	.645	im2 □
1.621	5.146	2.054	17.134	.3707	2.698	.601	im2 □
1.621	5.247	2.066	17.572	.3740	2.674	.606	im2 □
1.621	5.472	2.262	20.064	.3619	2.763	.587	im2 □
1.621	5.545	2.270	20.404	.3644	2.745	.591	im2 □

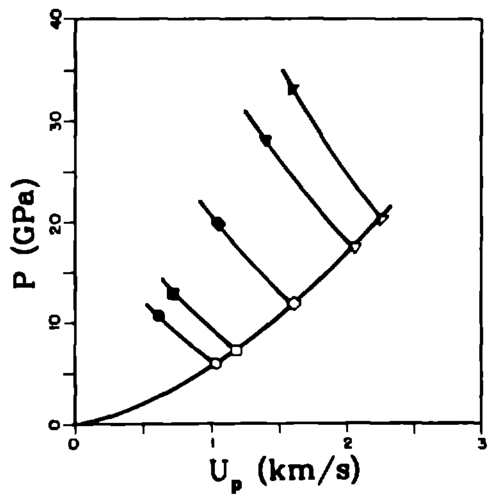


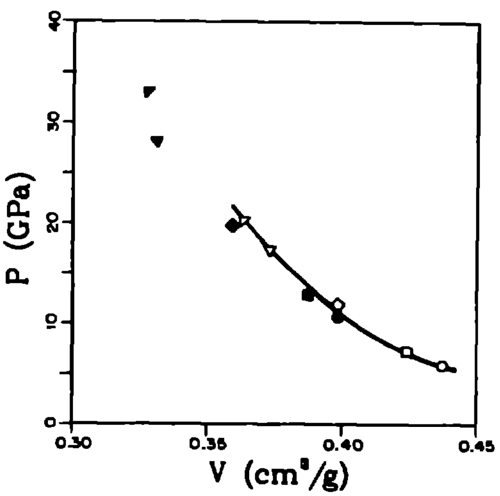


ZINC CHLORIDE, 6.2 molar aqueous solution, reflected-shock data
ρ_0 = 1.621 g/cm^3.

Initial Shock				Reflected Shock				
U_{p1} (km/s)	V_1 (cm^3/g)	P_1 (GPa)		U_{p2} (km/s)	V_2 (cm^3/g)	P_2 (GPa)		Std.[a]
1.033	0.436	5.89	○	0.616	0.399	10.56	●	Al
1.034	0.437	5.93	○	0.612	0.397	10.48	●	Al
1.183	0.424	7.26	□	0.731	0.387	12.83	■	Al
1.605	0.397	11.72	◇	1.059	0.361	19.90	◆	Al
1.610	0.398	11.87	◇	1.046	0.356	19.59	◆	Al
2.054	0.371	17.15	▽	1.394	0.330	27.92	▼	Al
2.066	0.374	17.60	▽	1.404	0.332	28.18	▼	Al
2.262	0.362	20.07	◸	1.571	0.323	32.50	◤	Al
2.270	0.364	20.40	◸	1.615	0.332	33.67	◤	Al

[a]Standard used for reflected-shock measurements was 2024 aluminum alloy (Al).



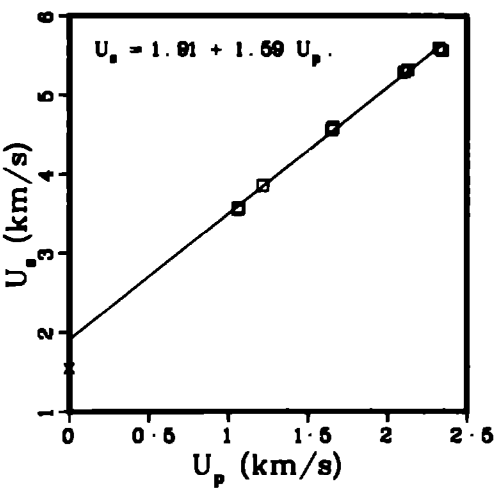


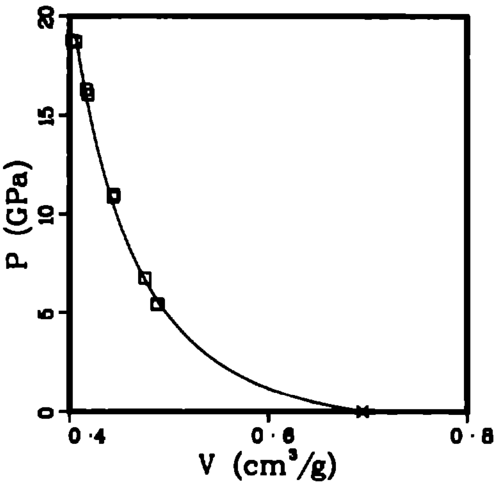
ZINC CHLORIDE, 4.3 molar aqueous solution

Average ρ_0 = 1.439 g/cm^3.

Sound velocities longitudinal 1.55 km/s.
shear 0.00 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.439	1.550	0.000	0.000	.6949	1.439	1.000	ssp ×
1.439	3.554	1.059	5.416	.4879	2.050	.702	im2 □
1.439	3.573	1.061	5.455	.4886	2.047	.703	im2 □
1.439	3.854	1.215	6.738	.4758	2.102	.685	im2 □
1.439	4.565	1.650	10.839	.4437	2.254	.639	im2 □
1.439	4.595	1.658	10.963	.4442	2.251	.639	im2 □
1.439	5.289	2.105	16.021	.4183	2.390	.602	im2 □
1.439	5.316	2.128	16.279	.4167	2.400	.600	im2 □
1.439	5.594	2.324	18.708	.4062	2.462	.585	im2 □
1.439	5.566	2.343	18.766	.4024	2.485	.579	im2 □

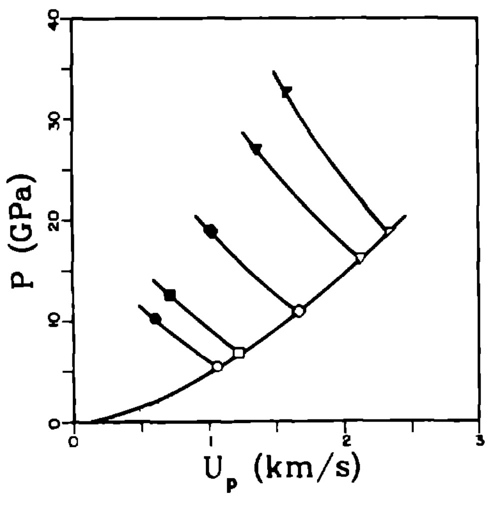


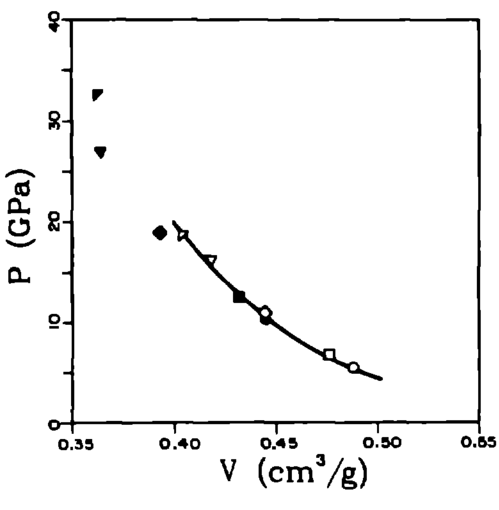


ZINC CHLORIDE, 4.3 molar aqueous solution, reflected-shock data
ρ_0 = 1.439 g/cm^3.

Initial Shock				Reflected Shock				
U_{p1} (km/s)	V_1 (cm^3/g)	P_1 (GPa)		U_{p2} (km/s)	V_2 (cm^3/g)	P_2 (GPa)		Std.[a]
1.059	0.488	5.42	○	0.601	0.445	10.27	●	Al
1.061	0.488	5.46	○	0.601	0.444	10.27	●	Al
1.215	0.476	6.74	□	0.714	0.432	12.49	■	Al
1.650	0.444	10.84	◇	1.006	0.391	18.70	◆	Al
1.658	0.444	10.95	◇	1.023	0.395	19.09	◆	Al
2.105	0.418	16.02	▽	1.350	0.365	26.82	▼	Al
2.128	0.417	16.26	▽	1.361	0.362	27.09	▼	Al
2.324	0.406	18.70	▽	1.535	0.357	31.56	▼	Al
2.343	0.402	18.77	▽	1.618	0.367	33.75	▼	Al

[a]Standard used for reflected-shock measurements was 2024 aluminum alloy (Al).





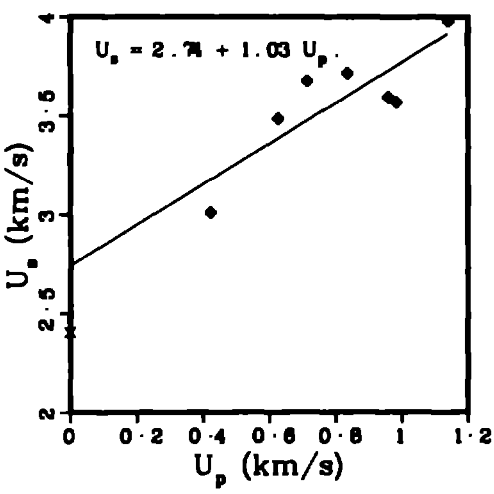
HIGH EXPLOSIVES, HIGH-EXPLOSIVE SIMULANTS, AND PROPELLANTS

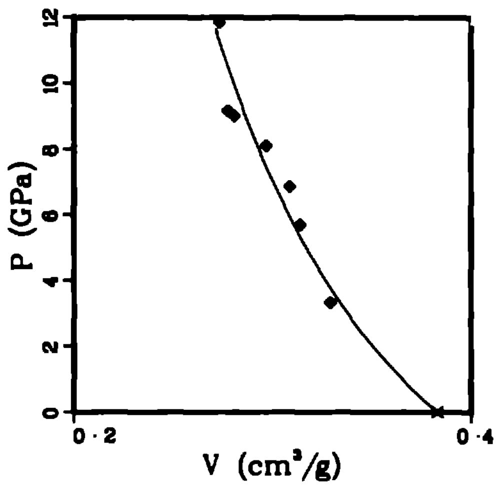
BARATOL, barium nitrate-24 wt% TNT

Average ρ_0 = 2.611 g/cm^3.

Sound velocities longitudinal 2.95 km/s.
shear 1.48 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
2.611	2.405	0.000	0.000	.3830	2.611	1.000	ssp ×
2.611	3.011	.424	3.333	.3291	3.039	.859	wdg ◆
2.611	3.485	.627	5.705	.3141	3.184	.820	wdg ◆
2.611	3.675	.714	6.851	.3086	3.241	.806	wdg ◆
2.611	3.714	.836	8.107	.2968	3.369	.775	wdg ◆
2.611	3.594	.959	8.999	.2808	3.561	.733	wdg ◆
2.611	3.569	.983	9.160	.2775	3.604	.725	wdg ◆
2.611	3.977	1.140	11.838	.2732	3.660	.713	wdg ◆



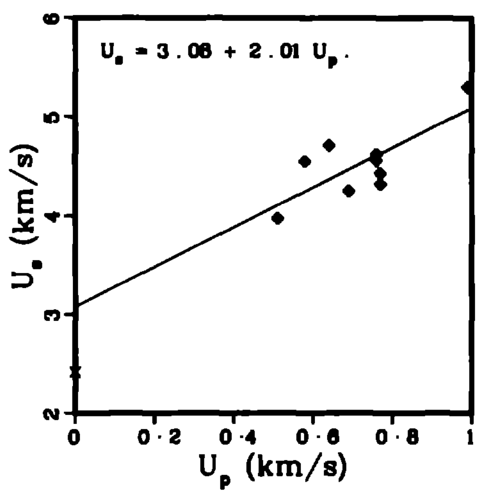


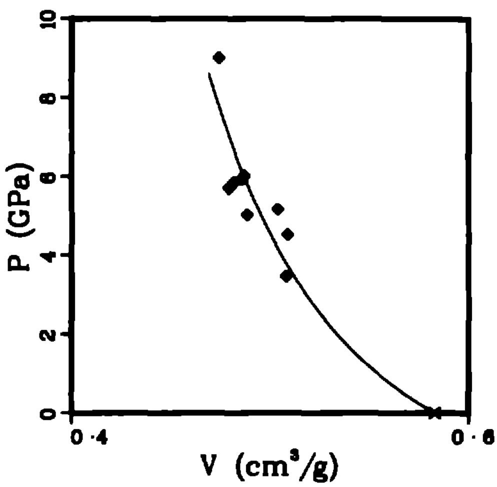
COMPOSITION B, RDX-36 wt% TNT-1 wt% wax

Average ρ_0 = 1.715 g/cm^3.

Sound velocities longitudinal 3.12 km/s.
shear 1.71 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.715	2.416	0.000	0.000	.5831	1.715	1.000	ssp ×
1.715	3.970	.510	3.472	.5082	1.968	.872	wdg ◆
1.715	4.550	.580	4.526	.5088	1.966	.873	wdg ◆
1.715	4.710	.640	5.170	.5039	1.985	.864	wdg ◆
1.715	4.250	.690	5.029	.4884	2.047	.838	wdg ◆
1.715	4.620	.760	6.022	.4872	2.053	.835	wdg ◆
1.715	4.560	.760	5.944	.4859	2.058	.833	wdg ◆
1.715	4.430	.770	5.850	.4817	2.076	.826	wdg ◆
1.715	4.320	.770	5.705	.4792	2.087	.822	wdg ◆
1.715	5.300	.990	8.999	.4742	2.109	.813	wdg ◆



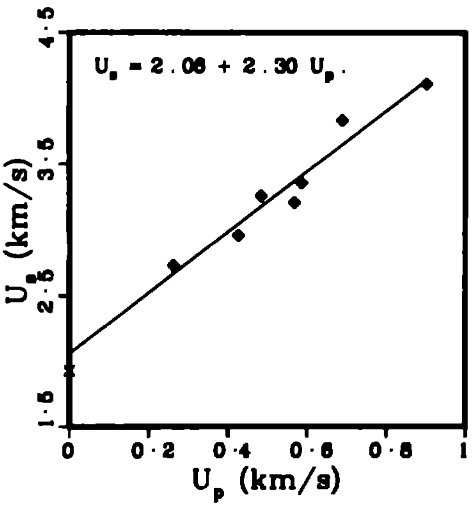


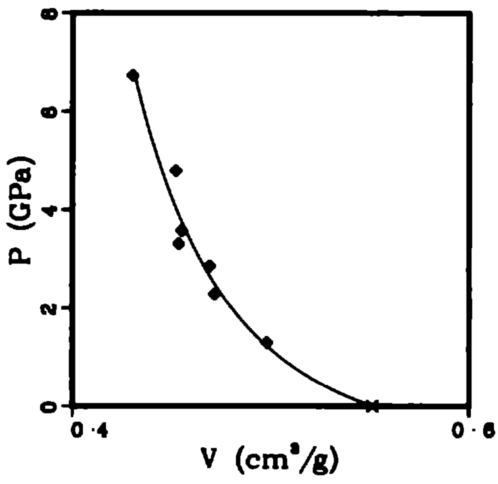
FKM PROPELLANT

Average ρ_0 = 1.814 g/cm³.

Sound velocities longitudinal 1.93 km/s.
shear 0.00 km/s.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.814	1.930	0.000	0.000	.5513	1.814	1.000	ssp ×
1.814	2.726	.263	1.301	.4981	2.008	.904	wdg ◆
1.814	2.956	.427	2.290	.4716	2.120	.856	wdg ◆
1.814	3.256	.484	2.859	.4693	2.131	.851	wdg ◆
1.814	3.205	.568	3.302	.4536	2.205	.823	wdg ◆
1.814	3.355	.586	3.566	.4550	2.198	.825	wdg ◆
1.814	3.831	.689	4.788	.4521	2.212	.820	wdg ◆
1.814	4.111	.902	6.727	.4303	2.324	.781	wdg ◆

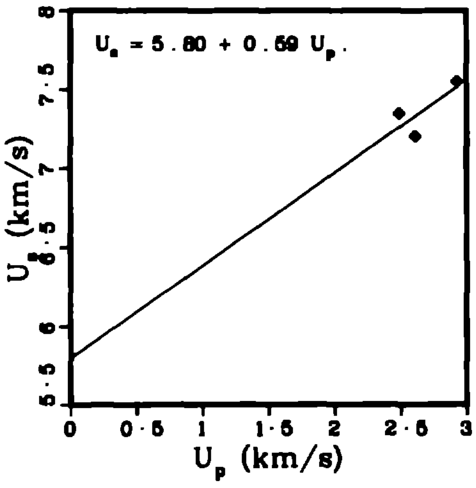


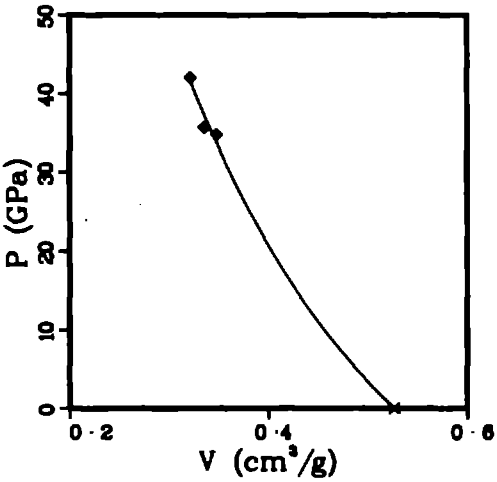


HMX , single-crystal

Average ρ_0 = 1.900 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.900	7.350	2.490	34.773	.3480	2.873	.661	wdg ◆
1.900	7.200	2.610	35.705	.3355	2.980	.637	wdg ◆
1.900	7.550	2.930	42.031	.3221	3.105	.612	wdg ◆

