Chapter 2

ELASTIC CONSTANTS OF MINERALS*

Yoshio Sumino and Orson L. Anderson

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* Research funding received from the National Science Foundation EAR 79-11212 and EAR 80-08272. Data analyses and reduction were carried out at the Office of Academic Computing on the UCLA campus.

INTRODUCTION

Previous References for the Review of Elastic Data

Data on the elastic properties of single crystals have been compiled previously in papers and books by Huntington,[21] Hearmon,[17-19] Alexandrov and Ryzhova,[1] Simmons,[25,26] Anderson,[3,6,8] Birch,[13,14] Belikov, et al.,[12] Simmons and Wang,[27] and Alexandrov, et al.[2]

Compilation of the Elastic Data in the Handbook

The calculated aggregate properties of minerals compute from single cyrstal elastic data are summarized in this Handbook. The data sets are divided into four groups.

Group 1 : Alkali halide series. These data were compiled from original publications of the last 20 years (from 1960 to 1980).

Group 2 : Simple oxide series. These data were compiled from original publications of the last 15 years (from 1965 to 1980).

Group 3 : Silicate minerals series. These data were compiled from original publications of the last 15 years (from 1965 to 1980).

Group 4 : Nonsilicate minerals series. These data are compiled from original publications of the last 15 years (from 1965 to 1980).

No interpretation of the accuracy or precision of experimental data has been described in this Handbook, but a few data which were reported before 1970 were deleted by the authors because we lacked confidence in their validity.

The data on thermal expansivity needed to reduce the elasticity data were compiled from the most recent sources found and often postdate the original source of the elastic constants.

Determination of Isotropic Elastic Moduli for a Polycrystalline Aggregate Using Single-Crystal Data

The method for calculating the isotropic elastic moduli for polycrystalline aggregates was derived by Voigt,[28] Reuss,[23] and Hill,[20] and described in detail by Kumazawa[22] and Anderson.[6] Voigt averaged the elastic stiffness (C_{ij}) over all lattice orientations using the assumption that strain is uniform throughout a grain. Reuss averaged the elastic compliances (S_{ij}) assuming that stress is uniform throughout a grain. The Voigt method gives the upper bound of elastic moduli, and the Reuss method gives the lower bound of elastic moduli. The Hill method is simply the arithmetic average of the upper and lower bounds. The isotropic elastic data computed by the Hill and Reuss average schemes are summarized in this handbook.

Two independent isotropic elastic moduli, the bulk modulus K and shear modulus μ, given by the Voigt, Reuss, and Hill averages are

Voigt average

$$9K_V = (C_{11} + C_{22} + C_{33}) + 2(C_{12} + C_{23} + C_{31})$$

$$15\mu_R = (C_{11} + C_{22} + C_{33}) - (C_{12} + C_{23} + C_{31}) + 3(C_{44} + C_{55} + C_{66})$$

Reuss average

$$1/K_R = (S_{11} + S_{22} + S_{33}) + 2(S_{12} + S_{23} + S_{31})$$

$$15/\mu_R = 4(S_{11} + S_{22} + S_{33}) - 4(S_{12} + S_{23} + S_{31}) + 3(S_{44} + S_{55} + S_{66})$$

Hill average

$$K_H = (K_V + K_R)/2$$

$$\mu_H = (\mu_V + \mu_R)/2$$

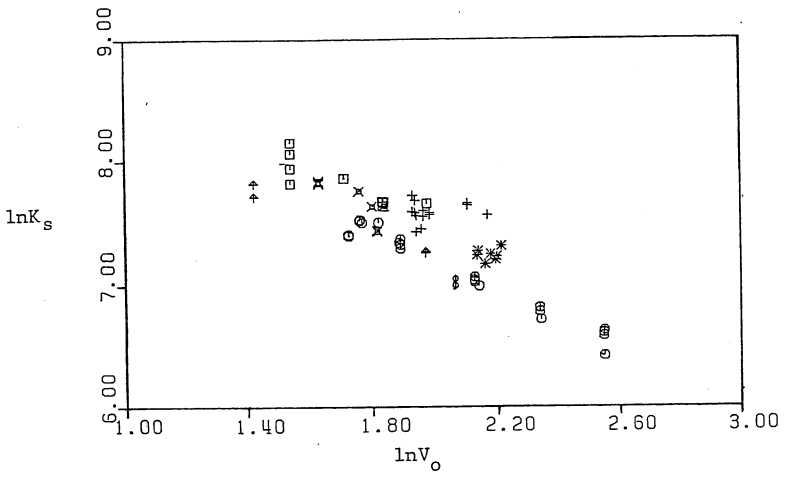

FIGURE 1. Correlation of $1nK_s$ vs. $1n\ V_o$ for oxides (excepting glasses and ice) for various structures (① rock salt; ⊡ rutile; ⏃ wurzite; + fluorite; * Mn_2O_3; ⊗ corundum; ⧓ Cu_2O_3).

The elastic moduli K and μ, and their temperature and pressure coefficients are presented first. The other isotropic parameters all were calculated from combining bulk modulus K_H (or K_R) and shear modulus μ_H (or μ_R) and their temperature and pressure coefficients with density, thermal expansivity, and specific heat.

Patterns Relating Elastic Constants (at Ambient Conditions)

The trends of elastic constants, or sound velocity, vs. intrinsic ambient parameters (density, ρ_o, or atomic mass, $\overline{M}$) have interested geophysicists for several decades. The tendency of sound velocity to increase with density, ρ_o, in a class of rocks and minerals having constant $\overline{M}$, known as Birch's law[13,25] has been useful, for example, in the reduction of seismic and gravity data. Equivalent statements of Birch's law, but with different parameters, are also well known. Examples are (1) the seismic equation of state where $\sqrt{K_{So}/\rho_o}$ is correlated with ρ_o (Ref. 3) and the law of corresponding states, K_{So} correlated with V_o.[7,9]

The subject as a whole is often called velocity-density systematics or elastic-constant systematics. The data in this review are sufficient in quantity to test the details of elastic-constant systematics, but that subject is appropriate for a future article. In this review, we will present four correlation graphs as examples. The graphs will be restricted to data of oxides (Group II-B) because there are sufficient data in the oxides to provide statistical information.

The first correlation graph is a test from the law of corresponding states that $K_{So}V_o^{-x} =$ constant, where X is a number slightly above unity.[7] The correlation is thought to hold for isostructural oxides. Figure 1 shows a plot of $1nK_{So}$ vs. $1nV_o$, for oxides composed of the following structural groups: rock salt, rutile, fluorite, corundum, wurzite, Mn_2O_3, and Cu_2O_3 (glass and ice values are not plotted). The rock salt structures, which are the most numerous, tend to lie along a line with a slope of -1.25. The Mn_2O_3 and fluorite structures tend to cluster. The rutile structures show high scatter due to different reports on the stishovite properties. The corundum, wurzite, and Cu_2O_3 structure data are rather sparse. Nevertheless, the data in totality appear to condense in a band around a straight line with a slope of about -1.3.

Another suggested correlation of the isostructural groups is that $K_{So}V_o$ vs. $\overline{M}$ is a straight line parallel to the $\overline{M}$ axis.[15,24]

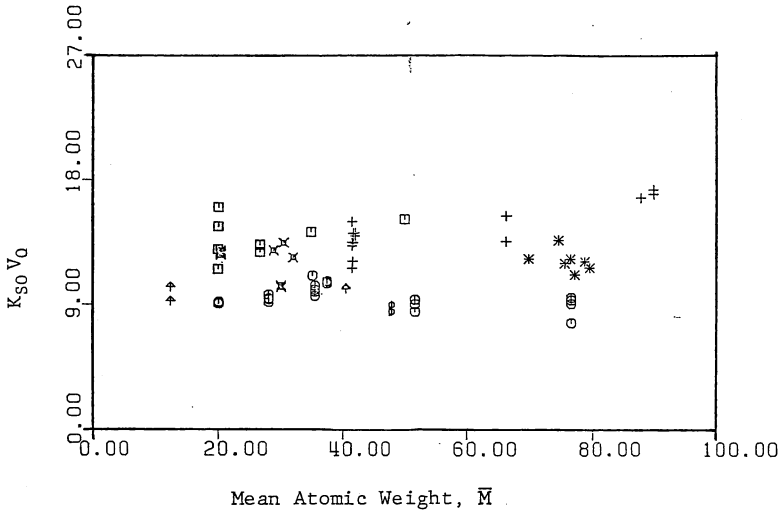

FIGURE 2. Correlation between $K_{so}V_o$ and $\overline{M}$ for oxides (excepting glasses and ice). Symbols are the same as in Figure 1.

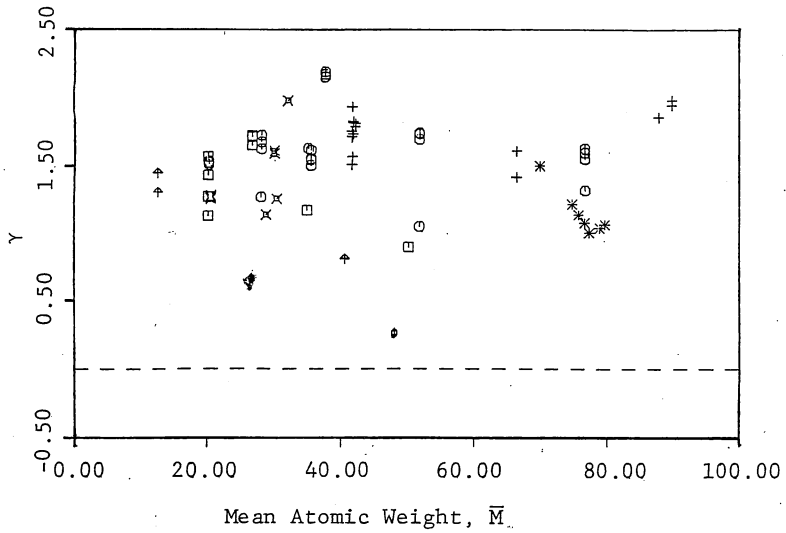

FIGURE 3A. Correlation between γ and $\overline{M}$ for oxides (excepting glasses and ice). Symbols are the same as in Figure 1.

The oxide data plotted in Figure 2 show that this is approximately true. The rock salt structure indicates that $K_{So}V_o$ is near 10 for $20 < \overline{M} < 80$. Four wurzite structures indicate a straight line near the value of 10. The corundum structure and the MN_2O_3 structure both cluster, but suggest a value of $K_{So}V_o$ near 12. The corundum structures and the fluorite structures both indicate a slight increase of $K_{So}V_o$ with $\overline{M}$, suggesting a mean value near 15. The data in totality condense in a broad band around a straight line with a slope of zero.

The Grüneisen ratio given by $\gamma = \alpha K_T V/C_V$ is of great interest to thermal geophysics. Since its value is controlled primarily by the repulsion coefficient in an interatomic potential, the value of γ should not be very sensitive to composition. Figure 3a shows γ vs. mean

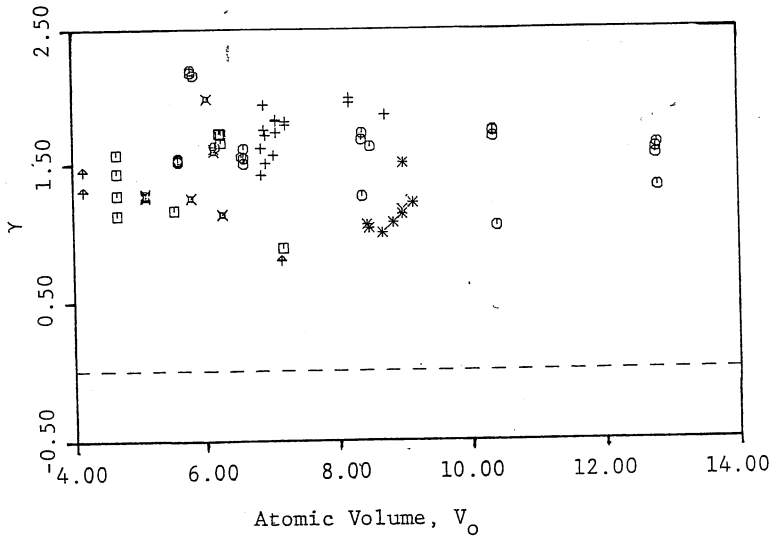

FIGURE 3B. Correlation between γ and V_o for oxides (excepting glasses and ice). Symbols are the same as in Figure 1.

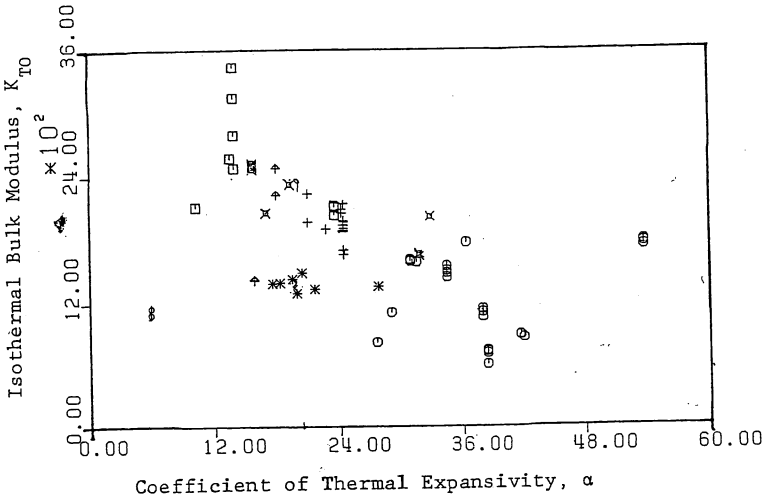

FIGURE 4. Correlation of K_{TO} with α for oxides (excepting glasses and ice). Symbols are the same as in Figure 1.

atomic weight, $\overline{M}$, and Figure 3b shows γ vs. specific volume, V_o. Roughly speaking, γ is independent of composition according to Figures 3a and 3b.

Correlations which might exist between K_T and α are of interest because of the fact that $K_T\alpha$ is virtually independent of T at high T for mantle materials.[11] Figure 4 shows that a rough correlation exists between K_{To} and α_o, where the subscript o refers to ambient conditions.

Notation and Dimensions of the Numerical Tables in the Handbook

Table 1 shows the notation of elastic parameters and their dimensions.