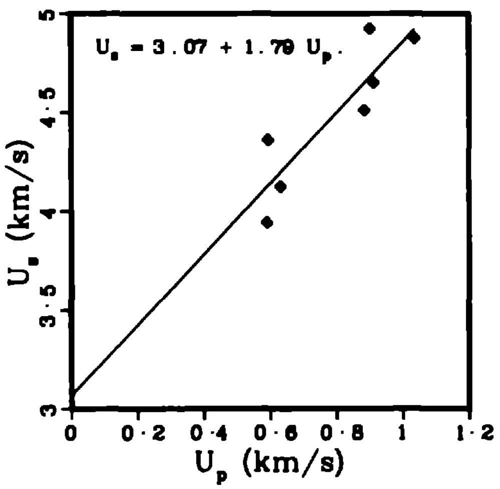


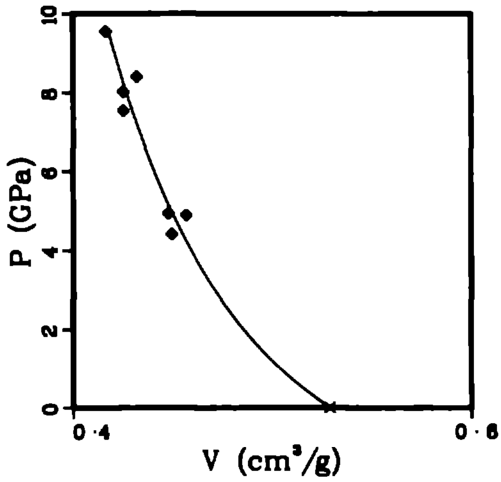


HMX, solvent-pressed

Average ρ_0 = 1.891 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.891	3.943	.591	4.407	.4496	2.224	.850	wdg ◆
1.891	4.359	.593	4.888	.4569	2.189	.864	wdg ◆
1.891	4.126	.632	4.931	.4478	2.233	.847	wdg ◆
1.891	4.511	.884	7.541	.4252	2.352	.804	wdg ◆
1.891	4.924	.902	8.399	.4319	2.315	.817	wdg ◆
1.891	4.651	.912	8.021	.4251	2.352	.804	wdg ◆
1.891	4.877	1.036	9.554	.4165	2.401	.788	wdg ◆

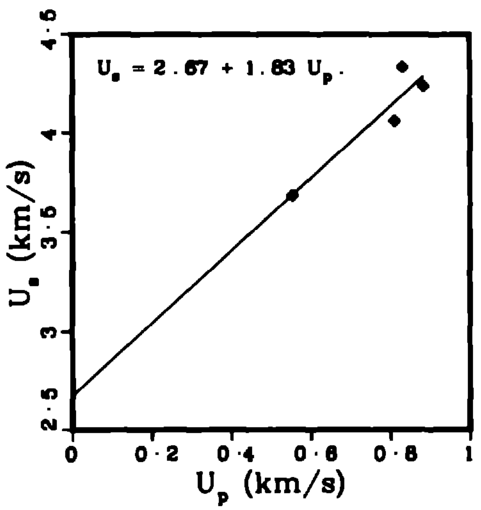


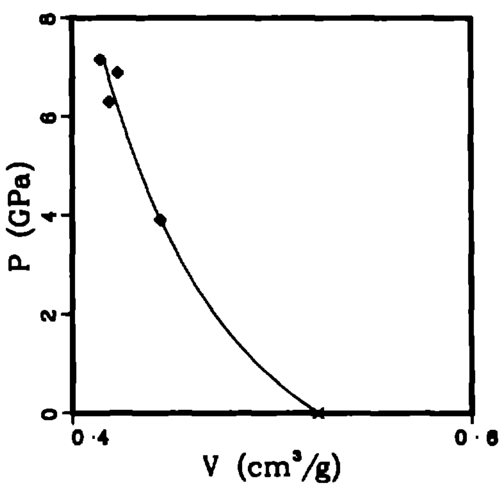


HMX-40 wt% TATB-10 wt% Kel F 800

Average ρ_0 = 1.912 g/cm³.

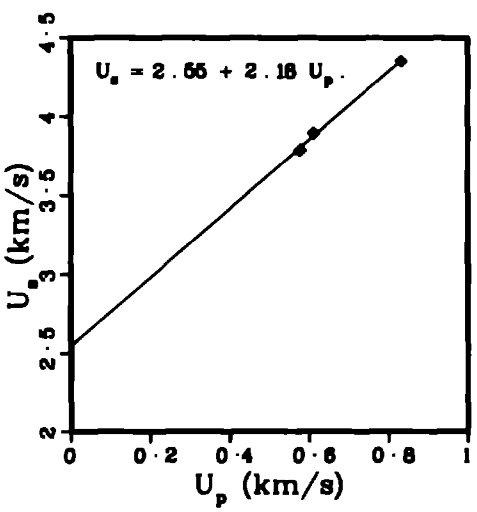
ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.912	3.683	.554	3.901	.4443	2.251	.850	wdg ◆
1.912	4.062	.811	6.299	.4186	2.389	.800	wdg ◆
1.912	4.336	.831	6.889	.4228	2.365	.808	wdg ◆
1.912	4.237	.883	7.153	.4140	2.415	.792	wdg ◆

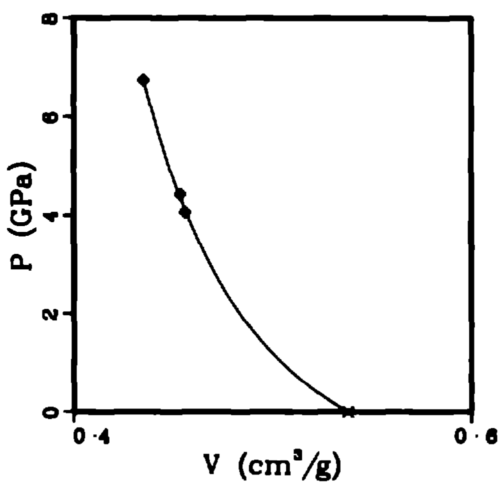




LX-04, HMX-15 wt% Viton, solvent-pressed, fine-grain HMX
Average ρ_0 = 1.859 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.859	3.785	.577	4.060	.4559	2.193	.848	wdg ◆
1.859	3.895	.611	4.424	.4535	2.205	.843	wdg ◆
1.859	4.354	.832	6.734	.4351	2.298	.809	wdg ◆



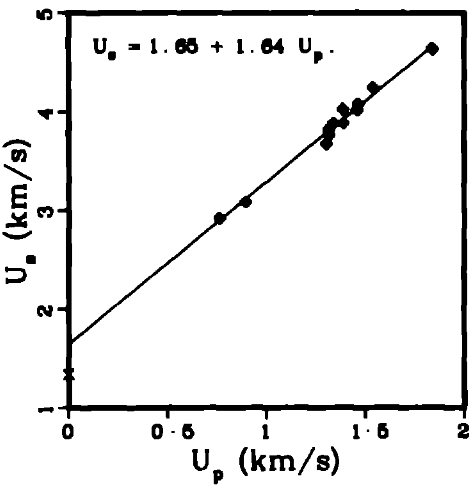


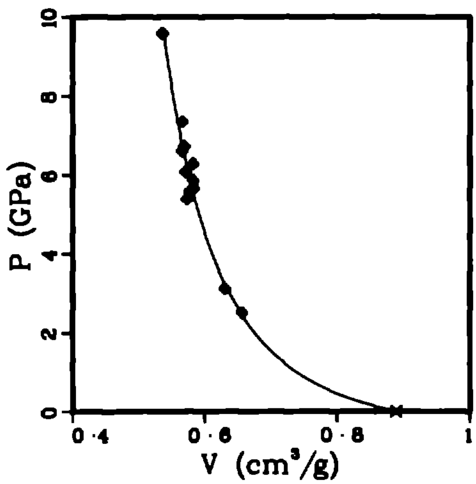
NITROMETHANE

Average ρ_0 = 1.125 g/cm^3.

Sound velocities longitudinal 1.34 km/s.
shear 0.00 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.125	1.335	0.000	0.000	.8889	1.125	1.000	ssp ×
1.125	2.918	.762	2.501	.6568	1.523	.739	wdg ◆
1.125	3.080	.896	3.105	.6303	1.587	.709	wdg ◆
1.125	3.670	1.304	5.384	.5731	1.745	.645	wdg ◆
1.125	3.819	1.315	5.650	.5828	1.716	.656	wdg ◆
1.125	3.761	1.319	5.581	.5772	1.733	.649	wdg ◆
1.125	3.885	1.340	5.857	.5823	1.717	.655	wdg ◆
1.125	4.025	1.387	6.281	.5826	1.716	.655	wdg ◆
1.125	3.882	1.390	6.070	.5706	1.753	.642	wdg ◆
1.125	4.016	1.460	6.596	.5657	1.768	.636	wdg ◆
1.125	4.077	1.465	6.719	.5695	1.756	.641	wdg ◆
1.125	4.243	1.540	7.351	.5663	1.766	.637	wdg ◆
1.125	4.639	1.839	9.598	.5365	1.864	.604	wdg ◆
1.125	4.629	1.841	9.587	.5354	1.868	.602	wdg ◆

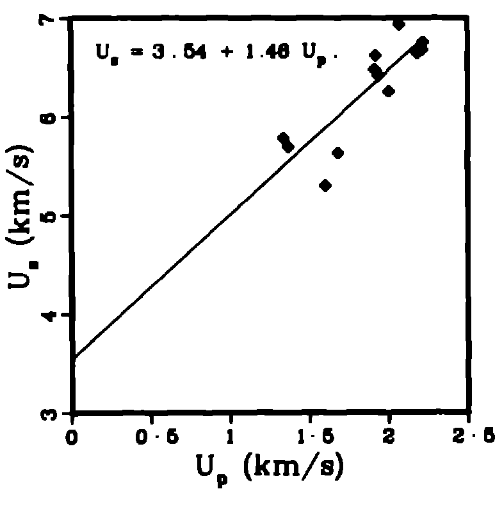


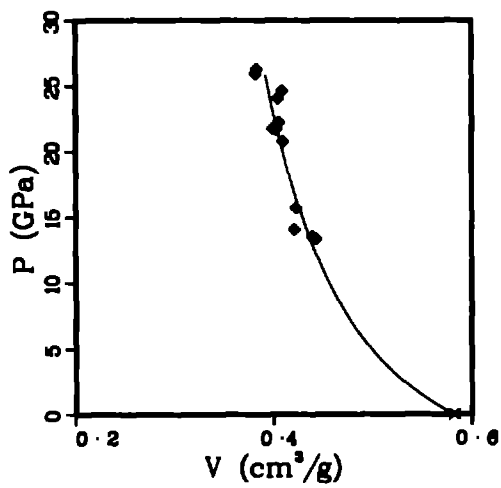


NQ, commercial-grain

Average ρ_0 = 1.717 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.751	5.780	1.337	13.531	.4390	2.278	.769	wdg ◆
1.715	5.692	1.368	13.354	.4430	2.258	.760	wdg ◆
1.659	5.300	1.601	14.077	.4207	2.377	.698	wdg ◆
1.659	5.630	1.683	15.720	.4226	2.366	.701	wdg ◆
1.751	6.473	1.914	21.694	.4022	2.486	.704	wdg ◆
1.751	6.469	1.920	21.748	.4016	2.490	.703	wdg ◆
1.751	6.618	1.921	22.261	.4053	2.467	.710	wdg ◆
1.751	6.416	1.935	21.739	.3989	2.507	.698	wdg ◆
1.659	6.251	2.003	20.772	.4096	2.441	.680	wdg ◆
1.715	6.932	2.072	24.633	.4088	2.446	.701	wdg ◆
1.659	6.640	2.184	24.058	.4045	2.472	.671	wdg ◆
1.751	6.678	2.215	25.900	.3817	2.620	.668	wdg ◆
1.751	6.757	2.220	26.266	.3835	2.608	.671	wdg ◆

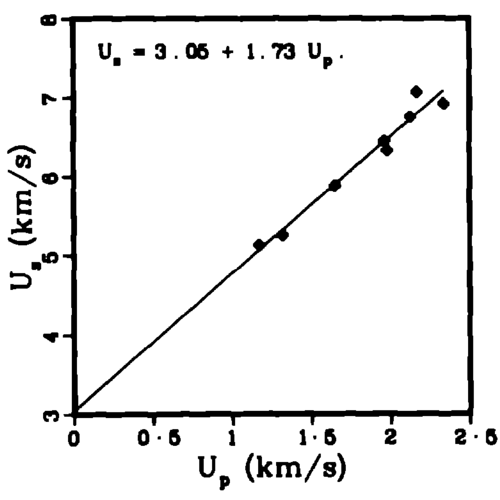


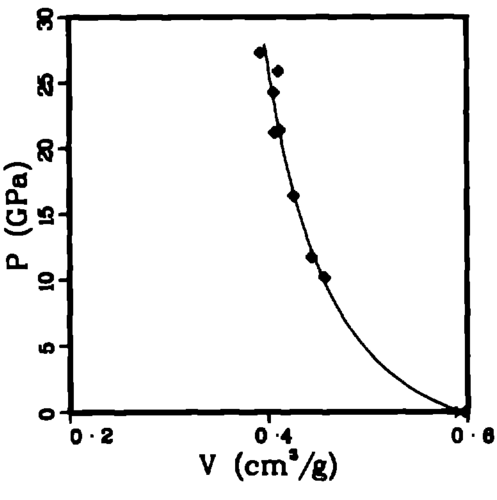


NQ , 1964 commercial-grain

Average ρ_0 = 1.688 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.688	5.131	1.172	10.151	.4571	2.188	.772	wdg ◆
1.688	5.257	1.320	11.713	.4437	2.254	.749	wdg ◆
1.688	5.880	1.650	16.377	.4262	2.346	.719	wdg ◆
1.688	6.445	1.962	21.345	.4121	2.427	.696	wdg ◆
1.688	6.325	1.982	21.161	.4068	2.458	.687	wdg ◆
1.688	6.751	2.128	24.250	.4057	2.465	.685	wdg ◆
1.688	7.067	2.167	25.850	.4108	2.435	.693	wdg ◆
1.688	6.918	2.336	27.279	.3924	2.549	.662	wdg ◆

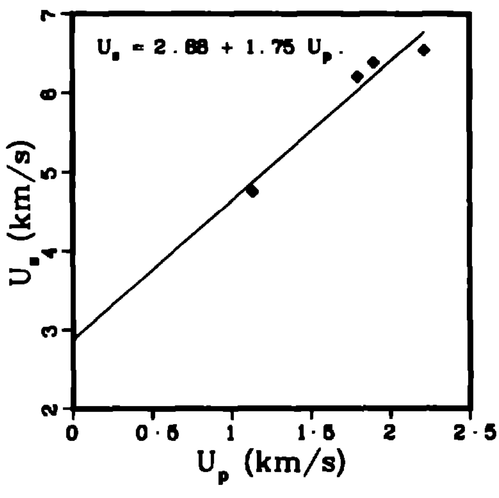


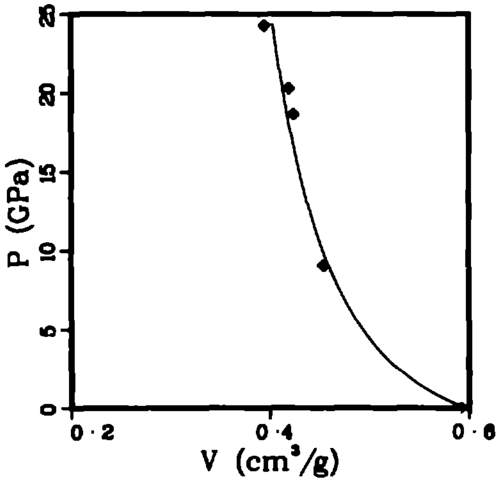


NQ-2 wt% B square wax-2 wt% Elvax , large-grain NQ

Average ρ_0 = 1.676 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.676	4.753	1.136	9.049	.4541	2.202	.761	wdg ◆
1.676	6.206	1.794	18.660	.4242	2.357	.711	wdg ◆
1.676	6.380	1.898	20.295	.4192	2.386	.703	wdg ◆
1.676	6.539	2.216	24.286	.3945	2.535	.661	wdg ◆

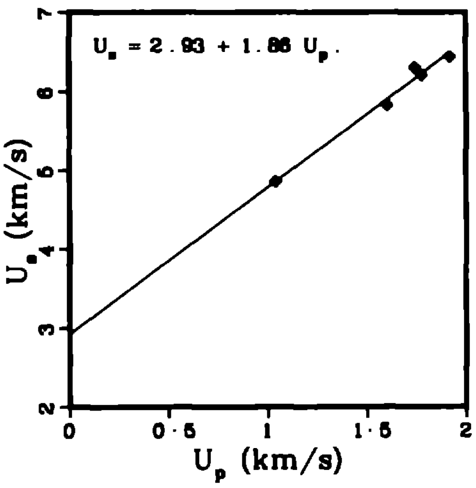


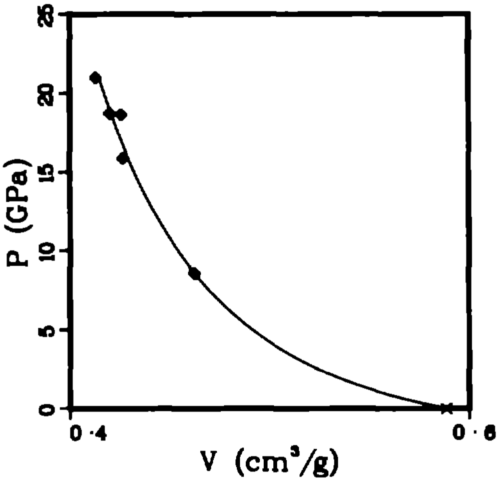


NQ–5 wt% Estane, 1968 commercial–grain NQ, ρ_0 = 1.70 g/cm^3.

Average ρ_0 = 1.699 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.699	4.859	1.041	8.594	.4625	2.162	.786	wdg ◆
1.699	5.828	1.603	15.873	.4267	2.344	.725	wdg ◆
1.699	6.303	1.744	18.676	.4257	2.349	.723	wdg ◆
1.699	6.208	1.778	18.753	.4200	2.381	.714	wdg ◆
1.699	6.438	1.920	21.001	.4130	2.421	.702	wdg ◆

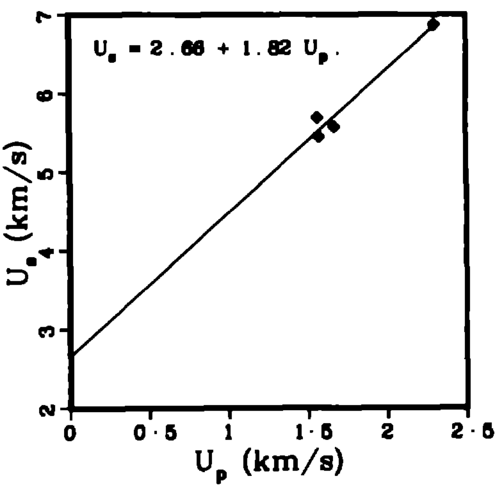


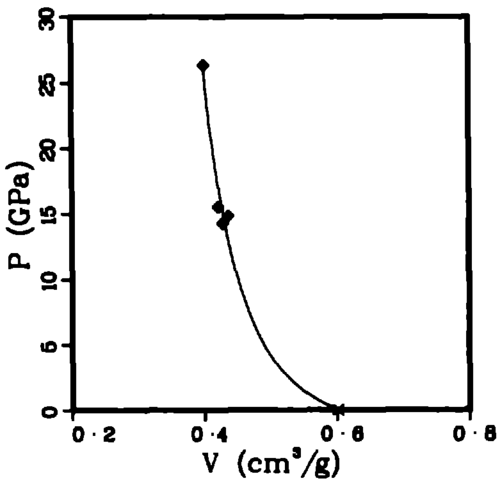


NQ-5 wt% Estane, 1968 commercial-grain NQ, ρ_0 = 1.66 g/cm^3.