Table 1
NOTATIONS

Notation	Example				Dimension	No.
	BaF_2		EuF_2			(1)
	Fluorite (cubic)		Fluorite (cubic)			(2)
	*PULS (1974)		PULS (1971)			(3)
	ROOM		300 K			(4)
ρ_x	4.886		6.320		g/cm^3	(5)
ρ_B	4.887		******		g/cm^3	(6)
M	58.45		63.32		g	(7)
α	61.38		60.65 (CaF_2)		$\times 10^{-6}$ 1/K	(8)
C_P	4.062		(3.876)**		$\times 10^{+6}$ erg/g·K	(9)
	(HILL)	(REUSS)	(HILL)	(REUSS)		(10)
K_s	581.2	581.2	644.0	644.0	Kbar	(11)
K_T	562.6	562.6	625.8	625.8	Kbar	(12)
μ	255.0	255.0	308.1	307.9	Kbar	(13)
σ	0.309	0.309	0.294	0.294	—	(14)
V_P	4.342	4.342	4.085	4.085	km/s	(15)
V_s	2.284	2.284	2.208	2.207	km/s	(16)
V_Φ	3.449	3.449	3.192	3.192	km/s	(17)
$(\partial K_s/\partial P)_T$	(5.05)	(5.05)	******	******	—	(18)
$(\partial K_T/\partial P)_T$	5.10	5.10	******	******	—	(19)
$(\partial \mu/\partial P)_T$	(0.39)	(0.39)	******	******	—	(20)
$(\partial \sigma/\partial P)_T$	1.195	1.197	******	******	1/Mb	(21)
$(\partial V_p/\partial P)_T$	9.28	9.27	******	******	(km/s)/Mb	(22)
$(\partial V_s/\partial P)_T$	−0.27	−0.29	******	******	(km/s)/Mb	(23)
$(\partial V_\Phi/\partial P)_T$	11.93	11.93	******	*** ***	(km/s)/Mb	(24)
$(\partial K_s/\partial T)_P$	−0.162	−0.162	−0.530	−0.530	Kb/K	(25)
$(\partial K_T/\partial T)_P$	−0.225	−0.225	−0.574	−0.574	Kb/K	(26)
$(\partial \mu/\partial T)_P$	−0.060	−0.060	−0.074	−0.072	Kb/K	(27)
$(\partial \sigma/\partial T)_P$	−0.69	−0.70	−10.37	−10.48	$\times 10^{-5}$ 1/K	(28)
$(\partial V_p/\partial T)_P$	−0.439	−0.438	−1.094	−1.089	$\times 10^{-3}$(km/s)/K	(29)
$(\partial V_s/\partial T)_P$	−0.201	−0.200	−0.198	−0.191	$\times 10^{-3}$(km/s)/K	(30)
$(\partial V_\Phi/\partial T)_P$	−0.375	−0.375	−1.217	−1.217	$\times 10^{-3}$(km/s)/K	(31)
$(\partial P/\partial T)_{VP}$	4.726	4.276	******	******	$\times 10^{-2}$Kb/K	(32)
$(\partial P/\partial T)_{Vs}$	−73.27	−68.49	** ****	******	$\times 10^{-2}$Kb/K	(33)
$(\partial P/\partial T)_{V\Phi}$	3.143	3.143	******	***** *	$\times 10^{-2}$Kb/K	(34)
$(\partial P/\partial T)_\rho$	3.453	3.453	3.796	3.796	$\times 10^{-2}$Kb/K	(35)
γ_{th}	1.797	1.797	1.594	1.594	—	(36)
γ_p	1.536	1.534	******	******	—	(37)
γ_s	0.266	0.261	******	******	—	(38)
γ_{LT}	0.352	0.348	******	******	—	(39)
γ_{HT}	0.689	0.686	******	******	—	(40)
δ_s	4.541	4.541	13.569	13.569	—	(41)
δ_T	6.510	6.510	15.119	15.119	—	(42)
θ_D	280.8	280.8	287.4	287.3	K	(43)
$(\partial K_s/\partial T)_V$	0.012	0.012	***** *	******	Kb/K	(44)
$(\partial K_T/\partial T)_V$	−0.049	−0.049	******	******	Kb/K	(45)
$(\partial_\alpha/\partial T)_P$	2.70	2.70	(0.0)†	(0.0)†	$\times 10^{-8}$ 1/K^2	(46)
V_s/V_P	0.526	0.526	0.540	0.540	—	(47)
V_m	2.554	2.554	2.464	2.463	km/s	(48)
REF. E.C.	060(119)		068			(49)
REF. α, Cp	534, 610		534, (CAL)**			(50)

Note to Table 1: Mb = Megabars = 10^{12} dynes/cm^2 = 10^2 Giga-Pascal; Kb = Kilobars = 10^9 dynes/cm^2 = 10^2 Mega-Pascal; —— = Dimensionless quantity.

Table 1 (continued)
NOTATIONS

Explanations for each property of the numerical table are described below:

1. Chemical formula of substance
2. Left: crystal structure
   Right: (parentheses): crystal system

ABBREVIATIONS

Isotropic	Isotropic
Cubic	Cubic
Hexa.	Hexagonal
Trigonal	Trigonal
Tetra.	Tetragonal
Ortho.	Orthorhombic
Mono.	Monoclinic
Tri.	Triclinic

3. Left: technical method for measurement
   Right: (parentheses): year for publication

ABBREVIATIONS

RESO	Resonance Method
PULS	Pulse transmission, pulse echo, modified pulse, and other pulse methods
*PULS	Pulse superposition method
BRIL	Brillouin method
XRAY	X-ray method
OPTI	Optical method
OTHER	Others
RE-CAL	Recalculation from previous data

4. Temperature in Kelvin. ROOM means room temperature
5. ρ_X: X-ray density in g/cm^3
6. ρ_B: Bulk density in g/cm^3
7. M: Mean atomic weight in gram/atom, derived from M/p where M is the molecular weight of the substance, and p is the number of atoms in the molecule (e.g., p = 3 for BaF_2)
8. α: Volume thermal expansion coefficient in $\times\ 10^{-6}\cdot K^{-1}$
9. C_p: Heat capacity (specific heat) at constant pressure in $\times\ 10^{+6}$ erg$\cdot$g^{-1}K^{-1}, which can be converted to cal$\cdot$K^{-1} mole^{-1}, by multiplying by $\times\ (M/4.1855) \times 10^{-7}$ where M is the molecular weight of the substance.
   ( )**: Calculated value of specific heat obtained from the acoustic Debye temperature θ (noted in column (43)), based on Debye theory
10. HILL: Averaged according to Hill's scheme
    REUSS: Averaged according to Reuss' scheme
    POLY: Data of polycrystalline aggregate
    GLASS: Data of isotropic glass
11. K_s: Adiabatic bulk modulus in kbar
12. K_T: Isothermal bulk modulus (Incompressibility) in kbar, given by $K_T = K_s/(1 + \alpha\gamma_{th}T)$ where γ_{th} is the thermal Grüneisen constant noted in column (36)
13. μ: Shear modulus (rigidity) in kbar
14. σ Poisson's ratio in dimensionless units, given by:

$$\sigma = (1/2)[K_s - (2/3)\mu]/[K_s + (1/3)\mu]$$

15. V_P: Compressional wave velocity in an infinite medium in km/s, given by:

$$V_P = \sqrt{[K_s + (4/3)\mu]/\rho}$$

Table 1 (continued)
NOTATIONS

16. V_s: Shear wave velocity in an infinite medium in km/s, given by:

$$V_s = \sqrt{\mu/\rho}$$

17. V_Φ: Bulk sound velocity in km/s, given by:

$$V_\Phi = \sqrt{K_s/\rho}$$

The data from rows (18) to (24) are pressure coefficients of the parameters from column (10) to (17) at constant temperature. In Table 1, the parentheses ( ) are found in rows (18) and (20). These parentheses mean that the numerical values in the parentheses are referred to different literature citations as shown by parentheses in column (49).

18. $(\partial K_s/\partial P)_T$: Pressure coefficient of adiabatic bulk modulus at constant pressure in dimensionless units
19. $(\partial K_T/\partial P)_T$: in dimensionless, given by:

$$(\partial K_T/\partial P) \cong (1 + \gamma\alpha T)^{-1}[(\partial K_s/\partial P)_T - (\gamma T/K_T)(\partial K_T/\partial T)_P]$$

20. $(\partial\mu/\partial P)_T$: Pressure coefficient of shear modulus at constant pressure in dimensionless units.
21. $(\partial\sigma/\partial P)_T$: in $(\text{Mbar})^{-1}$, given by:

$$(\partial\sigma/\partial P)_T = (1/2)[K_s + (1/3)\mu]^{-2}[\mu(\partial K_s/\partial P)_T - K_s(\partial\mu/\partial P)_T]$$

22. $(\partial V_P/\partial P)_T$: in $(\text{km/s})(\text{Mbar})^{-1}$, given by:

$$(\partial V_P/\partial P)_T = (V_P/2)\{[K_s + (4/3)\mu]^{-1}[(\partial K_s/\partial P)_T + (4/3)(\partial\mu/\partial P)_T] - (1/K_T)\}$$

23. $(\partial V_s/\partial P)_T$: in $(\text{km/s})(\text{Mbar})^{-1}$, given by:

$$(\partial V_s/\partial P)_T = (V_s/2)[(1/\mu)(\partial\mu/\partial P)_T - (1/K_T)]$$

24. $(\partial V_\Phi/\partial P)_T$: in $(\text{km/s})(\text{Mbar})^{-1}$, given by:

$$(\partial V_\Phi/\partial P)_T = (V_\Phi/2)[(1/K_s)(\partial K_s/\partial P)_T - (1/K_T)]$$

The data from rows (25) to (31) are temperature coefficients of the parameters from columns (10 to (17) at constant pressure.

25. $(\partial K_s/\partial T)_P$: Temperature coefficient of adabatic bulk modulus at constant pressure in $\text{kbar}\cdot\text{K}^{-1}$
26. $(\partial K_T/\partial T)_P$: in $\text{kbar}\cdot\text{K}^{-1}$, given by:

$$(\partial K_T/\partial T)_P \cong (1 + \alpha\gamma T)^{-1}\{(\partial K_s/\partial T)_P - (\alpha\gamma K_T)[1 + (T/\alpha)(\partial\alpha/\partial T)]\}$$

27. $(\partial\mu/\partial T)_P$: Temperature coefficient of shear modulus at constant pressure in $\text{kbar}\cdot\text{K}^{-1}$
28. $(\partial\sigma/\partial T)_P$: in $\times 10^{-5}\text{K}^{-1}$, given by:

$$(\partial\sigma/\partial T)_P = (1/2)[K_s + (1/3)\mu]^{-2}[\mu(\partial K_s/\partial T)_P - K_s(\partial\mu/\partial T)_P]$$

29. $(\partial V_P/\partial T)_P$: in $\times 10^{-3}$ $(\text{km/s})\cdot\text{K}^{-1}$, given by:

$$(\partial V_P/\partial T)_P = (V_P/2)\{[K_s + (4/3)\mu]^{-1}[(\partial K_s/\partial T)_P + (4/3)(\partial\mu/\partial T)_P] + \alpha\}$$

30. $(\partial V_s/\partial T)_P$: in $\times 10^{-3}$ $(\text{km/s})\cdot\text{K}^{-1}$, given by:

$$(\partial V_s/\partial T)_P = (V_s/2)[(1/\mu)(\partial\mu/\partial T)_P + \alpha]$$

Table 1 (continued)
NOTATIONS

31. $(\partial V_\Phi/\partial T)_P$: in $\times 10^{-3}$(km/s)·K^{-1}, given by:

$$(\partial V_\Phi/\partial T)_P = (V_\Phi/2)[(1/K_s)(\partial K_s/\partial T)_P + \alpha]$$

The parameters from rows (32) to (35) show the critical thermal gradients.

32. $(\partial P/\partial T)_{VP}$: Critical thermal gradient for V_P in $\times 10^{-2}$kbar·K^{-1}, given by:

$$(\partial P/\partial T)_{VP} = -(\partial V_P/\partial T)_P/(\partial V_P/\partial P)_T$$

33. $(\partial P/\partial T)_{Vs}$: Critical thermal gradient for V_s in $\times 10^{-2}$ kbar·K^{-1}, given by:

$$(\partial P/\partial T)_{Vs} = -(\partial V_s/\partial T)_P/(\partial V_s/\partial P)_T$$

34. $(\partial P/\partial T)_{V\Phi}$: Critical thermal gradient for V_Φ in $\times 10^{-2}$ kbar·K^{-1}, given by:

$$(\partial P/\partial T)_{V\Phi} = -(\partial V_\Phi/\partial T)_P/(\partial V_\Phi/\partial P)_T$$

35. $(\partial P/\partial T)_\rho$: Critical thermal gradient for ρ (or V) in $\times 10^{-2}$ kbar·K^{-1}, given by:

$$(\partial P/\partial T)_\rho = \alpha K_T$$

The parameters for columns (36) to (40) are the Grüneisen parameter and approximations of isotropic Grüneisen parameters.

36. γ_{th}: Thermal Grüneisen ratio in dimensionless units, defined by:

$$\gamma_{th} = (\alpha K_s)/(\rho C_P)$$

37. γ_P: In dimensionless units, given by:

$$\gamma_P = (1/3) + (K_T/V_P)(\partial V_P/\partial P)_T$$

38. γ_s: In dimensionless units, given by:

$$\gamma_s = (1/3) + (K_T/V_s)(\partial V_s/\partial P)_T$$

39. γ_{LT}: In dimensionless units, given by:

$$\gamma_{LT} = (2 + \Delta^3)^{-1}(\Delta^3\gamma_P + 2\gamma s)$$

where $\Delta = V_s/V_P$ noted in column (47).

40. γ_{HT}: In dimensionless units, given by:

$$\gamma_{HT} = (1/3\ (\gamma_P + 2\gamma_s)$$

The parameters from columns (41) to (43) are the Grüneisen-Anderson parameters and the Debye temperature.

41. δ_s: Adiabatic Grüneisen-Anderson parameter in dimensionless units defined by:

$$\delta_s = -(1/2K_s)(\partial K_s/\partial T)_P$$

42. δ_T: Isothermal Grüneisen-Anderson parameter in dimensionless units defined by:

$$\delta_T = -(1/2K_T)(\partial K_T/\partial T)_P$$

Table 1 (continued)
NOTATIONS

43. θ: Acoustic Debye temperature in Kelvin, given by:

$$\theta = \frac{h}{k_s}\left(\frac{9\rho N}{4\pi \overline{M}}\right)^{1/3}\left(\frac{2}{Vs^3} + \frac{1}{Vp^3}\right)^{-1/3}$$

where h is Planck's constant, k_B in Boltzmann's contant, N is Avogadro's number, $\overline{M}$ is the mean atomic weight, and ρ is the density.
Then, we have

$$\theta = 251.42[\rho/M]^{1/3}V_m$$

where ρ is in g/cm^3, $\overline{M}$ is in g/atom, and V_m is mean sound velocity in km/s as noted in column (48).

The parameters from rows (44) to (45) are temperature coefficient of bulk modulus at constant volume.

44. $(\partial K_s/\partial T)_V$: Temperature coefficient of adiabatic bulk modulus at constant volume in kbar·K^{-1}, given by:

$$(\partial K_s/\partial T)_V \cong (\partial K_t/\partial T)_V\,(1 + \alpha\gamma T) + \alpha\gamma K_T$$

45. $(\partial K_T/\partial T)_V$: Temperature coefficient of isothermal bulk modulus at constant volume in kbar·K^{-1}, given by:

$$(\partial K_T/\partial T)_V = (\partial K_T/\partial T)_P + (\alpha K_T)(\partial K_T/\partial P)_T$$

46. $(\partial\alpha/\partial T)_P$: Temperature derivatives of volume thermal expansion coefficient in $\times\ 10^{-8}\ K^{-2}$. ( )†: Assumed value.
47. V_s/V_p: V_s/V_P ratio in dimensionless units.
48. V_m: Mean sound velocity in km/s, given by:

$$V_m = (3)^{1/3}[(2/V_s^3) + (1/V_p^3)]^{-1/3}$$

49. REF. E.C.: Reference for elastic data.
50. REF. α, C_P: References for thermal exansivity data and specific heat data. (CAL)**: Calculated data. ***: No reference.