Average ρ_0 = 1.663 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.663	5.695	1.565	14.822	.4361	2.293	.725	wdg ◆
1.663	5.449	1.571	14.236	.4280	2.337	.712	wdg ◆
1.663	5.576	1.672	15.504	.4210	2.375	.700	wdg ◆
1.663	6.874	2.302	26.315	.3999	2.500	.665	wdg ◆

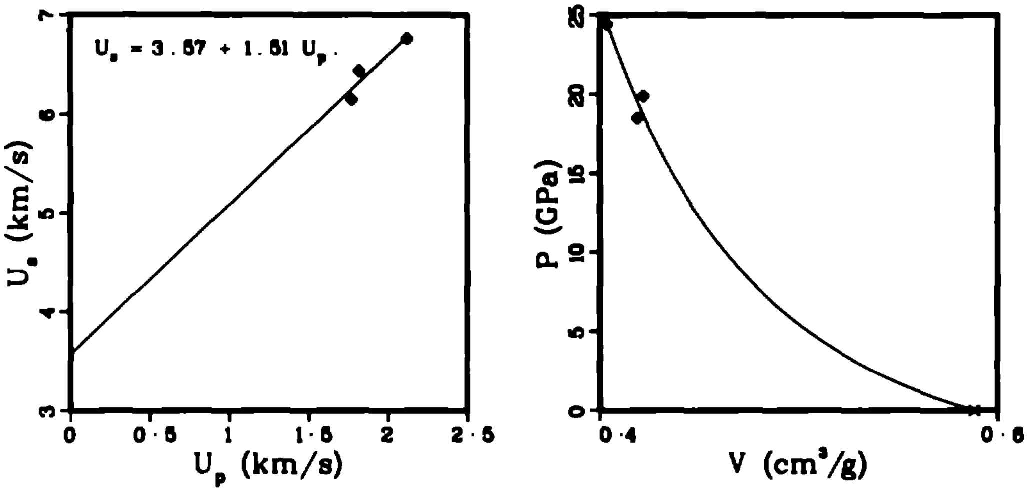




NQ-5 wt% Estane, 1968 large-grain NQ

Average ρ_0 = 1.700 g/cm^3.

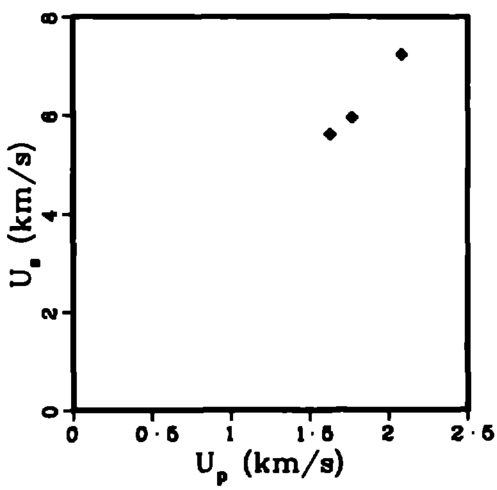
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.700	6.147	1.772	18.517	.4187	2.389	.712	wdg ◆
1.700	6.434	1.820	19.907	.4218	2.371	.717	wdg ◆
1.700	6.764	2.125	24.435	.4034	2.479	.686	wdg ◆

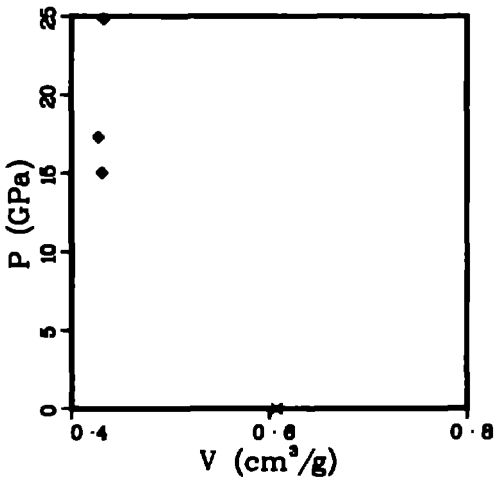


NQ-10 wt% Estane, commercial-grain NQ

Average ρ_0 = 1.647 g/cm³.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.647	5.606	1.628	15.031	.4308	2.321	.710	wdg ◆
1.647	5.954	1.766	17.318	.4271	2.342	.703	wdg ◆
1.647	7.238	2.083	24.831	.4324	2.313	.712	wdg ◆

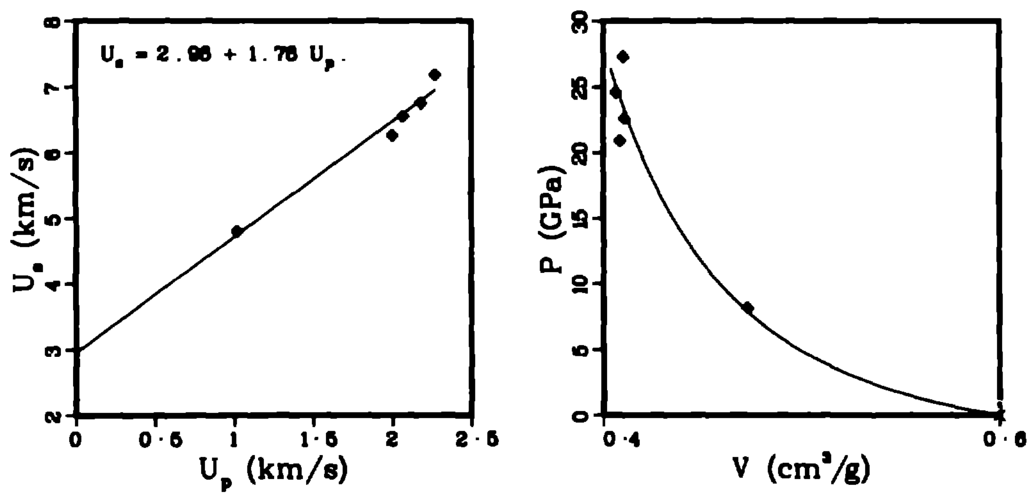




NQ-10 wt% Estane, large-grain NQ

Average ρ_0 = 1.667 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.667	4.804	1.018	8.152	.4728	2.115	.788	wdg ◆
1.667	6.266	2.001	20.901	.4083	2.449	.681	wdg ◆
1.667	6.558	2.068	22.608	.4107	2.435	.685	wdg ◆
1.667	6.761	2.181	24.581	.4064	2.461	.677	wdg ◆
1.667	7.186	2.274	27.240	.4100	2.439	.684	wdg ◆

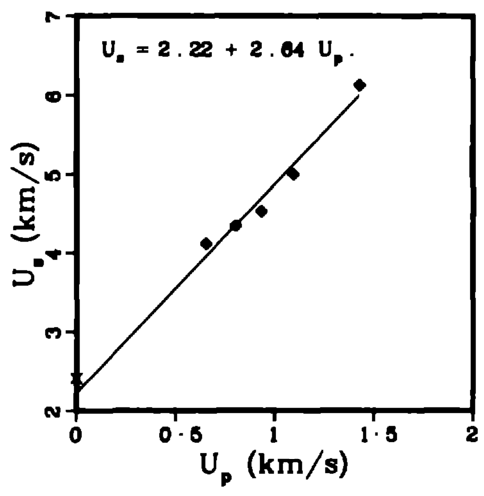


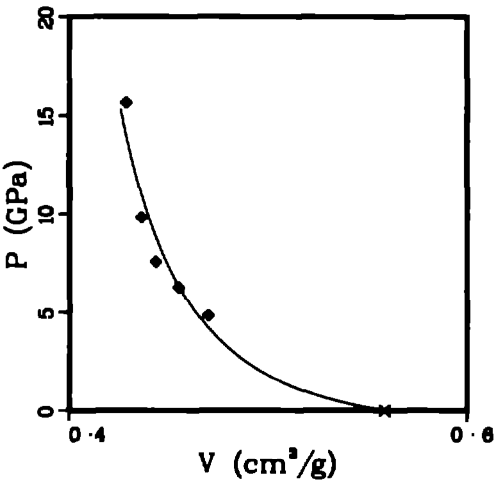
PBX 9011-06, HMX-10 wt% Estane

Average ρ_0 = 1.790 g/cm³.

Sound velocities longitudinal 2.89 km/s.
shear 1.38 km/s.

ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.790	2.411	0.000	0.000	.5587	1.790	1.000	ssp ×
1.790	4.115	.654	4.817	.4699	2.128	.841	wdg ◆
1.790	4.340	.803	6.238	.4553	2.196	.815	wdg ◆
1.790	4.528	.932	7.554	.4437	2.254	.794	wdg ◆
1.790	5.001	1.096	9.811	.4362	2.292	.781	wdg ◆
1.790	6.126	1.427	15.648	.4285	2.334	.767	wdg ◆



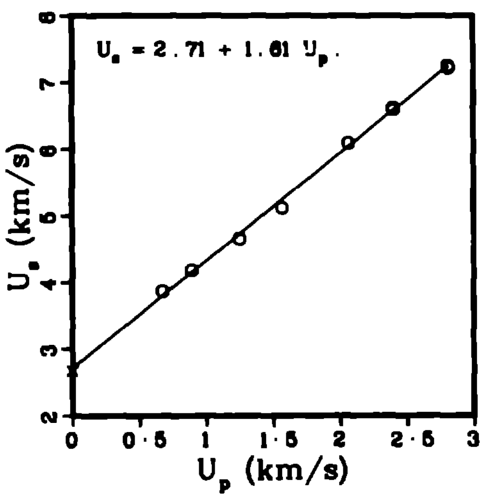


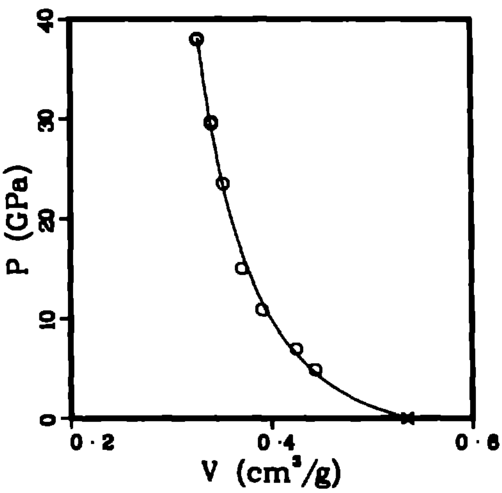
PBX 9404 DENSITY MOCKUP, 900-10

Average ρ_0 = 1.867 g/cm^3.

Sound velocities longitudinal 3.22 km/s.
shear 1.56 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.870	2.669	0.000	0.000	.5348	1.870	1.000	ssp ×
1.861	3.866	.676	4.864	.4434	2.255	.825	iml o
1.852	4.184	.893	6.920	.4247	2.355	.787	iml o
1.873	4.654	1.249	10.887	.3906	2.560	.732	iml o
1.871	5.119	1.571	15.046	.3704	2.699	.693	iml o
1.876	6.085	2.065	23.573	.3522	2.840	.661	iml o
1.867	6.613	2.401	29.644	.3412	2.931	.637	iml o
1.868	6.602	2.402	29.623	.3406	2.936	.636	iml o
1.863	6.588	2.405	29.518	.3408	2.934	.635	iml o
1.870	7.246	2.809	38.062	.3275	3.054	.612	iml o
1.868	7.217	2.814	37.937	.3266	3.062	.610	iml o



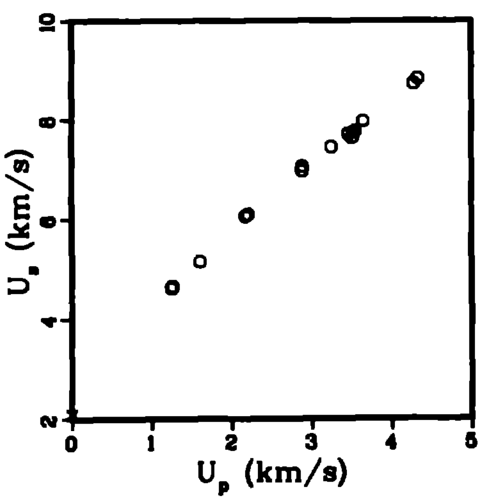


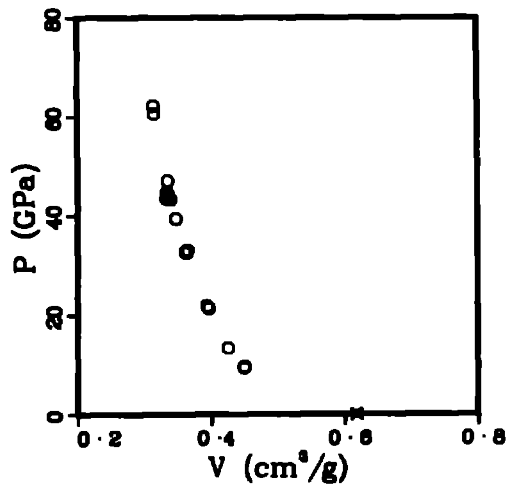
PBX 9404 NEUTRONIC MOCKUP, 905-03

Average ρ_0 = 1.621 g/cm^3.

Sound velocities longitudinal 2.70 km/s.
shear 1.48 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.618	2.090	0.000	0.000	.6180	1.618	1.000	ssp ×
1.623	4.614	1.250	9.361	.4492	2.226	.729	iml o
1.622	4.653	1.265	9.547	.4489	2.228	.728	iml o
1.620	5.155	1.603	13.387	.4253	2.351	.689	iml o
1.621	6.060	2.171	21.326	.3959	2.526	.642	iml o
1.622	6.094	2.202	21.766	.3937	2.540	.639	iml o
1.620	6.974	2.882	32.560	.3622	2.761	.587	iml o
1.621	7.066	2.884	33.033	.3651	2.739	.592	iml o
1.623	7.457	3.253	39.370	.3474	2.879	.564	iml o
1.622	7.718	3.463	43.352	.3399	2.942	.551	iml o
1.617	7.639	3.513	43.393	.3340	2.994	.540	iml o
1.623	7.743	3.524	44.286	.3357	2.979	.545	iml o
1.624	7.765	3.546	44.716	.3346	2.989	.543	iml o
1.618	7.975	3.648	47.072	.3353	2.982	.543	iml o
1.621	8.734	4.281	60.610	.3145	3.179	.510	iml o
1.624	8.838	4.334	62.206	.3138	3.187	.510	iml o





PBX 9404-03, HMX-3 wt% NC-3 wt% CEF, ρ_0 = 1.84 g/cm^3.

Average ρ_0 = 1.840 g/cm^3.

Sound velocities longitudinal 2.90 km/s.
shear 1.57 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.840	2.264	0.000	0.000	.5435	1.840	1.000	ssp ×
1.840	2.977	.133	.729	.5192	1.926	.955	wdg ◆
1.840	2.885	.190	1.009	.5077	1.970	.934	wdg ◆
1.840	3.189	.307	1.801	.4912	2.036	.904	wdg ◆
1.840	3.161	.340	1.976	.4850	2.062	.892	wdg ◆
1.840	3.244	.380	2.268	.4798	2.084	.883	wdg ◆
1.840	3.183	.393	2.302	.4764	2.099	.877	wdg ◆
1.839	3.317	.393	2.397	.4793	2.086	.882	wdg ◆
1.840	3.285	.407	2.460	.4761	2.100	.876	wdg ◆
1.845	3.289	.417	2.530	.4733	2.113	.873	wdg ◆
1.840	3.504	.458	2.953	.4724	2.117	.869	wdg ◆
1.839	3.454	.474	3.011	.4692	2.132	.863	wdg ◆
1.840	3.557	.481	3.148	.4700	2.128	.865	wdg ◆
1.840	3.762	.488	3.378	.4730	2.114	.870	wdg ◆
1.845	3.447	.497	3.161	.4639	2.156	.856	wdg ◆
1.840	3.413	.508	3.190	.4626	2.162	.851	wdg ◆
1.839	3.564	.536	3.513	.4620	2.165	.850	wdg ◆
1.840	3.628	.538	3.591	.4629	2.160	.852	wdg ◆
1.840	3.829	.571	4.023	.4624	2.162	.851	wdg ◆
1.845	4.098	.873	6.601	.4265	2.344	.787	wdg ◆

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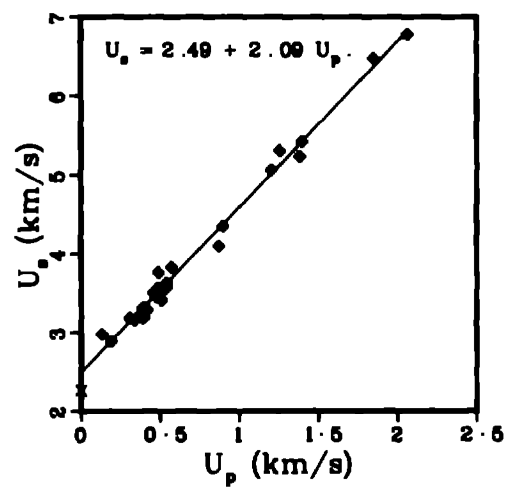
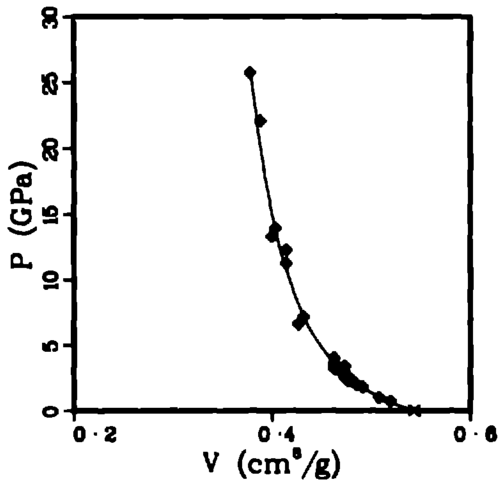




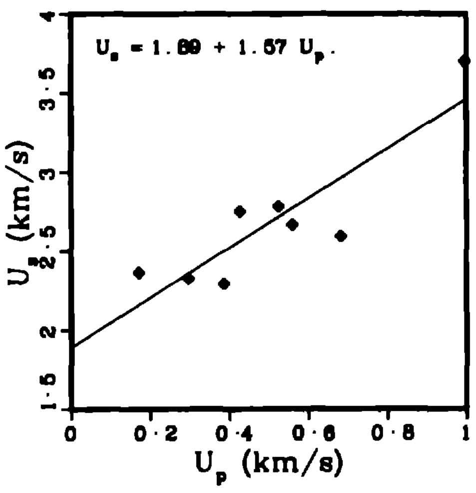
PBX 9404-03, HMX-3 wt% NC-3 wt% CEF, ρ_0 = 1.84 g/cm^3.
(Continued)

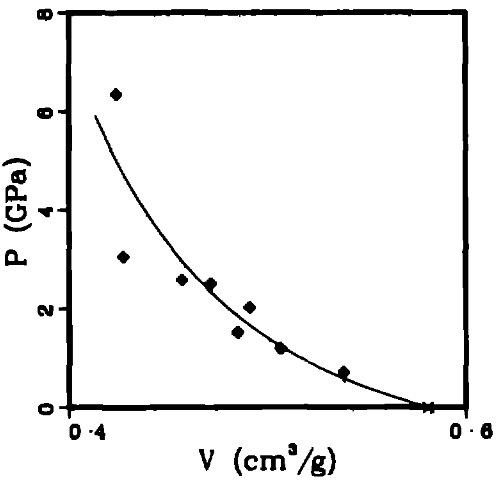
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.839	4.351	.897	7.177	.4317	2.317	.794	wdg ◆
1.840	5.062	1.202	11.196	.4144	2.413	.763	wdg ◆
1.840	5.305	1.256	12.260	.4148	2.411	.763	wdg ◆
1.840	5.233	1.382	13.307	.3999	2.500	.736	wdg ◆
1.840	5.420	1.397	13.932	.4034	2.479	.742	wdg ◆
1.840	6.473	1.850	22.034	.3882	2.576	.714	wdg ◆
1.840	6.775	2.063	25.717	.3780	2.646	.695	wdg ◆

PBX 9404-03, HMX-3 wt% NC-3 wt% CEF, ρ_0 = 1.72 g/cm^3.

Average ρ_0 = 1.722 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.722	2.365	.172	.700	.5385	1.857	.927	wdg ◆
1.722	2.326	.297	1.190	.5066	1.974	.872	wdg ◆
1.714	2.294	.387	1.522	.4850	2.062	.831	wdg ◆
1.720	2.749	.427	2.019	.4911	2.036	.845	wdg ◆
1.720	2.782	.525	2.512	.4717	2.120	.811	wdg ◆
1.728	2.664	.560	2.578	.4571	2.188	.790	wdg ◆
1.724	2.594	.682	3.050	.4275	2.339	.737	wdg ◆
1.724	3.699	.995	6.345	.4240	2.358	.731	wdg ◆

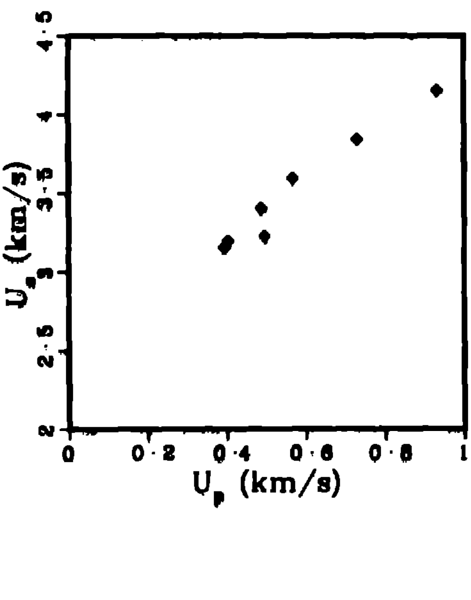


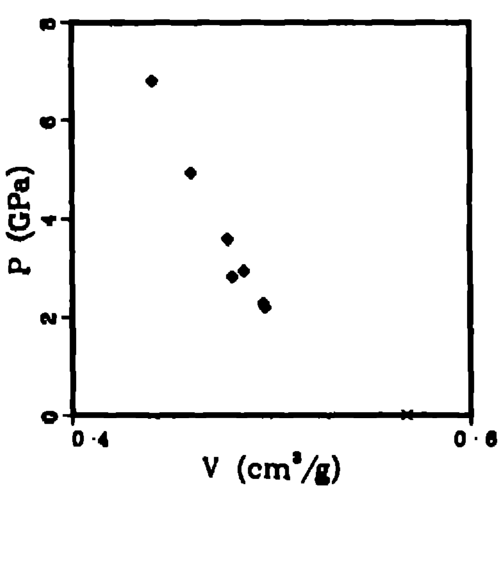


PBX 9405-01, RDX-3 wt% NC-3 wt% CEF

Average ρ_0 = 1.761 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.761	3.152	.394	2.187	.4969	2.013	.875	wdg ◆
1.761	3.195	.404	2.273	.4961	2.016	.874	wdg ◆
1.761	3.400	.488	2.922	.4864	2.056	.856	wdg ◆
1.761	3.225	.496	2.817	.4805	2.081	.846	wdg ◆
1.761	3.594	.567	3.589	.4783	2.091	.842	wdg ◆
1.761	3.841	.730	4.938	.4599	2.174	.810	wdg ◆
1.761	4.152	.932	6.814	.4404	2.271	.776	wdg ◆





PBX 9407, 94/6 wt% RDX/Exon

Average ρ_0 = 1.600 g/cm^3.

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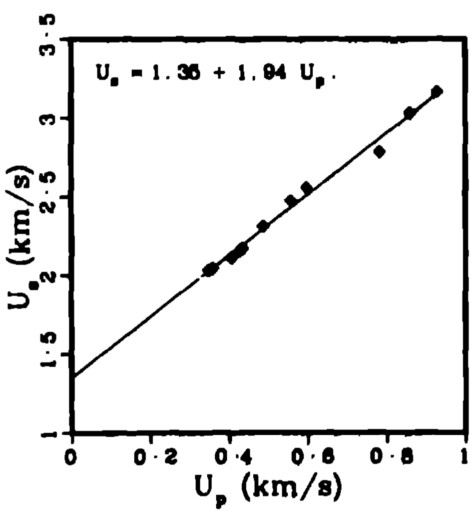
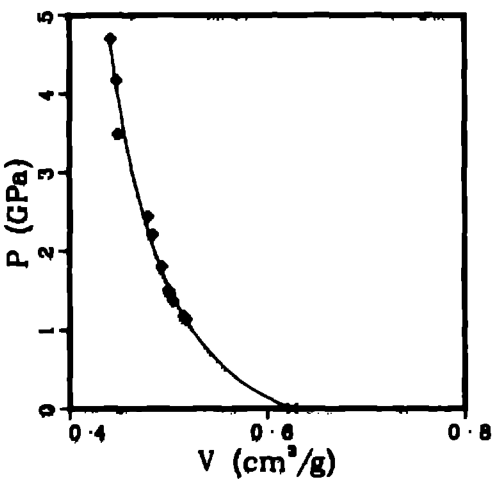
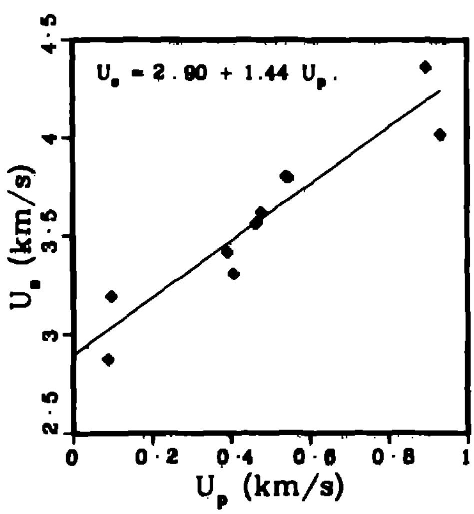
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.600	2.033	.349	1.135	.5177	1.932	.828	wdg ◆
1.600	2.046	.359	1.175	.5153	1.940	.825	wdg ◆
1.600	2.110	.406	1.371	.5047	1.981	.808	wdg ◆
1.600	2.152	.426	1.467	.5013	1.995	.802	wdg ◆
1.600	2.171	.433	1.504	.5003	1.999	.801	wdg ◆
1.600	2.310	.487	1.800	.4932	2.027	.789	wdg ◆
1.600	2.475	.558	2.210	.4841	2.066	.775	wdg ◆
1.600	2.557	.597	2.442	.4791	2.087	.767	wdg ◆
1.600	2.783	.783	3.487	.4492	2.226	.719	wdg ◆
1.600	3.032	.860	4.172	.4477	2.234	.716	wdg ◆
1.600	3.163	.928	4.696	.4416	2.264	.707	wdg ◆

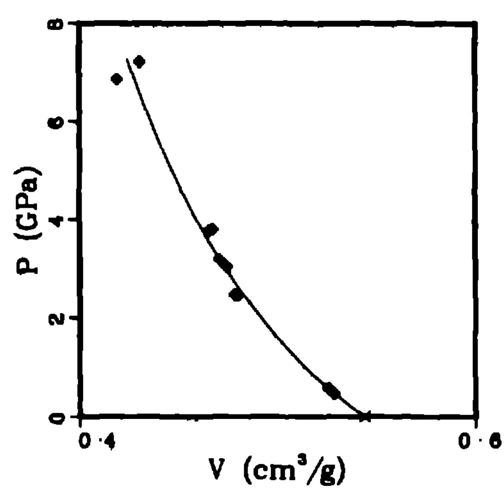




PBX 9501-01, HMX-2.5 wt% Estane-2.5 wt% BDNPF,
BDNPF-bisdinitropropyl formal
Average ρ_0 = 1.838 g/cm^3.

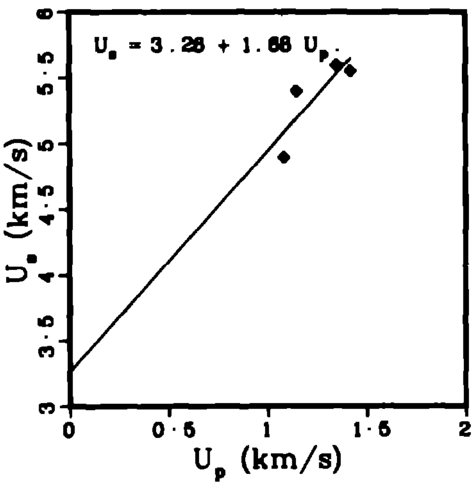
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.833	2.873	.089	.469	.5287	1.892	.969	wdg ◆
1.844	3.192	.097	.571	.5258	1.902	.970	wdg ◆
1.844	3.418	.392	2.471	.4801	2.083	.885	wdg ◆
1.833	3.308	.407	2.468	.4784	2.090	.877	wdg ◆
1.833	3.563	.466	3.043	.4742	2.109	.869	wdg ◆
1.844	3.617	.478	3.188	.4706	2.125	.868	wdg ◆
1.844	3.803	.539	3.780	.4654	2.149	.858	wdg ◆
1.833	3.798	.546	3.801	.4671	2.141	.856	wdg ◆
1.844	4.358	.897	7.208	.4307	2.322	.794	wdg ◆
1.833	4.017	.932	6.862	.4190	2.387	.768	wdg ◆

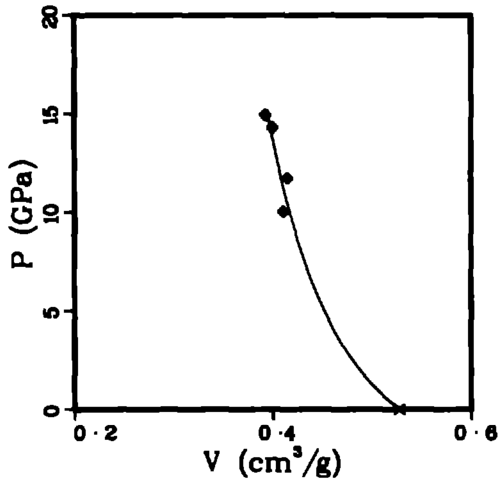




PBX 9502, TATB-5 wt% Kel F 800,
Pantex standard TATB
Average ρ_0 = 1.896 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.896	4.894	1.083	10.049	.4107	2.435	.779	wdg ◆
1.896	5.401	1.148	11.756	.4153	2.408	.787	wdg ◆
1.896	5.595	1.349	14.310	.4003	2.498	.759	wdg ◆
1.896	5.552	1.421	14.958	.3924	2.548	.744	wdg ◆





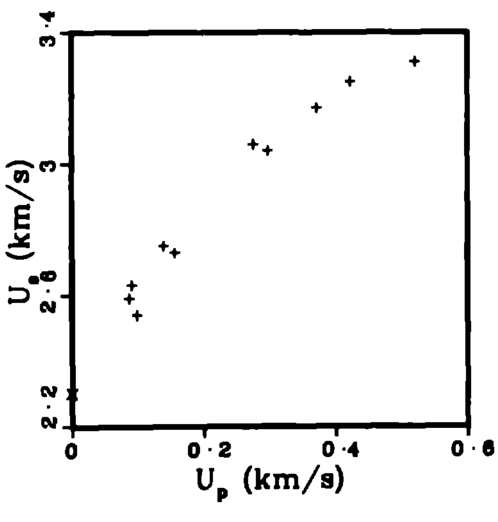
PETN, pressed, ρ_0 = 1.75 g/cm^3.

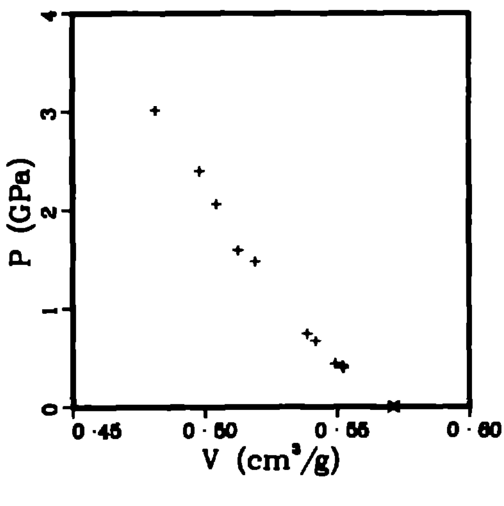
Average ρ_0 = 1.751 g/cm^3.

Sound velocities longitudinal 2.98 km/s.
shear 1.64 km/s.

Reference 63

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.750	2.301	0.000	0.000	.5714	1.750	1.000	ssp	×
1.750	2.590	.087	.394	.5522	1.811	.966	qzi	+
1.749	2.630	.091	.419	.5520	1.812	.965	qzi	+
1.750	2.540	.099	.440	.5492	1.821	.961	qzi	+
1.752	2.750	.139	.670	.5419	1.845	.949	qzi	+
1.750	2.730	.156	.745	.5388	1.856	.943	qzi	+
1.753	3.060	.276	1.481	.5190	1.927	.910	qzi	+
1.760	3.040	.298	1.594	.5125	1.951	.902	qzi	+
1.750	3.170	.372	2.064	.5044	1.983	.883	qzi	+
1.746	3.250	.423	2.400	.4982	2.007	.870	qzi	+
1.750	3.310	.521	3.018	.4815	2.077	.843	qzi	+





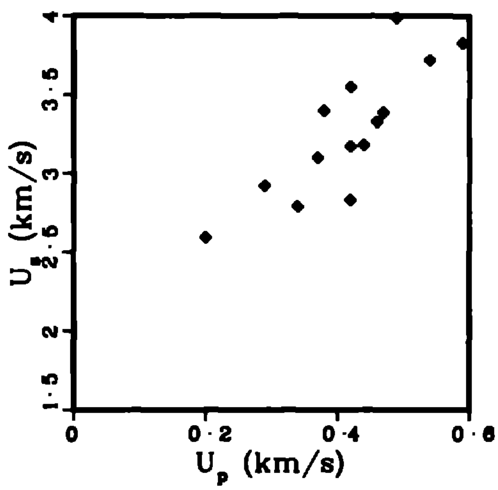
PETN, pressed, ρ_0 = 1.72 g/cm^3.

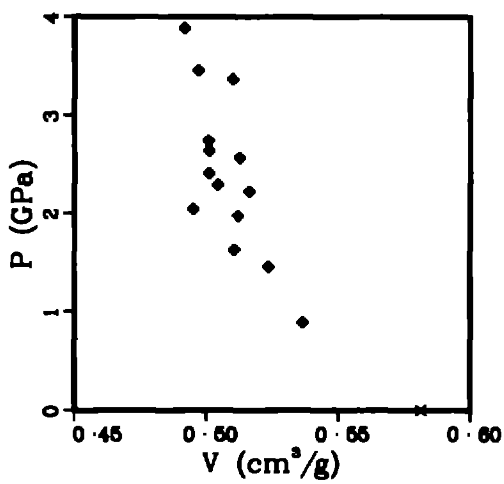
Average ρ_0 = 1.720 g/cm^3.

Sound velocities longitudinal 2.82 km/s.
shear 1.48 km/s.

Reference 64

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.720	2.590	.200	.891	.5365	1.864	.923	wdg ◆
1.720	2.920	.290	1.456	.5237	1.910	.901	wdg ◆
1.720	2.790	.340	1.632	.5105	1.959	.878	wdg ◆
1.720	3.100	.370	1.973	.5120	1.953	.881	wdg ◆
1.720	3.400	.380	2.222	.5164	1.936	.888	wdg ◆
1.720	3.170	.420	2.290	.5044	1.983	.868	wdg ◆
1.720	3.550	.420	2.565	.5126	1.951	.882	wdg ◆
1.720	2.830	.420	2.044	.4951	2.020	.852	wdg ◆
1.720	3.180	.440	2.407	.5010	1.996	.862	wdg ◆
1.720	3.330	.460	2.635	.5011	1.996	.862	wdg ◆
1.720	3.390	.470	2.740	.5008	1.997	.861	wdg ◆
1.720	3.990	.490	3.363	.5100	1.961	.877	wdg ◆
1.720	3.720	.540	3.455	.4970	2.012	.855	wdg ◆
1.720	3.830	.590	3.887	.4918	2.033	.846	wdg ◆



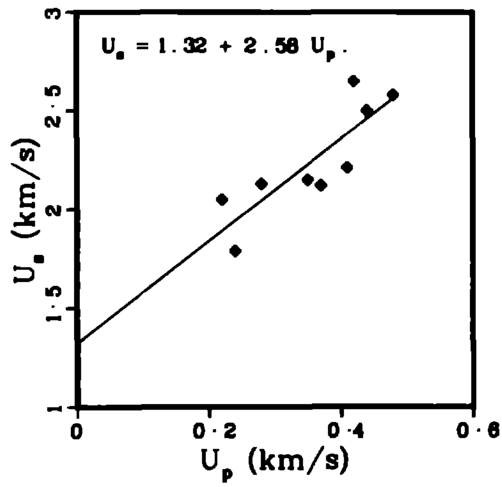


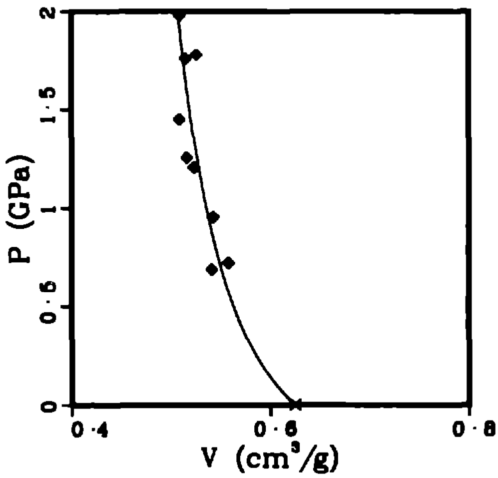
PETN, pressed, ρ_0 = 1.60 g/cm^3.