Table 2
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

A. Alkali Halide Series

	LiF Rock salt (Cubic) PULS (1960) 295 K		LiF Rock salt (Cubic) PULS (1964) 300 K		LiF Rock salt (Cubic) PULS (1967) ROOM		LiF Rock salt (Cubic) *PULS (1976) 298 K		LiF Rock salt (Cubic) RESO (1977) 297 K		NaF Rock salt (Cubic) PULS (1960) 295 K	
ρ_x	2.639		2.639		2.639		2.639		2.639		2.804	
ρ_B	******		2.639		******		2.641		******		******	
M	12.97		12.97		12.97		12.97		12.97		20.99	
a	97.83		97.83		97.83		97.83		97.83		97.61	
C_P	16.137		16.137		16.137		16.137		16.137		11.162	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	695.8	695.8	696.4	696.4	697.7	697.7	704.0	704.0	723.1	723.1	485.3	485.3
K_T	664.6	664.6	665.2	665.2	666.4	666.4	672.1	672.1	689.5	689.5	464.7	464.7
μ	488.2	463.5	489.6	464.7	489.8	465.2	490.7	465.7	484.6	459.9	311.5	309.1
σ	0.216	0.227	0.215	0.227	0.216	0.227	0.217	0.229	0.226	0.238	0.236	0.237
V_P	7.144	7.056	7.150	7.062	7.154	7.067	7.171	7.083	7.203	7.116	5.667	5.657
V_S	4.301	4.191	4.307	4.196	4.308	4.199	4.310	4.199	4.285	4.175	3.333	3.320
V_ϕ	5.135	5.135	5.137	5.137	5.142	5.142	5.163	5.163	5.235	5.235	4.160	4.160
$(\partial K_S/\partial P)_T$	(5.14)	(5.14)	5.14	5.14	4.46	4.46	(5.14)	(5.14)	(5.14)	(5.14)	(5.18)	(5.18)
$(\partial K_T/\partial P)_T$	5.17	5.17	5.17	5.17	4.52	4.52	5.17	5.17	5.12	5.12	5.21	5.21
$(\partial \mu/\partial P)_T$	(2.79)	(3.30)	2.79	3.30	2.12	2.52	(2.79)	(3.30)	(2.79)	(3.30)	(1.78)	(1.53)
$(\partial \sigma/\partial P)_T$	0.386	0.060	0.389	0.062	0.477	0.219	0.372	0.048	0.303	-0.015	1.077	1.240
$(\partial V_P/\partial P)_T$	18.12	20.31	18.10	20.29	13.92	15.66	18.05	20.23	18.07	20.24	17.69	16.67
$(\partial V_S/\partial P)_T$	9.05	11.77	9.03	11.75	6.08	8.21	9.04	11.75	9.22	11.95	5.96	4.64
$(\partial V_\phi/\partial P)_T$	15.10	15.10	15.10	15.10	12.58	12.58	15.01	15.01	14.81	14.81	17.73	17.73
$(\partial K_S/\partial T)_P$	-0.247	-0.247	(-0.242)	(-0.242)	(-0.242)	(-0.242)	-0.242	-0.242	-0.171	-0.171	-0.177	-0.177
$(\partial K_T/\partial T)_P$	-0.378	-0.378	-0.374	-0.374	-0.374	-0.374	-0.377	-0.377	-0.316	-0.316	-0.263	-0.263
$(\partial \mu/\partial T)_P$	-0.306	-0.355	(-0.311)	(-0.359)	(-0.311)	(-0.359)	-0.311	-0.359	-0.301	-0.343	-0.153	-0.138
$(\partial \sigma/\partial T)_P$	6.27	9.16	6.61	9.50	6.62	9.49	6.63	9.49	8.61	11.03	2.76	1.81
$(\partial V_P/\partial T)_P$	-1.388	-1.588	-1.389	-1.589	-1.387	-1.587	-1.381	-1.581	-1.153	-1.325	-0.923	-0.864
$(\partial V_S/\partial T)_P$	-1.138	-1.399	-1.155	-1.417	-1.155	-1.416	-1.153	-1.414	-1.121	-1.353	-0.656	-0.582
$(\partial V_\phi/\partial T)_P$	-0.660	-0.660	-0.641	-0.641	-0.640	-0.640	-0.635	-0.635	-0.363	-0.363	-0.556	-0.556
$(\partial P/\partial T)_{V_P}$	7.664	7.821	7.673	7.832	9.968	10.138	7.652	7.813	6.380	6.546	5.216	5.182
$(\partial P/\partial T)_{V_S}$	12.59	11.89	12.80	12.06	19.00	17.24	12.76	12.03	12.16	11.32	11.01	12.53
$(\partial P/\partial T)_{V_\phi}$	4.372	4.372	4.248	4.248	5.091	5.091	4.230	4.230	2.451	2.451	3.134	3.134
$(\partial P/\partial T)_\rho$	6.502	6.502	6.507	6.507	6.519	6.519	6.575	6.575	6.745	6.745	4.536	4.536
γ_{th}	1.598	1.598	1.600	1.600	1.603	1.603	1.616	1.616	1.661	1.661	1.514	1.514
γ_P	2.019	2.246	2.017	2.244	1.630	1.810	2.025	2.253	2.063	2.294	1.784	1.703
γ_S	1.731	2.199	1.727	2.195	1.273	1.637	1.743	2.215	1.817	2.307	1.165	0.983
γ_{LT}	1.759	2.204	1.756	2.200	1.308	1.653	1.770	2.218	1.840	2.306	1.222	1.049
γ_{HT}	1.827	2.215	1.824	2.212	1.392	1.694	1.837	2.227	1.899	2.303	1.371	1.223
δ_S	3.629	3.629	3.552	3.552	3.545	3.545	3.514	3.514	2.417	2.417	3.737	3.737
δ_T	5.818	5.818	5.744	5.744	5.741	5.741	5.727	5.727	4.689	4.689	5.791	5.791
θ_D	703.4	686.2	704.3	687.1	704.5	687.5	705.2	687.9	701.6	684.4	474.8	473.1
$(\partial K_S/\partial T)_V$	0.060	0.060	0.065	0.065	0.021	0.021	0.068	0.068	0.142	0.142	0.041	0.041
$(\partial K_P/\partial T)_V$	-0.042	-0.042	-0.038	-0.038	-0.080	-0.080	-0.037	-0.037	0.029	0.029	-0.027	-0.027
$(\partial \alpha/\partial T)_P$	14.16	14.16	14.16	14.16	14.16	14.16	14.16	14.16	14.16	14.16	13.58	13.58
V_S/V_P	0.602	0.594	0.602	0.594	0.602	0.594	0.601	0.593	0.595	0.587	0.588	0.587
V_m	4.756	4.641	4.763	4.646	4.764	4.649	4.768	4.651	4.744	4.628	3.694	3.681
REF. E.C.	D52(078)		D78(062)		D26(062)		D62(078)		D49(078)		D52(078)	
REF. α,Cp	537; 613		537; 613		537; 613		537, 613		537; 613		537, 613	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	NaF Rock salt (Cubic) PULS (1964) 300 K		NaF Rock salt (Cubic) PULS (1966) 295 K		NaF Rock salt (Cubic) PULS (1967) 300 K		NaF Rock salt (Cubic) RESO (1968) 297 K		NaF Rock salt (Cubic) *PULS (1972) ROOM		NaF Rock salt (Cubic) *PULS (1976) 298 K	
ρ_x	2.804		2.804		2.796		2.804		2.804		2.804	
ρ_B	******		******		******		******		******		2.806	
M	20.99		20.99		20.99		20.99		20.99		20.99	
α	97.61		97.61		97.61		97.61		97.61		97.61	
C_P	11.162		11.162		11.162		11.162		11.162		11.162	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	482.0	482.0	480.7	480.7	484.9	484.9	491.6	491.6	482.0	482.0	483.0	483.0
K_T	461.7	461.7	460.5	460.5	464.3	464.3	470.5	470.5	461.7	461.7	462.6	462.6
μ	313.2	310.7	313.3	310.7	308.8	306.5	310.0	307.5	307.7	305.0	313.7	311.1
σ	0.233	0.235	0.232	0.234	0.237	0.239	0.239	0.241	0.237	0.239	0.233	0.235
V_P	5.664	5.654	5.660	5.650	5.663	5.653	5.681	5.670	5.641	5.630	5.667	5.656
V_S	3.342	3.329	3.343	3.329	3.323	3.311	3.325	3.312	3.313	3.298	3.344	3.330
V_ϕ	4.146	4.146	4.140	4.140	4.164	4.164	4.187	4.187	4.146	4.146	4.149	4.149
$(\partial K_S/\partial P)_T$	5.18	5.18	(5.18)	(5.18)	(5.18)	(5.18)	(5.18)	(5.18)	5.89	5.89	(5.18)	(5.18)
$(\partial K_T/\partial P)_T$	5.21	5.21	5.20	5.20	5.17	5.17	5.21	5.21	5.88	5.88	5.21	5.21
$(\partial \mu/\partial P)_T$	1.78	1.53	(1.78)	(1.53)	(1.78)	(1.53)	(1.78)	(1.53)	1.93	1.65	(1.78)	(1.53)
$(\partial \sigma/\partial P)_T$	1.108	1.272	1.117	1.280	1.062	1.227	1.029	1.191	1.291	1.467	1.105	1.267
$(\partial V_P/\partial P)_T$	17.67	16.65	17.67	16.65	17.77	16.75	17.69	16.68	20.04	19.54	17.64	16.63
$(\partial V_S/\partial P)_T$	5.90	4.59	5.89	4.58	6.03	4.70	6.04	4.72	6.80	5.37	5.90	4.59
$(\partial V_\phi/\partial P)_T$	17.79	17.79	17.81	17.81	17.76	17.76	17.61	17.61	20.84	20.84	17.76	17.76
$(\partial K_S/\partial T)_P$	(-0.177)	(-0.177)	-0.166	-0.166	-0.142	-0.142	-0.177	-0.177	-0.173	-0.173	-0.177	-0.177
$(\partial K_T/\partial T)_P$	-0.262	-0.262	-0.251	-0.251	-0.229	-0.229	-0.265	-0.265	-0.258	-0.258	-0.262	-0.262
$(\partial \mu/\partial T)_P$	(-0.155)	(-0.139)	-0.168	-0.155	-0.155	-0.141	-0.147	-0.133	-0.136	-0.121	-0.155	-0.139
$(\partial \sigma/\partial T)_P$	2.77	1.76	4.22	3.39	4.54	3.62	2.46	1.55	1.77	0.79	2.77	1.76
$(\partial V_P/\partial T)_P$	-0.929	-0.867	-0.954	-0.902	-0.825	-0.769	-0.894	-0.838	-0.843	-0.783	-0.928	-0.866
$(\partial V_S/\partial T)_P$	-0.661	-0.583	-0.735	-0.670	-0.672	-0.601	-0.626	-0.555	-0.568	-0.491	-0.660	-0.582
$(\partial V_\phi/\partial T)_P$	-0.559	-0.559	-0.513	-0.513	-0.407	-0.407	-0.549	-0.549	-0.542	-0.542	-0.558	-0.558
$(\partial P/\partial T)_{V_P}$	5.260	5.209	5.397	5.417	4.642	4.590	5.050	5.022	4.082	4.005	5.257	5.206
$(\partial P/\partial T)_{V_S}$	11.20	12.69	12.47	14.62	11.16	12.79	10.37	11.75	8.35	9.15	11.19	12.68
$(\partial P/\partial T)_{V_\phi}$	3.142	3.142	2.879	2.879	2.289	2.289	3.120	3.120	2.599	2.599	3.140	3.140
$(\partial P/\partial T)_\rho$	4.506	4.506	4.495	4.495	4.532	4.532	4.592	4.592	4.506	4.506	4.516	4.516
γ_{th}	1.503	1.503	1.499	1.499	1.517	1.517	1.533	1.533	1.503	1.503	1.505	1.505
γ_P	1.773	1.693	1.771	1.691	1.791	1.709	1.799	1.717	2.023	1.936	1.774	1.693
γ_S	1.149	0.970	1.145	0.967	1.175	0.992	1.188	1.004	1.281	1.084	1.149	0.971
γ_{LT}	1.207	1.037	1.204	1.034	1.232	1.058	1.243	1.068	1.349	1.162	1.208	1.038
γ_{HT}	1.357	1.211	1.354	1.208	1.380	1.231	1.391	1.242	1.528	1.368	1.358	1.212
δ_S	3.762	3.762	3.538	3.538	3.000	3.000	3.689	3.689	3.677	3.677	3.754	3.754
δ_T	5.803	5.803	5.573	5.573	5.058	5.058	5.768	5.768	5.718	5.718	5.798	5.798
θ_D	475.9	474.1	476.0	474.1	473.0	471.4	473.9	472.0	472.0	470.0	476.3	474.4
$(\partial K_S/\partial T)_V$	0.040	0.040	0.050	0.050	0.074	0.074	0.043	0.043	0.075	0.075	0.040	0.040
$(\partial K_P/\partial T)_V$	-0.027	-0.027	-0.017	-0.017	0.005	0.005	-0.026	-0.026	0.007	0.007	-0.027	-0.027
$(\partial \alpha/\partial T)_P$	13.58	13.58	13.58	13.58	13.58	13.58	13.58	13.58	13.58	13.58	13.58	13.58
V_S/V_P	0.590	0.589	0.591	0.589	0.587	0.586	0.585	0.584	0.587	0.586	0.590	0.589
V_m	3.703	3.689	3.703	3.689	3.684	3.671	3.687	3.673	3.672	3.657	3.705	3.690
REF. E.C.	078(062)		112(078)		069(078)		048(078)		012		062(078)	
REF. α, Cp	537; 613		537; 613		537; 613		537; 613		537; 613		537; 613	