Average ρ_0 = 1.600 g/cm^3.

Reference 64

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.600	2.050	.220	.722	.5579	1.792	.893	wdg ◆
1.600	1.790	.240	.687	.5412	1.848	.866	wdg ◆
1.600	2.130	.280	.954	.5428	1.842	.869	wdg ◆
1.600	2.150	.350	1.204	.5233	1.911	.837	wdg ◆
1.600	2.120	.370	1.255	.5159	1.938	.825	wdg ◆
1.600	2.210	.410	1.450	.5090	1.964	.814	wdg ◆
1.600	2.650	.420	1.781	.5259	1.901	.842	wdg ◆
1.600	2.500	.440	1.760	.5150	1.942	.824	wdg ◆
1.600	2.580	.480	1.981	.5087	1.966	.814	wdg ◆





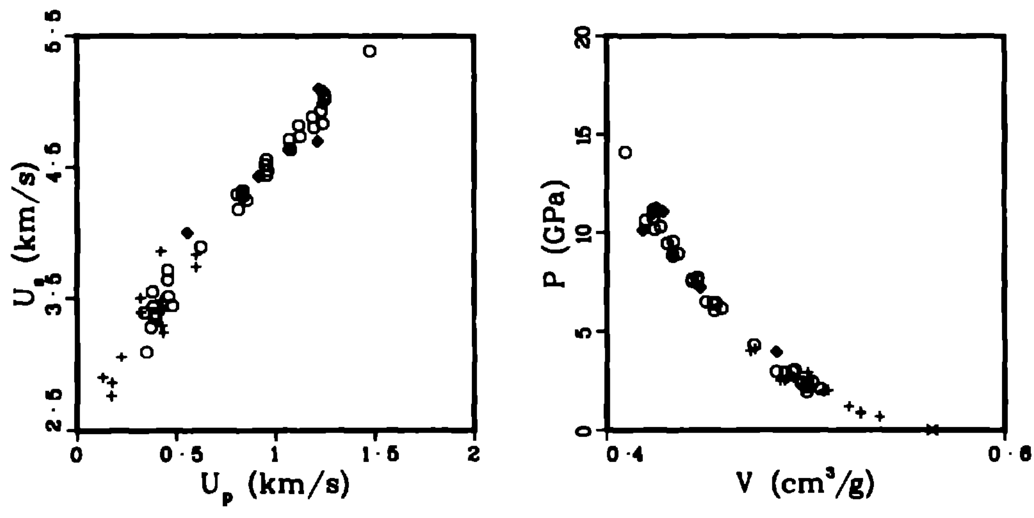
PETN , single–crystal

Average ρ_0 = 1.774 g/cm^3.

Reference 62

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.778	2.900	.130	.670	.5372	1.861	.955	qzi	+
1.778	2.760	.171	.839	.5276	1.895	.938	qzi	+
1.778	2.860	.177	.900	.5276	1.895	.938	qzi	+
1.778	3.054	.221	1.200	.5217	1.917	.928	qzi	+
1.778	3.504	.321	2.000	.5109	1.957	.908	qzi	+
1.778	3.396	.323	1.950	.5089	1.965	.905	qzi	+
1.773	3.394	.341	2.052	.5073	1.971	.900	iml	o
1.773	3.093	.349	1.914	.5004	1.999	.887	iml	o
1.773	3.282	.372	2.165	.5001	2.000	.887	iml	o
1.773	3.550	.382	2.404	.5033	1.987	.892	iml	o
1.773	3.437	.385	2.346	.5008	1.997	.888	iml	o
1.773	3.354	.394	2.343	.4978	2.009	.883	iml	o
1.773	3.383	.394	2.363	.4983	2.007	.884	iml	o
1.778	3.861	.421	2.890	.5011	1.996	.891	qzi	+
1.778	3.486	.426	2.640	.4937	2.026	.878	qzi	+
1.778	3.293	.427	2.500	.4895	2.043	.870	qzi	+
1.778	3.240	.434	2.500	.4871	2.053	.866	qzi	+
1.778	3.414	.435	2.640	.4908	2.038	.873	qzi	+
1.773	3.640	.456	2.943	.4934	2.027	.875	iml	o
1.773	3.716	.457	3.011	.4947	2.022	.877	iml	o
1.773	3.513	.463	2.884	.4897	2.042	.868	iml	o

(Continued)



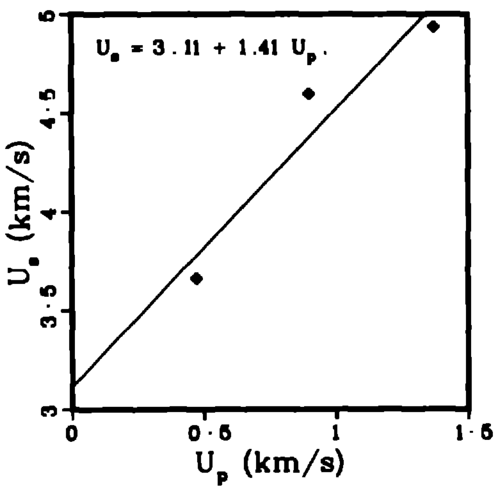
PETN , single-crystal
(Continued)

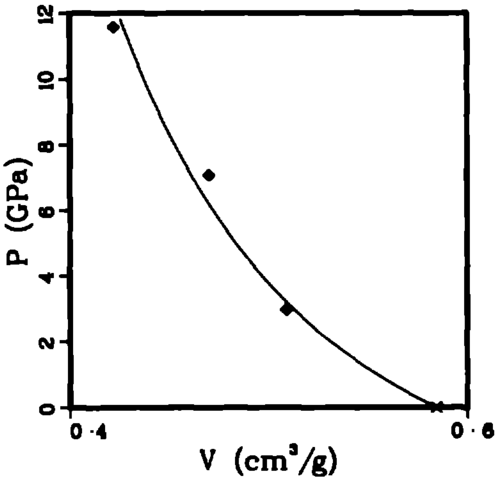
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp	
1.773	3.445	.481	2.938	.4853	2.061	.860	iml	o
1.775	4.000	.555	3.940	.4852	2.061	.861	wdg	◆
1.778	3.743	.601	4.000	.4721	2.118	.839	qzi	+
1.778	3.837	.601	4.100	.4743	2.108	.843	qzi	+
1.773	3.894	.622	4.294	.4739	2.110	.840	iml	o
1.773	4.298	.809	6.165	.4579	2.184	.812	iml	o
1.773	4.179	.814	6.031	.4542	2.202	.805	iml	o
1.773	4.325	.836	6.411	.4550	2.198	.807	iml	o
1.773	4.303	.837	6.386	.4543	2.201	.805	iml	o
1.773	4.281	.838	6.361	.4536	2.205	.804	iml	o
1.773	4.249	.858	6.464	.4501	2.222	.798	iml	o
1.775	4.432	.914	7.190	.4472	2.236	.794	wdg	◆
1.773	4.518	.949	7.602	.4455	2.244	.790	iml	o
1.773	4.441	.954	7.512	.4429	2.258	.785	iml	o
1.773	4.558	.956	7.726	.4457	2.244	.790	iml	o
1.773	4.477	.961	7.628	.4429	2.258	.785	iml	o
1.775	4.630	1.068	8.777	.4334	2.307	.769	wdg	◆
1.773	4.709	1.069	8.925	.4360	2.294	.773	iml	o
1.773	4.638	1.076	8.848	.4332	2.309	.768	iml	o
1.773	4.821	1.117	9.548	.4333	2.308	.768	iml	o
1.773	4.736	1.123	9.430	.4303	2.324	.763	iml	o
1.773	4.886	1.187	10.283	.4270	2.342	.757	iml	o
1.773	4.803	1.193	10.159	.4239	2.359	.752	iml	o
1.775	4.696	1.212	10.103	.4180	2.392	.742	wdg	◆
1.775	5.100	1.221	11.053	.4285	2.334	.761	wdg	◆
1.773	4.930	1.229	10.743	.4234	2.362	.751	iml	o
1.773	4.833	1.238	10.608	.4195	2.384	.744	iml	o
1.775	4.990	1.240	10.983	.4234	2.362	.752	wdg	◆
1.775	5.078	1.246	11.231	.4251	2.352	.755	wdg	◆
1.773	5.053	1.247	11.172	.4248	2.354	.753	iml	o
1.773	5.021	1.250	11.128	.4236	2.361	.751	iml	o
1.773	5.385	1.476	14.092	.4094	2.442	.726	iml	o

RDX-2.5 wt% B square wax-2.5 wt% Elvax

Average ρ_0 = 1.711 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.711	3.662	.473	2.964	.5090	1.965	.871	wdg ◆
1.711	4.599	.899	7.074	.4702	2.127	.805	wdg ◆
1.711	4.936	1.371	11.579	.4221	2.369	.722	wdg ◆

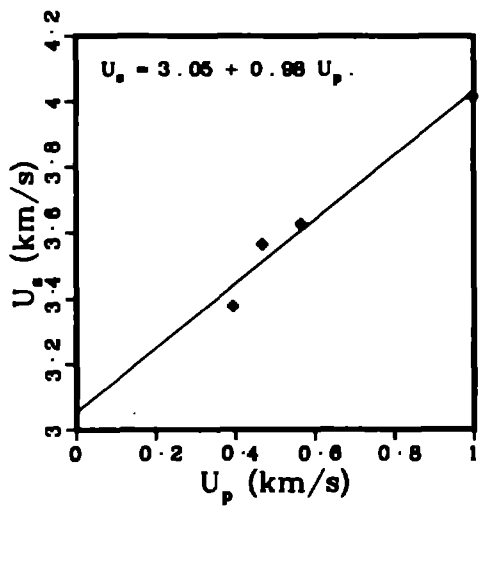


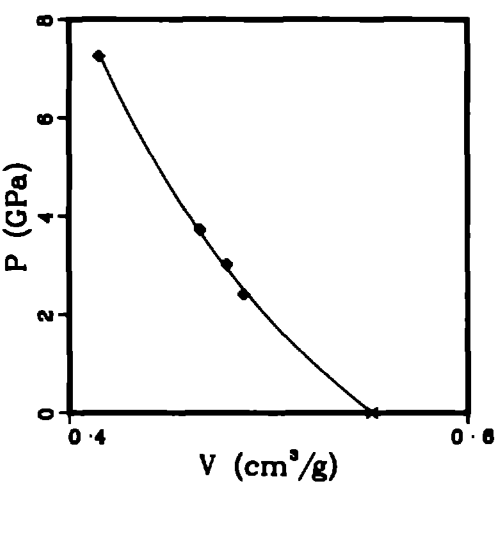


RDX-20 wt% aluminum-6 wt% wax, 30-micron aluminum

Average ρ_0 = 1.812 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.812	3.377	.394	2.411	.4875	2.051	.883	wdg ◆
1.812	3.564	.468	3.022	.4794	2.086	.869	wdg ◆
1.812	3.627	.565	3.713	.4659	2.146	.844	wdg ◆
1.812	4.016	.997	7.255	.4149	2.410	.752	wdg ◆

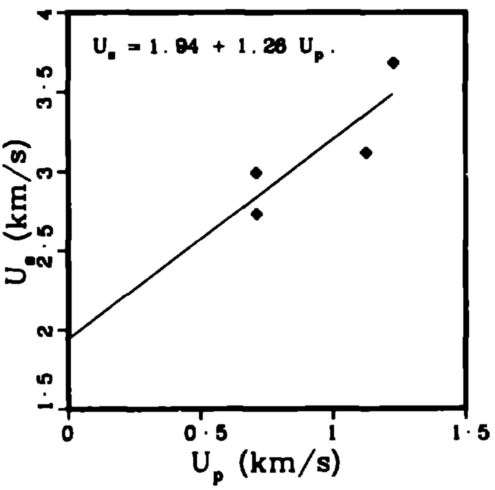


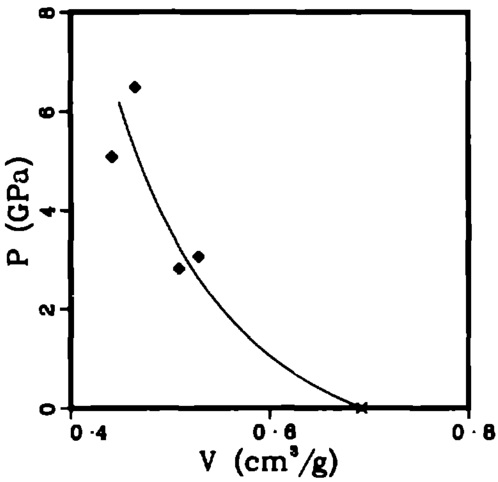


RDX–40.4 wt% cyanuric acid–19.4 wt% Sylgard

Average ρ_0 = 1.444 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.442	2.990	.710	3.061	.5288	1.891	.763	wdg ◆
1.453	2.731	.711	2.821	.5091	1.964	.740	wdg ◆
1.447	3.117	1.126	5.079	.4414	2.265	.639	wdg ◆
1.433	3.682	1.228	6.479	.4651	2.150	.666	wdg ◆



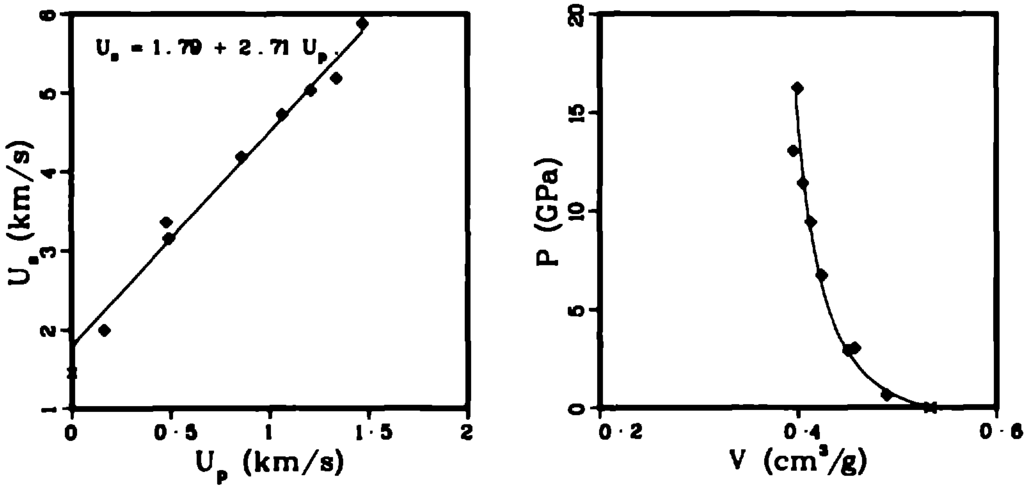


TATB, purified 1972

Average ρ_0 = 1.876 g/cm^3.

Sound velocities longitudinal 1.98 km/s.
shear 1.16 km/s.

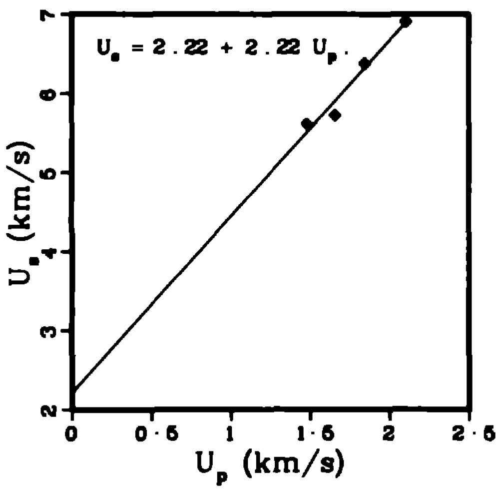
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.876	1.458	0.000	0.000	.5330	1.876	1.000	ssp ×
1.876	1.999	.165	.619	.4891	2.045	.917	wdg ◆
1.876	3.356	.480	3.022	.4568	2.189	.857	wdg ◆
1.876	3.151	.489	2.891	.4503	2.221	.845	wdg ◆
1.876	4.186	.858	6.738	.4238	2.360	.795	wdg ◆
1.876	4.723	1.063	9.419	.4131	2.421	.775	wdg ◆
1.876	5.030	1.208	11.399	.4050	2.469	.760	wdg ◆
1.876	5.184	1.340	13.032	.3953	2.530	.742	wdg ◆
1.876	5.879	1.471	16.224	.3997	2.502	.750	wdg ◆

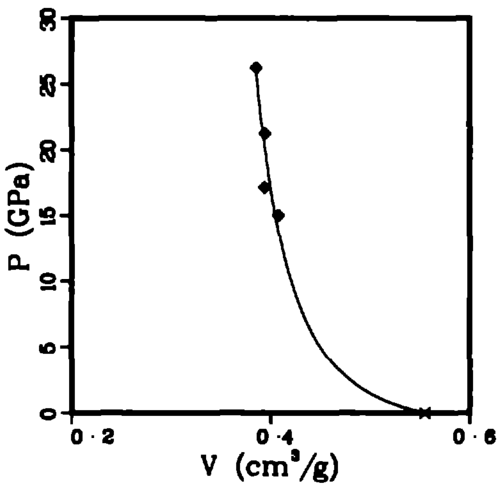


TATB-3 wt% B square wax-3 wt% Elvax . 1968 TATB

Average ρ_s = 1.802 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.802	5.610	1.482	14.982	.4083	2.449	.736	wdg ◆
1.802	5.725	1.660	17.125	.3940	2.538	.710	wdg ◆
1.802	6.375	1.847	21.218	.3942	2.537	.710	wdg ◆
1.802	6.908	2.105	26.203	.3858	2.592	.695	wdg ◆

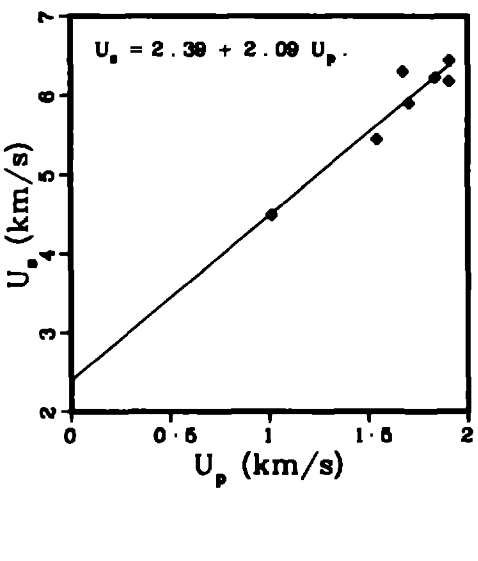


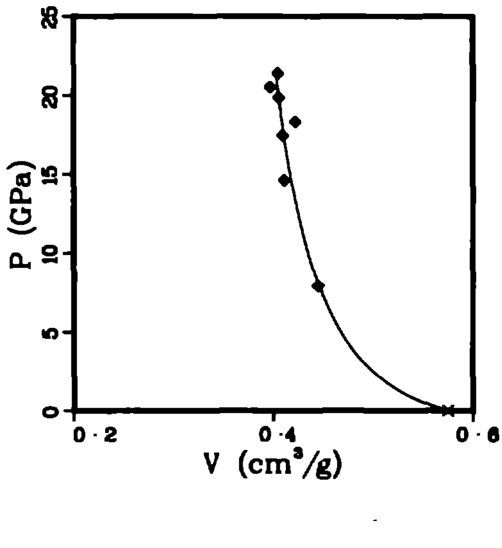


TATB-5 wt% B square wax-5 wt% Elvax, 1968 TATB

Average ρ_0 = 1.740 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.741	4.489	1.012	7.909	.4449	2.248	.775	wdg ◆
1.741	5.444	1.543	14.625	.4116	2.430	.717	wdg ◆
1.739	6.302	1.672	18.324	.4225	2.367	.735	wdg ◆
1.736	5.901	1.703	17.446	.4098	2.440	.711	wdg ◆
1.739	6.224	1.834	19.850	.4056	2.465	.705	wdg ◆
1.743	6.180	1.904	20.509	.3970	2.519	.692	wdg ◆
1.739	6.441	1.909	21.383	.4046	2.472	.704	wdg ◆

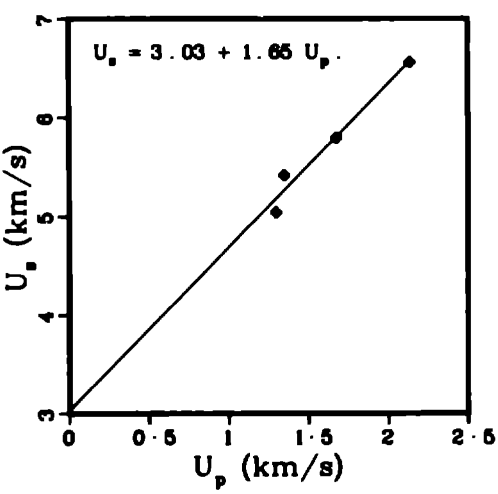


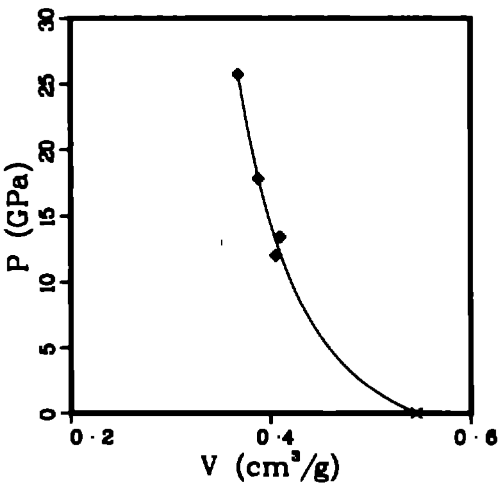


TATB-6 wt% Estane, bimodal 1968 TATB

Average ρ_0 = 1.833 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.833	5.040	1.299	12.001	.4049	2.469	.742	wdg ◆
1.833	5.414	1.350	13.397	.4095	2.442	.751	wdg ◆
1.833	5.796	1.677	17.817	.3877	2.579	.711	wdg ◆
1.833	6.560	2.139	25.720	.3677	2.720	.674	wdg ◆

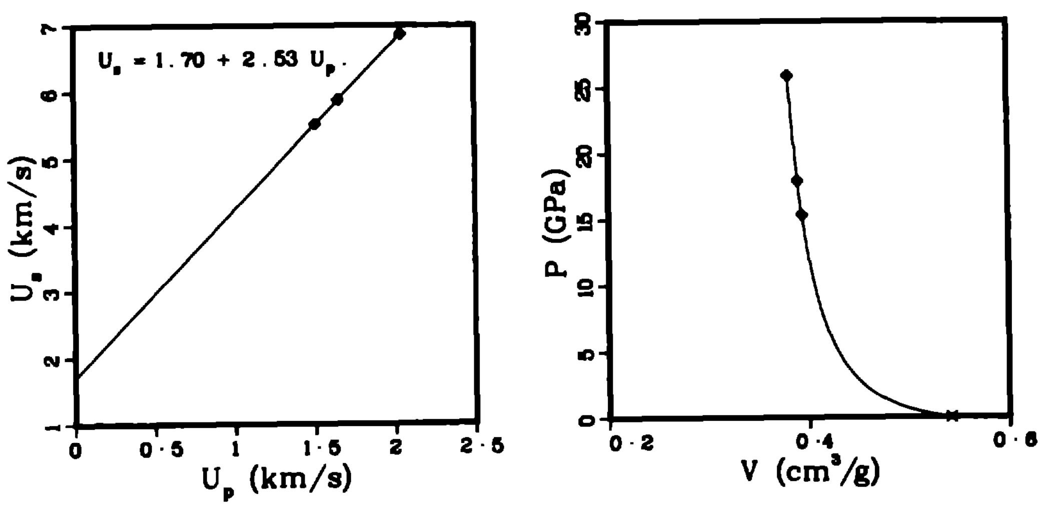




TATB–6 wt% Estane, coarse 1968 TATB

Average ρ_0 = 1.846 g/cm^3.

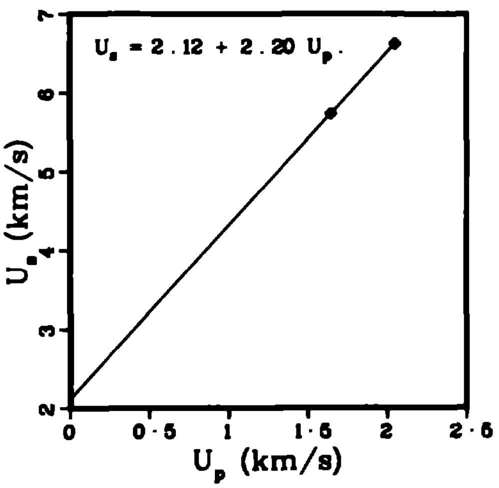
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.846	5.515	1.506	15.332	.3938	2.539	.727	wdg ◆
1.846	5.882	1.652	17.938	.3896	2.567	.719	wdg ◆
1.846	6.867	2.040	25.860	.3808	2.626	.703	wdg ◆

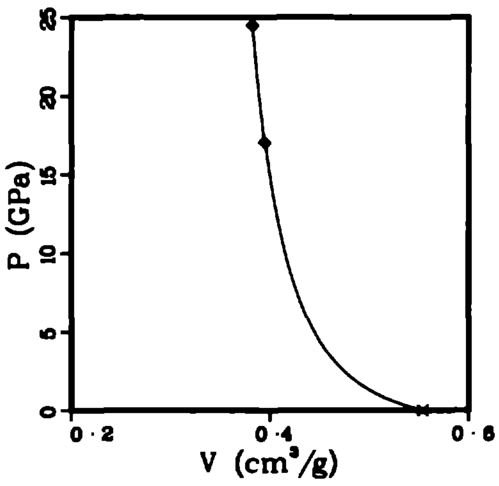


TATB-10 wt% Estane, 1968 TATB

Average ρ_0 = 1.805 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.805	5.734	1.646	17.036	.3950	2.532	.713	wdg ◆
1.805	6.620	2.049	24.484	.3825	2.614	.690	wdg ◆

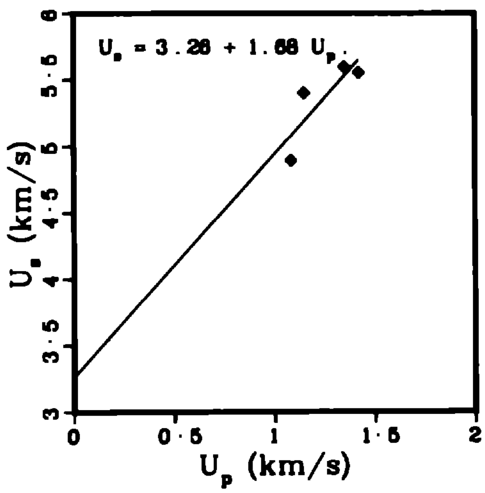


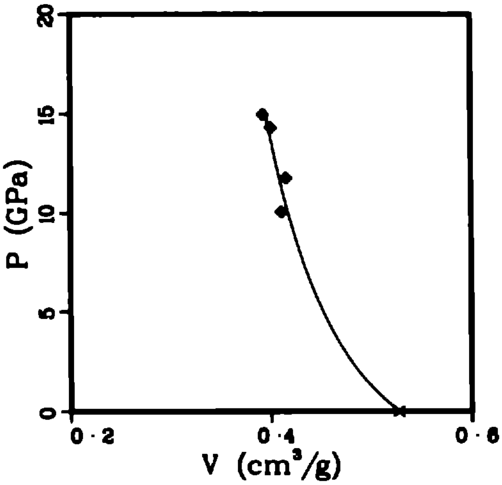


TATB-5 wt% Kel F 800

Average ρ_0 = 1.896 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.896	4.894	1.083	10.049	.4107	2.435	.779	wdg ◆
1.896	5.401	1.148	11.756	.4153	2.408	.787	wdg ◆
1.896	5.595	1.349	14.310	.4003	2.498	.759	wdg ◆
1.896	5.552	1.421	14.958	.3924	2.548	.744	wdg ◆

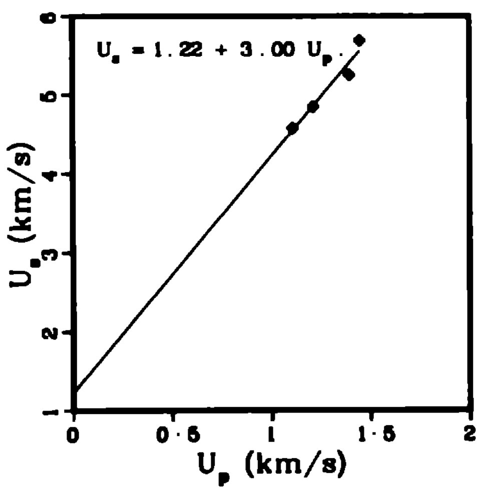


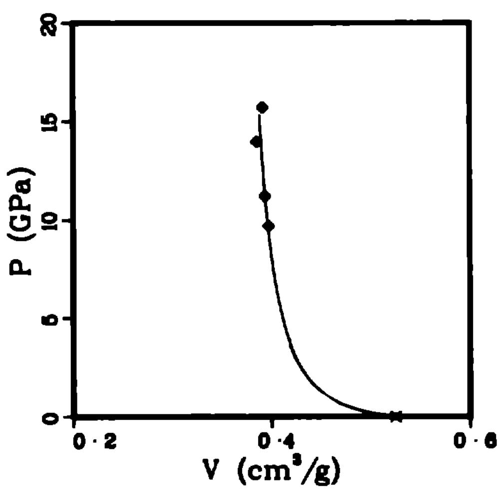


TATB-10 wt% Kel F 800, Pantex fine TATB

Average ρ_0 = 1.905 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.905	4.579	1.110	9.683	.3977	2.515	.758	wdg ◆
1.904	4.850	1.213	11.201	.3939	2.539	.750	wdg ◆
1.905	5.250	1.395	13.952	.3855	2.594	.734	wdg ◆
1.906	5.692	1.447	15.698	.3913	2.556	.746	wdg ◆

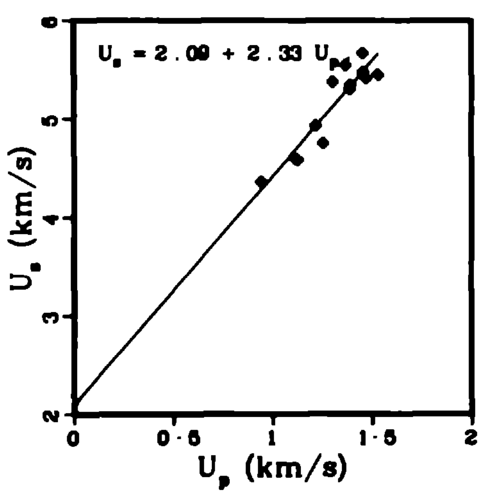


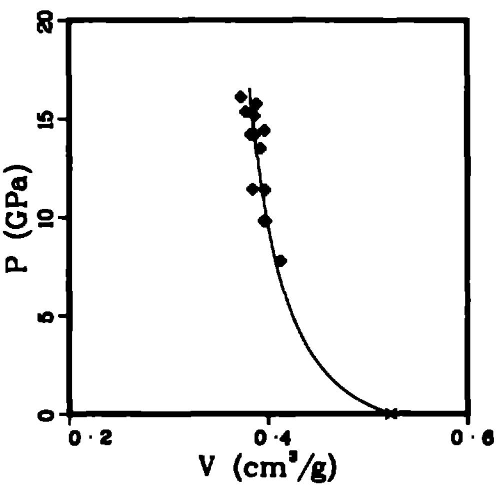


TATB-10 wt% Kel F 800. Pantex standard TATB

Average ρ_0 = 1.912 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.898	4.363	.942	7.801	.4131	2.421	.784	wdg ◆
1.914	4.596	1.114	9.800	.3958	2.526	.758	wdg ◆
1.898	4.590	1.125	9.801	.3977	2.514	.755	wdg ◆
1.898	4.931	1.218	11.399	.3967	2.521	.753	wdg ◆
1.914	4.755	1.256	11.431	.3845	2.601	.736	wdg ◆
1.929	5.375	1.302	13.500	.3928	2.546	.758	wdg ◆
1.898	5.543	1.369	14.403	.3967	2.521	.753	wdg ◆
1.929	5.302	1.388	14.196	.3827	2.613	.738	wdg ◆
1.913	5.340	1.390	14.199	.3867	2.586	.740	wdg ◆
1.913	5.664	1.455	15.765	.3885	2.574	.743	wdg ◆
1.898	5.473	1.458	15.145	.3865	2.587	.734	wdg ◆
1.929	5.413	1.470	15.349	.3776	2.648	.728	wdg ◆
1.929	5.448	1.532	16.100	.3726	2.684	.719	wdg ◆

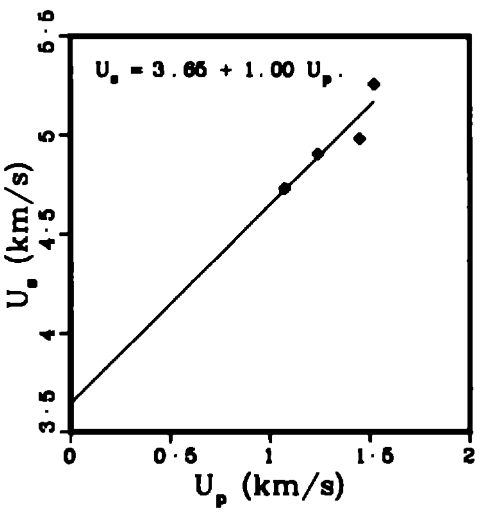


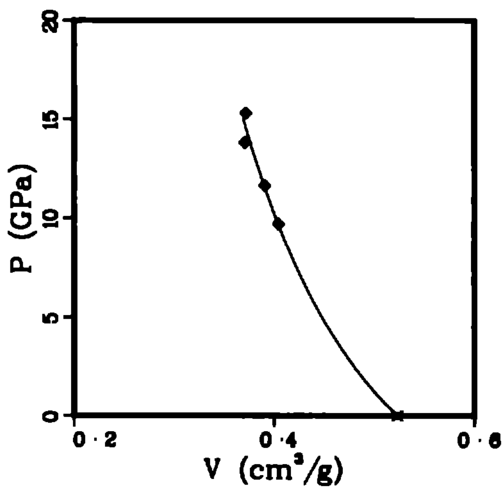


TATB-10 wt% Kel F 800, reprocessed TATB

Average ρ_0 = 1.912 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.911	4.728	1.074	9.704	.4044	2.473	.773	wdg ◆
1.913	4.905	1.239	11.626	.3907	2.560	.747	wdg ◆
1.912	4.982	1.449	13.803	.3709	2.696	.709	wdg ◆
1.912	5.259	1.522	15.304	.3716	2.691	.711	wdg ◆

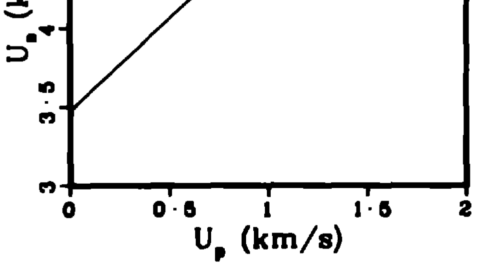


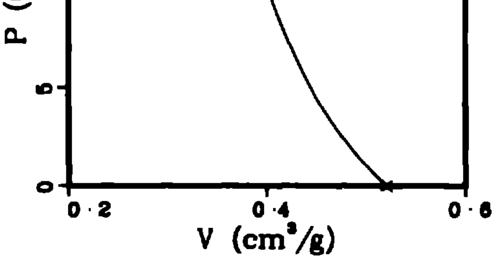


TATB-10 wt% Kel F 800, 1968 TATB

Average ρ_0 = 1.920 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.920	5.005	1.360	13.069	.3793	2.636	.728	wdg ◆
1.920	5.328	1.545	15.805	.3698	2.704	.710	wdg ◆
1.920	5.460	1.582	16.584	.3699	2.703	.710	wdg ◆
1.920	5.491	1.776	18.724	.3524	2.838	.677	wdg ◆

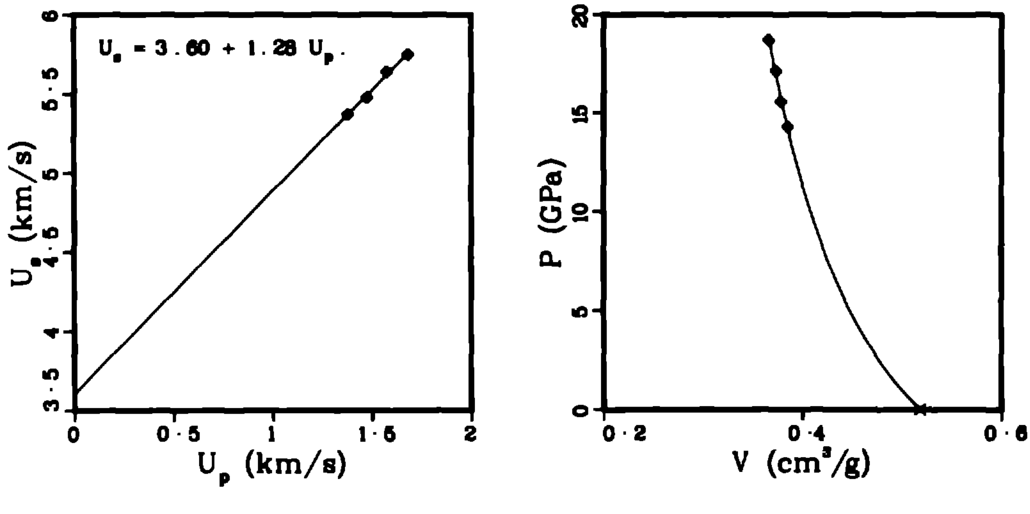




TATB-15 wt% Kel F 800, 1968 TATB

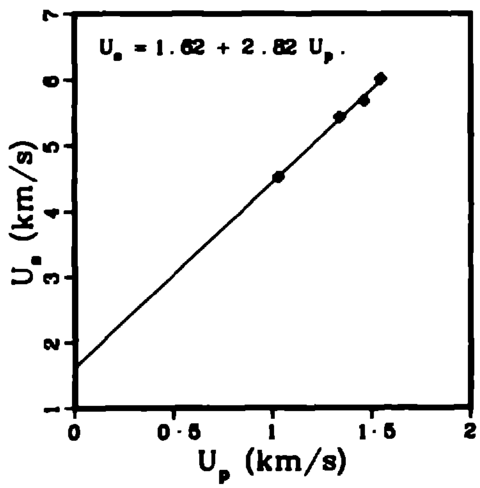
Average ρ_0 = 1.930 g/cm^3.