	KF Rock salt (Cubic) PULS (1960) 295 K		KF Rock salt (Cubic) *PULS (1967) 298 K		KF Rock salt (Cubic) PULS (1967) 300 K		KF Rock salt (Cubic) PULS (1967) 300 K		KF Rock salt (Cubic) PULS (1967) 295 K		RbF Rock salt (Cubic) PULS (1960) 295 K	
ρ_x	2.526		2.480		2.526		2.526		2.480		3.843	
ρ_B	******		******		******		******		******		******	
M	29.05		29.05		29.05		29.05		29.05		52.23	
α	(99.00)†		(99.00)†		(99.00)†		(99.00)†		(99.00)†		95.00	
C_P	8.441		8.441		8.441		8.441		8.441		4.855	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	316.0	316.0	311.3	311.3	322.7	322.7	322.7	322.7	317.7	317.7	277.2	277.2
K_T	302.8	302.8	298.3	298.3	308.9	308.9	308.9	308.9	304.1	304.1	266.5	266.5
μ	167.0	157.0	168.8	159.6	164.1	155.5	164.1	155.5	163.8	154.3	128.4	118.7
σ	0.275	0.287	0.270	0.281	0.283	0.292	0.283	0.292	0.280	0.291	0.299	0.313
V_P	4.618	4.560	4.651	4.597	4.630	4.581	4.630	4.581	4.649	4.594	3.416	3.366
V_S	2.571	2.493	2.609	2.537	2.549	2.481	2.549	2.481	2.570	2.494	1.828	1.757
V_ϕ	3.537	3.537	3.543	3.543	3.575	3.575	3.575	3.575	3.579	3.579	2.686	2.686
$(\partial K_S/\partial P)_T$	(5.02)	(5.02)	5.02	5.02	(5.02)	(5.02)	(5.25)	(5.25)	(5.02)	(5.02)	(5.57)	(5.57)
$(\partial K_T/\partial P)_T$	5.06	5.06	5.04	5.04	5.04	5.04	5.26	5.26	5.02	5.02	5.61	5.61
$(\partial \mu/\partial P)_T$	(1.06)	(0.38)	1.06	0.38	(1.06)	(0.38)	(1.15)	(0.45)	(1.06)	(0.38)	(0.77)	(-0.02)
$(\partial \sigma/\partial P)_T$	1.819	2.460	1.911	2.568	1.688	2.343	1.724	2.387	1.748	2.397	2.454	3.321
$(\partial V_P/\partial P)_T$	19.97	16.47	20.11	16.54	20.03	16.48	21.50	17.90	20.27	16.71	18.70	15.11
$(\partial V_S/\partial P)_T$	3.94	-1.08	3.84	-1.22	4.13	-0.97	4.79	-0.39	4.11	-1.01	2.03	-3.44
$(\partial V_\phi/\partial P)_T$	22.25	22.25	22.63	22.63	22.02	22.02	23.29	23.29	22.39	22.39	21.94	21.94
$(\partial K_S/\partial T)_P$	-0.131	-0.131	(-0.116)	(-0.116)	-0.116	-0.116	-0.116	-0.116	-0.100	-0.100	-0.129	-0.129
$(\partial K_T/\partial T)_P$	-0.180	-0.180	-0.165	-0.165	-0.168	-0.168	-0.168	-0.168	-0.152	-0.152	-0.169	-0.169
$(\partial \mu/\partial T)_P$	-0.090	-0.063	(-0.076)	(-0.054)	-0.076	-0.054	-0.076	-0.054	-0.100	-0.080	-0.073	-0.047
$(\partial \sigma/\partial T)_P$	2.42	-0.22	1.45	-0.66	1.87	-0.24	1.87	-0.24	5.55	3.66	1.86	-1.14
$(\partial V_P/\partial T)_P$	-0.850	-0.709	-0.709	-0.596	-0.697	-0.585	-0.697	-0.585	-0.782	-0.680	-0.702	-0.581
$(\partial V_S/\partial T)_P$	-0.569	-0.378	-0.454	-0.302	-0.460	-0.306	-0.460	-0.306	-0.657	-0.523	-0.436	-0.264
$(\partial V_\phi/\partial T)_P$	-0.558	-0.558	-0.485	-0.485	-0.466	-0.466	-0.466	-0.466	-0.386	-0.386	-0.497	-0.497
$(\partial P/\partial T)_{V_P}$	4.255	4.303	3.526	3.601	3.481	3.547	3.243	3.266	3.856	4.066	3.756	3.843
$(\partial P/\partial T)_{V_S}$	14.44	-34.92	11.83	-24.82	11.14	-31.66	9.61	-79.48	15.98	-51.63	21.50	-7.69
$(\partial P/\partial T)_{V_\phi}$	2.508	2.508	2.142	2.142	2.114	2.114	1.999	1.999	1.724	1.724	2.266	2.266
$(\partial P/\partial T)_\rho$	2.998	2.998	2.953	2.953	3.059	3.059	3.059	3.059	3.011	3.011	2.532	2.532
γ_{th}	1.467	1.467	1.472	1.472	1.499	1.499	1.499	1.499	1.502	1.502	1.411	1.411
γ_P	1.643	1.427	1.623	1.407	1.670	1.445	1.768	1.540	1.659	1.440	1.792	1.530
γ_S	0.797	0.202	0.772	0.190	0.834	0.213	0.914	0.285	0.820	0.210	0.629	-0.188
γ_{LT}	0.864	0.294	0.841	0.285	0.898	0.303	0.980	0.378	0.886	0.301	0.712	-0.074
γ_{HT}	1.079	0.610	1.056	0.596	1.113	0.623	1.199	0.704	1.100	0.620	1.017	0.385
δ_S	4.187	4.187	3.764	3.764	3.631	3.631	3.631	3.631	3.179	3.179	4.899	4.899
δ_T	6.019	6.019	5.602	5.602	5.500	5.500	5.500	5.500	5.054	5.054	6.684	6.684
θ_D	318.9	309.7	321.4	313.0	316.4	308.4	316.4	308.4	317.0	308.1	215.1	207.2
$(\partial K_S/\partial T)_V$	0.014	0.014	0.026	0.026	0.031	0.031	0.038	0.038	0.044	0.044	0.008	0.008
$(\partial K_P/\partial T)_V$	-0.029	-0.029	-0.016	-0.016	-0.014	-0.014	-0.007	-0.007	-0.001	-0.001	-0.027	-0.027
$(\partial \alpha/\partial T)_P$	(10.00)†	(10.00)†	(10.00)†	(10.00)†	(10.00)†	(10.00)†	(10.00)†	(10.00)†	(10.00)†	(10.00)†	(10.00)†	(10.00)†
V_S/V_P	0.557	0.547	0.561	0.552	0.550	0.542	0.550	0.542	0.553	0.543	0.535	0.522
V_M	2.863	2.780	2.903	2.827	2.841	2.769	2.841	2.769	2.863	2.783	2.042	1.966
REF. E.C.	052(065)		065(074)		074(065)		074(094)		069(065)		052(116)	