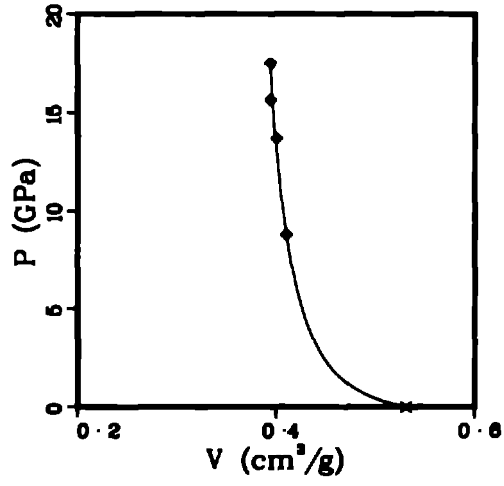
ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.930	5.371	1.380	14.305	.3850	2.597	.743	wdg ◆
1.930	5.477	1.476	15.602	.3785	2.642	.731	wdg ◆
1.930	5.638	1.575	17.138	.3734	2.678	.721	wdg ◆
1.930	5.749	1.684	18.685	.3664	2.730	.707	wdg ◆



TATB-2.5 wt% Kel F 800-2.5 wt% Kel F 827,
1968 TATB
Average ρ_0 = 1.883 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.883	4.524	1.030	8.774	.4102	2.438	.772	wdg ◆
1.883	5.434	1.339	13.701	.4002	2.499	.754	wdg ◆
1.883	5.683	1.462	15.645	.3944	2.535	.743	wdg ◆
1.883	6.014	1.545	17.496	.3946	2.534	.743	wdg ◆

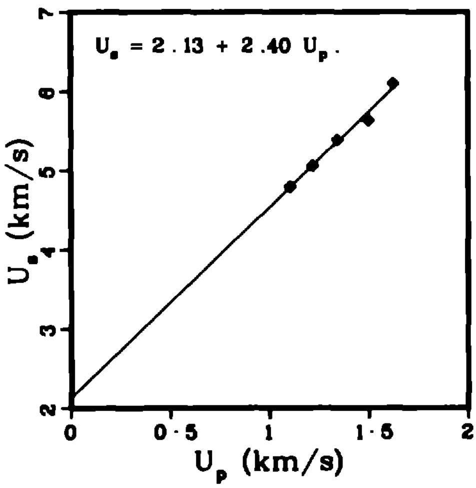


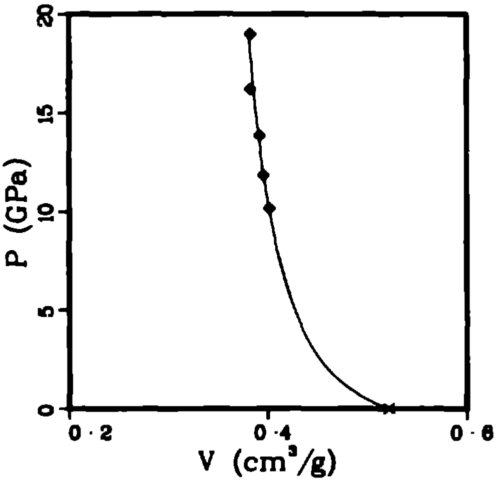


TATB-5 wt% Kel F 800-5 wt% Kel F 820, 1968 TATB

Average ρ_0 = 1.917 g/cm³.

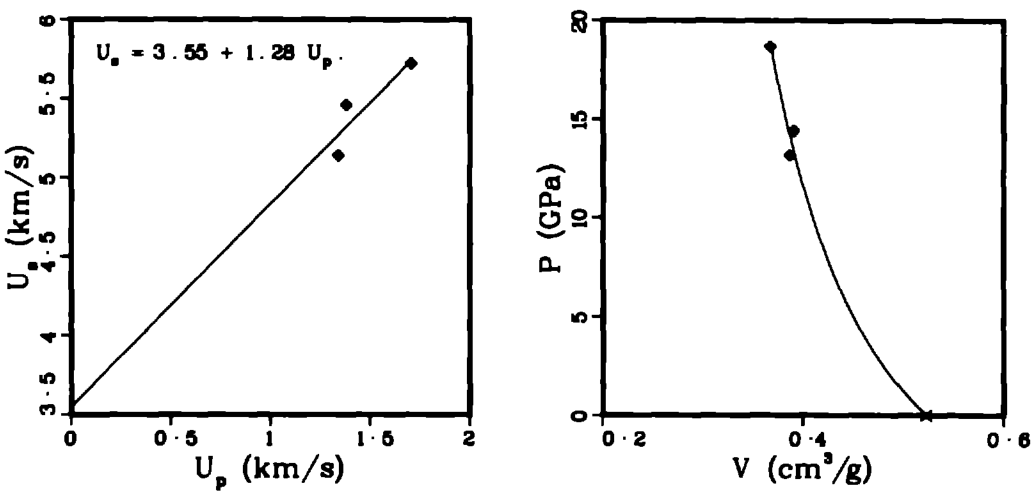
ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.917	4.796	1.105	10.159	.4015	2.491	.770	wdg ◆
1.917	5.058	1.220	11.829	.3958	2.526	.759	wdg ◆
1.917	5.387	1.342	13.859	.3917	2.553	.751	wdg ◆
1.917	5.635	1.499	16.193	.3829	2.612	.734	wdg ◆
1.917	6.096	1.625	18.990	.3826	2.614	.733	wdg ◆





TATB-7.5 wt% Kel F 800-7.5 wt% Kel F 827,
1968 TATB
Average ρ_0 = 1.912 g/cm³.

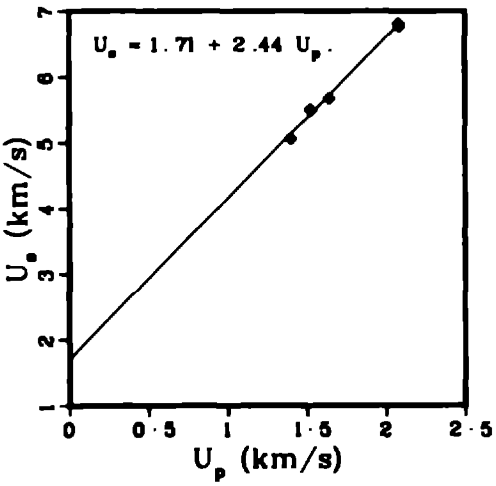
ρ_0 (g/cm³)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm³/g)	ρ (g/cm³)	V/Vo	Exp
1.912	5.141	1.341	13.181	.3866	2.587	.739	wdg ◆
1.912	5.462	1.381	14.422	.3908	2.559	.747	wdg ◆
1.912	5.722	1.707	18.675	.3670	2.725	.702	wdg ◆

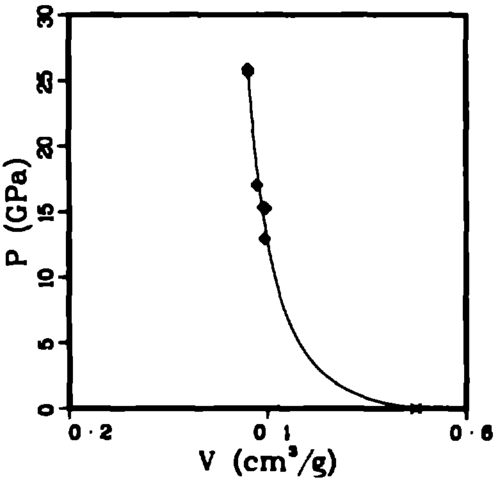


TATB-4.5 wt% polystyrene-1.5 wt% DOP, 1968 TATB

Average ρ_0 = 1.821 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.817	5.054	1.403	12.884	.3976	2.515	.722	wdg ◆
1.817	5.508	1.523	15.242	.3982	2.511	.723	wdg ◆
1.825	5.498	1.526	15.312	.3959	2.526	.722	wdg ◆
1.825	5.675	1.642	17.006	.3894	2.568	.711	wdg ◆
1.825	6.813	2.080	25.862	.3807	2.627	.695	wdg ◆
1.817	6.768	2.083	25.616	.3810	2.625	.692	wdg ◆

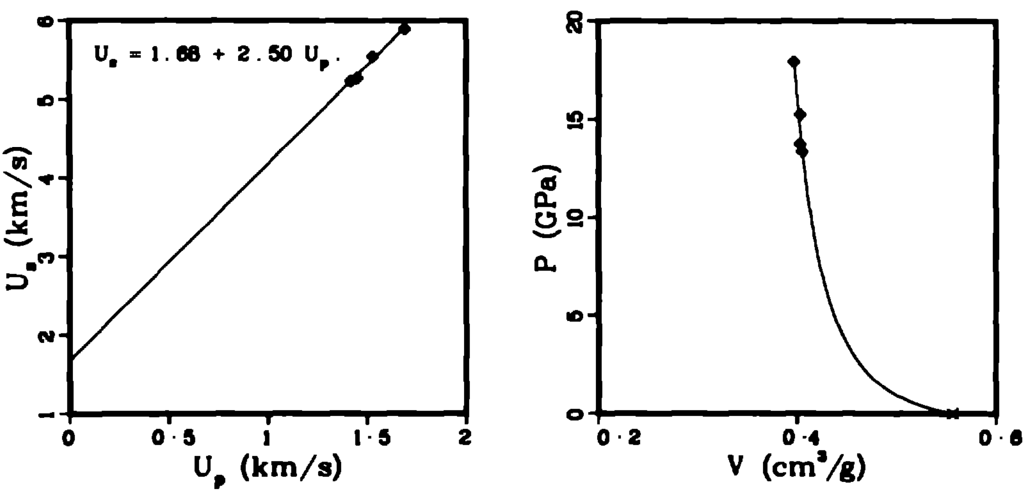




TATB–6 wt% polystyrene–2 wt% DOP , 1968 TATB

Average ρ_0 = 1.797 g/cm^3.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.797	5.231	1.420	13.348	.4054	2.467	.729	wdg ◆
1.797	5.270	1.452	13.751	.4032	2.480	.724	wdg ◆
1.797	5.549	1.529	15.247	.4031	2.480	.724	wdg ◆
1.797	5.895	1.693	17.934	.3967	2.521	.713	wdg ◆

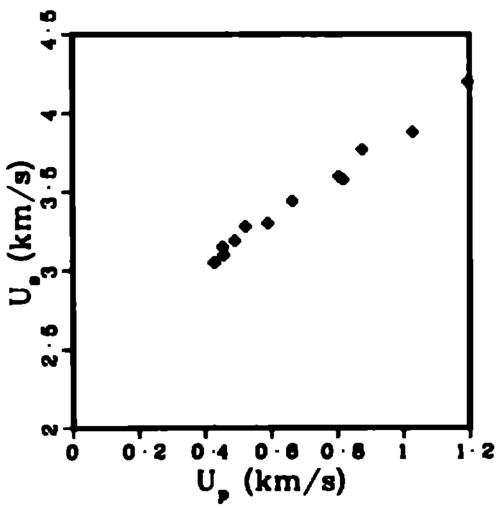


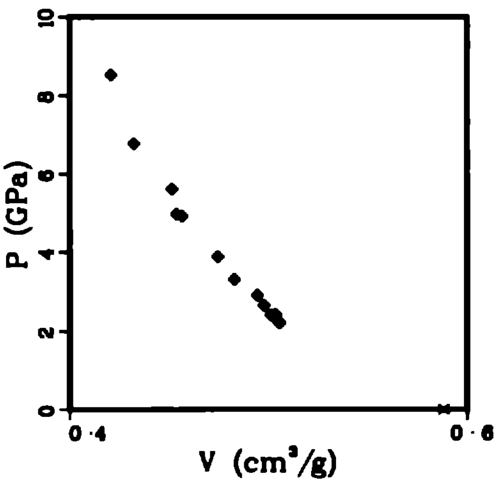
TETRYL, pressed, ρ_0 = 1.7 g/cm^3.

Average ρ_0 = 1.700 g/cm^3.

Reference 65

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.700	3.050	.428	2.219	.5057	1.977	.860	wdg ◆
1.700	3.050	.429	2.224	.5055	1.978	.859	wdg ◆
1.700	3.150	.453	2.426	.5036	1.986	.856	wdg ◆
1.700	3.100	.457	2.408	.5015	1.994	.853	wdg ◆
1.700	3.190	.490	2.657	.4979	2.009	.846	wdg ◆
1.700	3.280	.522	2.911	.4946	2.022	.841	wdg ◆
1.700	3.300	.590	3.310	.4831	2.070	.821	wdg ◆
1.700	3.440	.664	3.883	.4747	2.107	.807	wdg ◆
1.700	3.600	.805	4.927	.4567	2.190	.776	wdg ◆
1.700	3.580	.818	4.978	.4538	2.203	.772	wdg ◆
1.700	3.770	.876	5.614	.4516	2.215	.768	wdg ◆
1.700	3.880	1.028	6.781	.4324	2.313	.735	wdg ◆
1.700	4.200	1.195	8.532	.4209	2.376	.715	wdg ◆



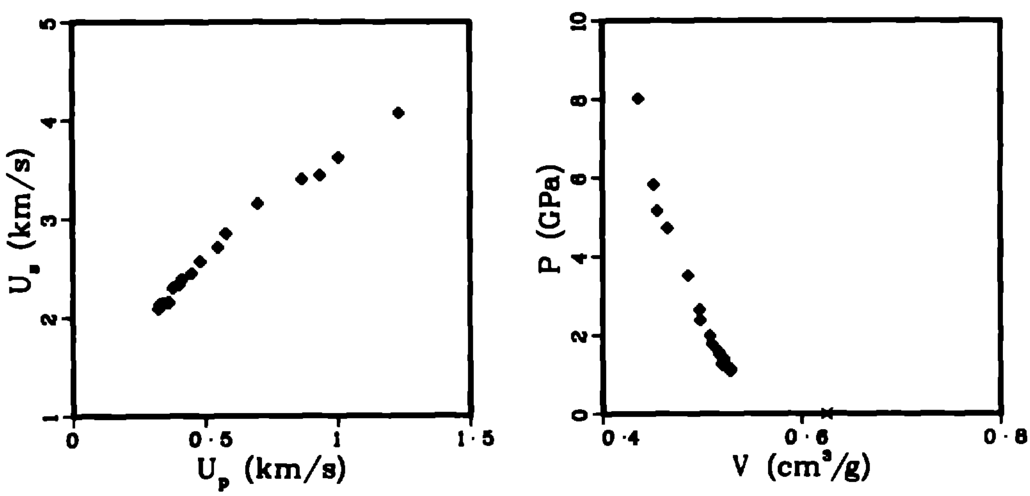


TETRYL, pressed, ρ_0 = 1.6 g/cm^3.

Average ρ_0 = 1.600 g/cm^3.

Reference 65

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.600	2.090	.324	1.083	.5281	1.894	.845	wdg ◆
1.600	2.140	.330	1.130	.5286	1.892	.846	wdg ◆
1.600	2.150	.343	1.180	.5253	1.904	.840	wdg ◆
1.600	2.160	.361	1.248	.5205	1.921	.833	wdg ◆
1.600	2.150	.363	1.249	.5195	1.925	.831	wdg ◆
1.600	2.300	.378	1.391	.5223	1.915	.836	wdg ◆
1.600	2.330	.400	1.491	.5177	1.932	.828	wdg ◆
1.600	2.390	.414	1.583	.5167	1.935	.827	wdg ◆
1.600	2.450	.451	1.768	.5099	1.961	.816	wdg ◆
1.600	2.570	.482	1.982	.5078	1.969	.812	wdg ◆
1.600	2.710	.548	2.376	.4986	2.006	.798	wdg ◆
1.600	2.850	.580	2.645	.4978	2.009	.796	wdg ◆
1.600	3.150	.699	3.523	.4863	2.056	.778	wdg ◆
1.600	3.400	.867	4.716	.4656	2.148	.745	wdg ◆
1.600	3.440	.935	5.146	.4551	2.197	.728	wdg ◆
1.600	3.620	1.004	5.815	.4517	2.214	.723	wdg ◆
1.600	4.070	1.232	8.023	.4358	2.295	.697	wdg ◆

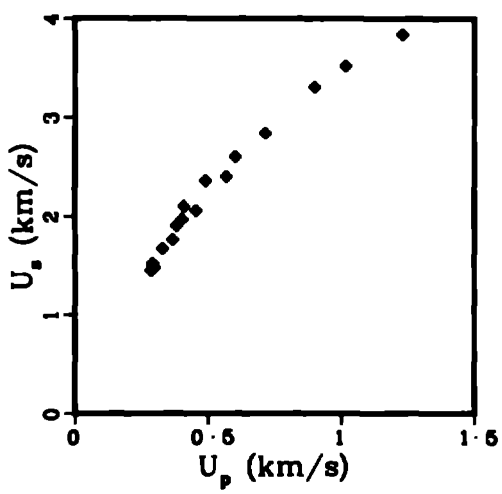


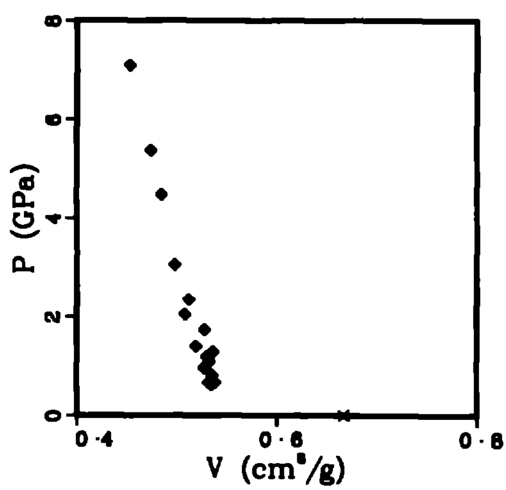
TETRYL, pressed, ρ_0 = 1.5 g/cm^3.