REF. α,Cp	074; 613		074; 613		074; 613		074; 613		074, 613		512, 116	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	RbF Rock salt (Cubic) PULS (1972) 300 K		MgF_2 Rutile (Tetra.) PULS (1968) 293 K		MgF_2 Rutile (Tetra.) PULS (1969) ROOM		MgF_2 Rutile (Tetra.) PULS (1976) 298 K		MgF_2 Rutile (Tetra.) *PULS (1977) ROOM		CaF_2 Fluorite (Cubic) PULS (1963) 293 K	
ρ_x	3.843		3.178		3.178		3.177		3.178		3.181	
ρ_B	******		******		3.172		3.175		3.178		3.180	
M	52.23		20.77		20.77		20.77		20.77		26.03	
α	95.00		37.66		37.66		37.66		37.66		60.65	
C_P	4.855		9.934		9.934		9.934		9.934		8.786	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(POLY)	******	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	280.2	280.2	1015.0	1010.7	1009.9	1005.9	1009.3	******	1019.0	1014.8	838.6	838.6
K_T	269.3	269.3	1001.3	997.1	996.3	992.4	995.7	******	1005.2	1001.1	811.7	811.7
μ	127.4	118.1	546.0	495.0	543.1	491.5	550.6	******	547.0	495.9	426.4	410.2
σ	0.303	0.315	0.272	0.289	0.272	0.290	0.269	******	0.272	0.290	0.283	0.290
V_P	3.422	3.375	7.406	7.251	7.394	7.237	7.410	******	7.417	7.262	6.652	6.600
V_S	1.821	1.753	4.[illegible]	[illegible]947	4.138	3.936	4.164	******	4.149	3.950	3.662	3.591
V_ϕ	2.700	2.700	5.651	5.639	5.643	5.631	5.638	******	5.663	5.651	5.135	5.135
$(\partial K_S/\partial P)_T$	(5.57)	(5.57)	(5.08)	(5.08)	(5.08)	(5.08)	5.08	******	(5.08)	(5.08)	(4.70)	(4.70)
$(\partial K_T/\partial P)_T$	5.54	5.54	5.08	5.08	5.08	5.08	5.08	******	5.08	5.08	4.74	4.74
$(\partial \mu/\partial P)_T$	(0.77)	(-0.02)	(0.73)	(0.73)	(0.73)	(0.73)	0.73	******	(0.73)	(0.73)	(1.18)	(1.28)
$(\partial \sigma/\partial P)_T$	2.376	3.247	0.709	0.643	0.713	0.644	0.724	******	0.705	0.638	0.527	0.449
$(\partial V_P/\partial P)_T$	18.71	15.11	9.16	9.50	9.19	9.54	9.14	******	9.15	9.49	10.73	11.19
$(\partial V_S/\partial P)_T$	2.10	-3.40	0.70	0.93	0.70	0.94	0.67	******	0.70	0.93	2.82	3.39
$(\partial V_\phi/\partial P)_T$	21.82	21.82	11.32	11.34	11.36	11.38	11.36	******	11.30	11.32	11.23	11.23
$(\partial K_S/\partial T)_P$	-0.079	-0.079	-0.155	-0.157	-0.151	-0.153	-0.158	******	-0.160	-0.160	-0.197	-0.197
$(\partial K_T/\partial T)_P$	-0.122	-0.122	-0.198	-0.200	-0.194	-0.195	-0.201	******	-0.203	-0.203	-0.290	-0.290
$(\partial \mu/\partial T)_P$	-0.073	-0.044	-0.077	-0.049	-0.094	-0.071	-0.090	******	-0.079	-0.050	-0.111	-0.116
$(\partial \sigma/\partial T)_P$	5.08	1.53	-0.23	-1.03	0.46	-0.16	0.14	******	-0.24	-1.03	0.48	0.88
$(\partial V_P/\partial T)_P$	-0.509	-0.371	-0.408	-0.346	-0.450	-0.402	-0.451	******	-0.423	-0.354	-0.615	-0.639
$(\partial V_S/\partial T)_P$	-0.439	-0.246	-0.214	-0.120	-0.280	-0.208	-0.262	******	-0.221	-0.124	-0.366	-0.401
$(\partial V_\phi/\partial T)_P$	-0.251	-0.251	-0.325	-0.333	-0.316	-0.323	-0.335	******	-0.338	-0.340	-0.448	-0.448
$(\partial p/\partial T)_{V_P}$	2.722	2.454	4.453	3.642	4.893	4.214	4.935	******	4.624	3.736	5.728	5.710
$(\partial p/\partial T)_{V_S}$	20.89	-7.23	30.55	12.91	39.78	22.15	39.12	******	31.43	13.31	13.01	11.81
$(\partial p/\partial T)_{V_\phi}$	1.150	1.150	2.872	2.932	2.778	2.833	2.951	******	2.991	3.000	3.991	3.991
$(\partial p/\partial T)_\rho$	2.558	2.558	3.771	3.755	3.752	3.737	3.750	******	3.786	3.770	4.923	4.923
γ_{th}	1.427	1.427	1.211	1.206	1.207	1.202	1.205	******	1.216	1.211	1.820	1.820
γ_P	1.805	1.539	1.572	1.640	1.572	1.641	1.562	******	1.573	1.641	1.643	1.710
γ_S	0.644	-0.188	0.503	0.569	0.503	0.570	0.493	******	0.504	0.570	0.957	1.100
γ_{LT}	0.725	-0.075	0.589	0.649	0.589	0.650	0.581	******	0.590	0.650	1.010	1.145
γ_{HT}	1.031	0.387	0.859	0.926	0.859	0.927	0.850	******	0.861	0.927	1.186	1.303
δ_S	2.957	2.957	4.055	4.133	3.970	4.041	4.157	******	4.169	4.192	3.877	3.877
δ_T	4.760	4.760	5.252	5.324	5.163	5.230	5.348	******	5.371	5.388	5.892	5.892
θ_D	214.3	206.7	620.4	592.0	619.0	590.1	622.9	******	621.0	592.6	509.1	499.8
$(\partial K_S/\partial T)_V$	0.057	0.057	0.039	0.036	0.042	0.039	0.035	******	0.035	0.034	0.031	0.031
$(\partial K_P/\partial T)_V$	0.020	0.020	-0.006	-0.009	-0.003	-0.006	-0.010	******	-0.011	-0.011	-0.057	-0.057
$(\partial \sigma/\partial T)_P$	(10.00)†	(10.00)†	0.02	0.02	0.02	0.02	0.02	******	0.02	0.02	2.90	2.90
V_S/V_P	0.532	0.519	0.560	0.544	0.560	0.544	0.562	******	0.559	0.544	0.550	0.544
V_m	2.034	1.962	4.614	4.402	4.606	4.391	4.634	******	4.618	4.407	4.081	4.006
REF. E,C.	D23(I16)		D54(D86)		D03(D86)		D86		D61(D86)		D55(D15)	
REF. α, Cp	512, 116		502, 613		502, 613		502, 613		502, 613		514, 613	