Average ρ_e = 1.500 g/cm^3.

Reference 65

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.500	1.450	.287	.624	.5347	1.870	.802	wdg ◆
1.500	1.520	.293	.668	.5382	1.858	.807	wdg ◆
1.500	1.480	.299	.664	.5320	1.880	.798	wdg ◆
1.500	1.670	.328	.822	.5357	1.867	.804	wdg ◆
1.500	1.760	.367	.969	.5277	1.895	.791	wdg ◆
1.500	1.900	.382	1.089	.5326	1.877	.799	wdg ◆
1.500	1.970	.404	1.194	.5299	1.887	.795	wdg ◆
1.500	2.100	.411	1.295	.5362	1.865	.804	wdg ◆
1.500	2.060	.456	1.409	.5191	1.926	.779	wdg ◆
1.500	2.360	.491	1.738	.5280	1.894	.792	wdg ◆
1.500	2.400	.569	2.048	.5086	1.966	.763	wdg ◆
1.500	2.600	.603	2.352	.5121	1.953	.768	wdg ◆
1.500	2.840	.717	3.054	.4984	2.007	.748	wdg ◆
1.500	3.310	.902	4.478	.4850	2.062	.727	wdg ◆
1.500	3.520	1.016	5.364	.4742	2.109	.711	wdg ◆
1.500	3.840	1.231	7.091	.4530	2.208	.679	wdg ◆



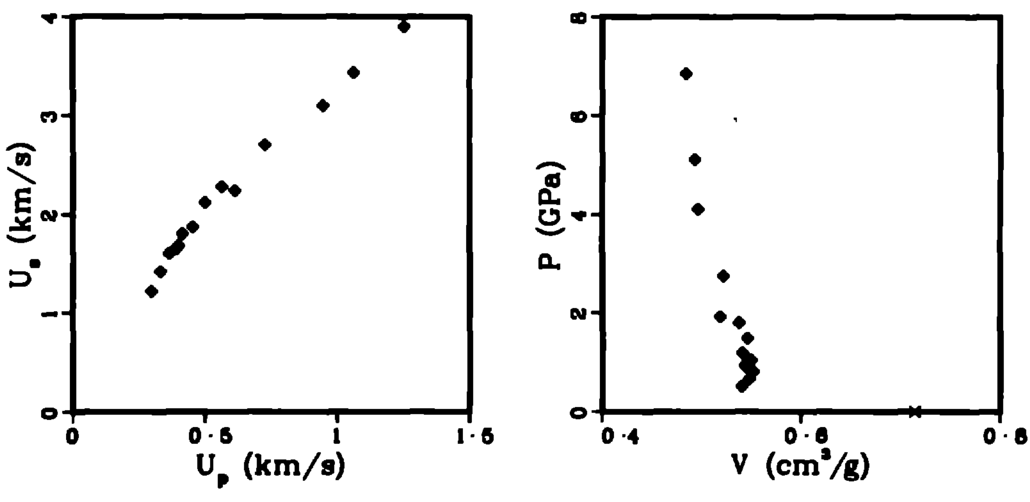


TETRYL, pressed, ρ_0 = 1.4 g/cm^3.

Average ρ_0 = 1.400 g/cm^3.

Reference 65

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.400	1.220	.297	.507	.5404	1.850	.757	wdg ◆
1.400	1.420	.331	.658	.5478	1.826	.767	wdg ◆
1.400	1.600	.364	.815	.5518	1.812	.772	wdg ◆
1.400	1.650	.392	.906	.5446	1.836	.762	wdg ◆
1.400	1.680	.401	.943	.5438	1.839	.761	wdg ◆
1.400	1.800	.415	1.046	.5496	1.819	.769	wdg ◆
1.400	1.870	.454	1.189	.5409	1.849	.757	wdg ◆
1.400	2.120	.500	1.484	.5458	1.832	.764	wdg ◆
1.400	2.280	.563	1.797	.5379	1.859	.753	wdg ◆
1.400	2.240	.613	1.922	.5188	1.927	.726	wdg ◆
1.400	2.700	.728	2.752	.5217	1.917	.730	wdg ◆
1.400	3.100	.946	4.106	.4963	2.015	.695	wdg ◆
1.400	3.430	1.063	5.105	.4929	2.029	.690	wdg ◆
1.400	3.900	1.253	6.841	.4848	2.063	.679	wdg ◆

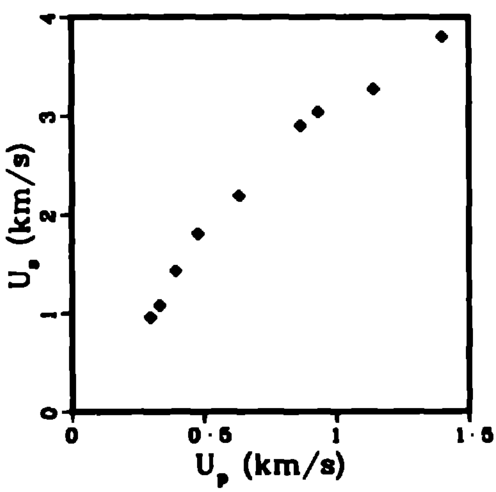


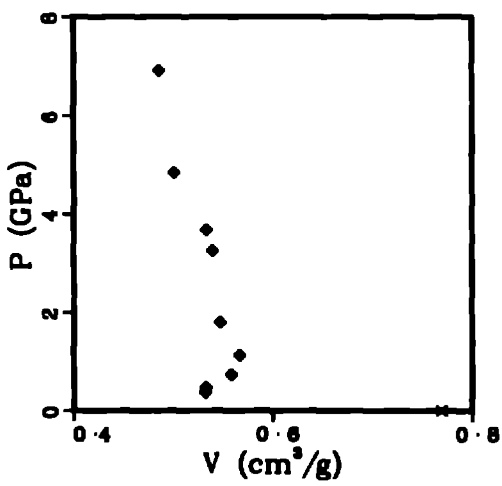
TETRYL, pressed, ρ_0 = 1.3 g/cm^3.

Average ρ_0 = 1.300 g/cm^3.

Reference 65

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.300	.960	.296	.369	.5321	1.880	.692	wdg ◆
1.300	1.080	.332	.466	.5328	1.877	.693	wdg ◆
1.300	1.430	.392	.729	.5584	1.791	.726	wdg ◆
1.300	1.810	.476	1.120	.5669	1.764	.737	wdg ◆
1.300	2.190	.632	1.799	.5472	1.827	.711	wdg ◆
1.300	2.900	.865	3.261	.5398	1.853	.702	wdg ◆
1.300	3.040	.932	3.683	.5334	1.875	.693	wdg ◆
1.300	3.270	1.140	4.846	.5011	1.996	.651	wdg ◆
1.300	3.800	1.399	6.911	.4860	2.057	.632	wdg ◆



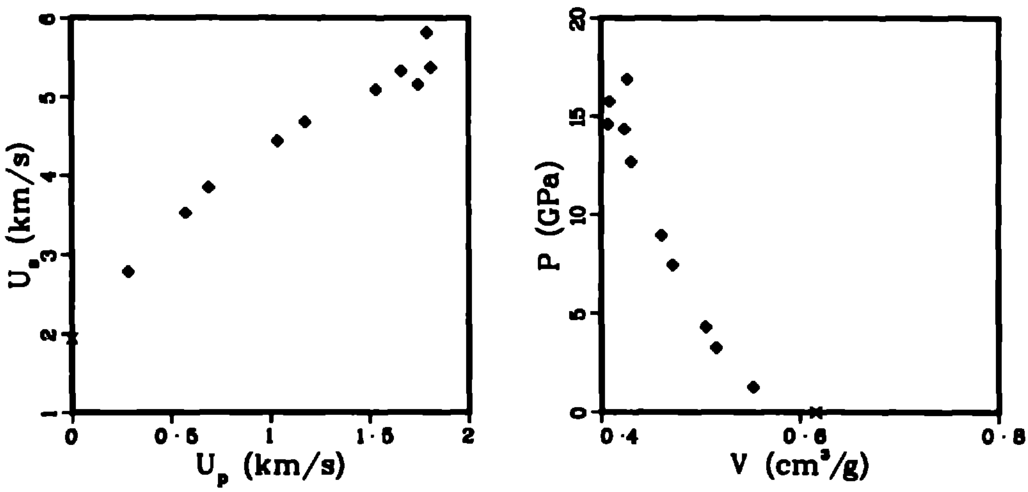


TNT, creamed, cast

Average ρ_s = 1.624 g/cm^3.

Sound velocities longitudinal 2.48 km/s.
shear 1.34 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.624	1.938	0.000	0.000	.6158	1.624	1.000	ssp ×
1.624	2.785	.283	1.280	.5532	1.808	.898	wdg ◆
1.624	3.525	.573	3.280	.5157	1.939	.837	wdg ◆
1.624	3.845	.691	4.315	.5051	1.980	.820	wdg ◆
1.624	4.430	1.037	7.461	.4716	2.120	.766	wdg ◆
1.624	4.680	1.178	8.953	.4608	2.170	.748	wdg ◆
1.624	5.090	1.534	12.680	.4302	2.325	.699	wdg ◆
1.624	5.325	1.660	14.355	.4238	2.360	.688	wdg ◆
1.624	5.155	1.745	14.609	.4073	2.455	.661	wdg ◆
1.624	5.815	1.790	16.904	.4262	2.346	.692	wdg ◆
1.624	5.370	1.808	15.767	.4084	2.448	.663	wdg ◆

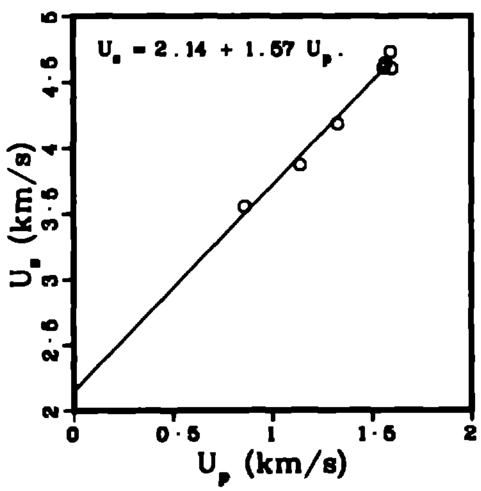


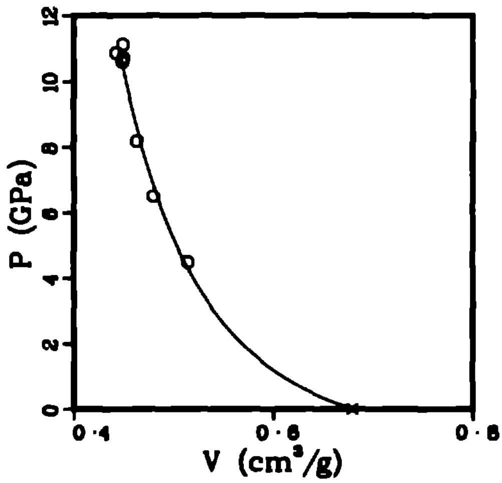
TNT, liquid, T_0 = 81°C

Average ρ_0 = 1.472 g/cm^3.

Reference 66

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.473	3.552	.860	4.500	.5145	1.944	.758	iml o
1.471	3.872	1.141	6.499	.4795	2.086	.705	iml o
1.473	4.183	1.328	8.183	.4634	2.158	.683	iml o
1.473	4.607	1.561	10.593	.4489	2.228	.661	iml o
1.471	4.640	1.569	10.709	.4499	2.223	.662	iml o
1.473	4.727	1.596	11.113	.4497	2.224	.662	iml o
1.473	4.603	1.601	10.855	.4428	2.259	.652	iml o



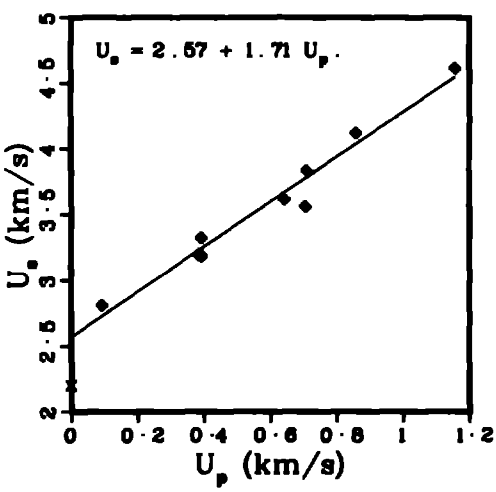


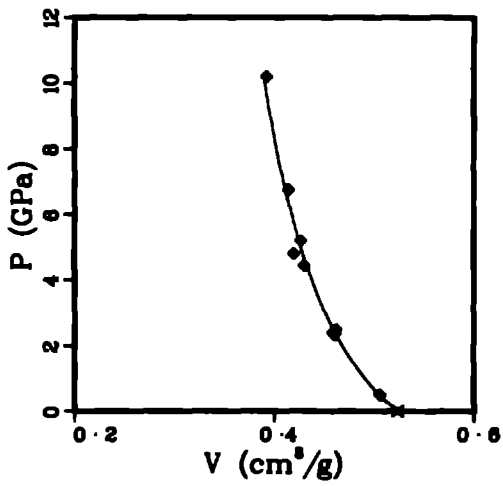
VOP-7 PROPELLANT

Average ρ_0 = 1.910 g/cm^3.

Sound velocities longitudinal 2.20 km/s.
shear 0.00 km/s.

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.910	2.200	0.000	0.000	.5236	1.910	1.000	ssp ×
1.910	2.811	.093	.499	.5062	1.975	.967	wdg ◆
1.910	3.195	.385	2.349	.4605	2.172	.879	wdg ◆
1.910	3.323	.392	2.488	.4618	2.165	.882	wdg ◆
1.910	3.186	.394	2.398	.4588	2.180	.876	wdg ◆
1.910	3.615	.643	4.440	.4304	2.323	.822	wdg ◆
1.910	3.561	.706	4.802	.4198	2.382	.802	wdg ◆
1.910	3.835	.710	5.201	.4266	2.344	.815	wdg ◆
1.910	4.121	.858	6.753	.4146	2.412	.792	wdg ◆
1.910	4.614	1.157	10.196	.3923	2.549	.749	wdg ◆

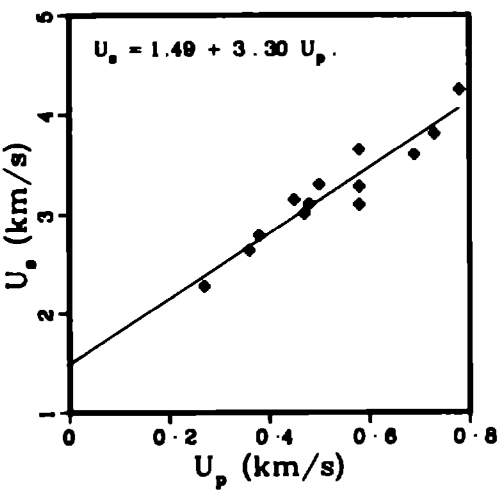


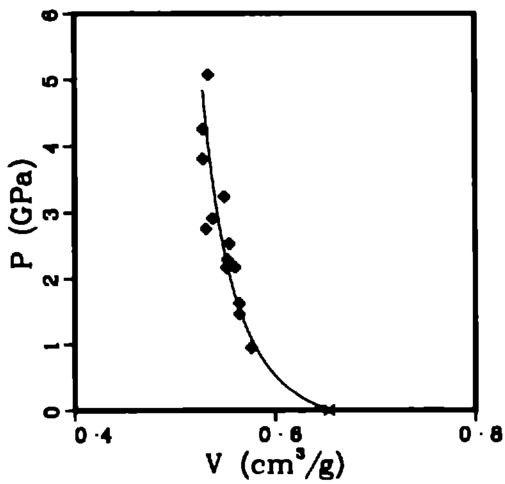


XTX-8003 ,
80/20 wt% superfine PETN/Sylgard
Average ρ_0 = 1.530 g/cm^3 .

Reference 64

ρ_0 (g/cm^3)	U_s (km/s)	U_p (km/s)	P (GPa)	V (cm^3/g)	ρ (g/cm^3)	V/Vo	Exp
1.530	2.280	.270	.942	.5762	1.736	.882	wdg ◆
1.530	2.640	.360	1.454	.5645	1.772	.864	wdg ◆
1.530	2.790	.380	1.622	.5646	1.771	.864	wdg ◆
1.530	3.150	.450	2.169	.5602	1.785	.857	wdg ◆
1.530	3.010	.470	2.164	.5515	1.813	.844	wdg ◆
1.530	3.110	.480	2.284	.5527	1.809	.846	wdg ◆
1.530	3.300	.500	2.524	.5546	1.803	.848	wdg ◆
1.530	3.650	.580	3.239	.5497	1.819	.841	wdg ◆
1.530	3.280	.580	2.911	.5380	1.859	.823	wdg ◆
1.530	3.100	.580	2.751	.5313	1.882	.813	wdg ◆
1.530	3.600	.690	3.801	.5283	1.893	.808	wdg ◆
1.530	3.810	.730	4.255	.5284	1.893	.808	wdg ◆
1.530	4.250	.780	5.072	.5336	1.874	.816	wdg ◆





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