REF. α, Cp 512, 116 502; 503 — —

	CaF_2 Fluorite (Cubic) PULS (1967) 295.5 K		CaF_2 Fluorite (Cubic) PULS (1968) 298 K		CaF_2 Fluorite (Cubic) PULS (1975) 298 K		CaF_2 Fluorite (Cubic) *PULS (1977) ROOM		MnF_2 Rutile (Tetra.) PULS (1968) 293 K		MnF_2 Rutile (Tetra.) PULS (1970) 300 K	
ρ_x	3.181		3.181		3.181		3.181		3.924		3.922	
ρ_B	3.180		3.181		3.180		3.183		3.926		******	
M	26.03		26.03		26.03		26.03		30.98		30.98	
α	60.65		60.65		60.65		60.65		20.10		20.10	
C_P	8.786		8.786		8.786		8.786		7.309		7.309	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	847.0	847.0	841.0	841.0	854.0	854.0	845.0	845.0	894.4	882.6	888.0	873.7
K_T	819.6	819.6	814.0	814.0	826.1	826.1	817.7	817.7	891.0	879.3	884.7	870.5
μ	427.2	410.3	425.8	408.9	425.5	408.9	427.4	410.3	299.9	247.4	316.5	261.9
σ	0.284	0.291	0.283	0.291	0.286	0.294	0.284	0.291	0.349	0.372	0.341	0.364
V_P	6.674	6.621	6.655	6.601	6.685	6.633	6.667	6.613	5.742	5.557	5.779	5.584
Vs	3.665	3.592	3.659	3.585	3.658	3.586	3.664	3.590	2.764	2.510	2.841	2.584
V_ϕ	5.161	5.161	5.142	5.142	5.182	5.182	5.152	5.152	4.773	4.741	4.758	4.720
$(\partial K_S/\partial P)_T$	6.26	6.26	4.92	4.92	4.70	4.70	(4.70)	(4.70)	******	******	******	******
$(\partial K_T/\partial P)_T$	6.24	6.24	4.93	4.93	4.67	4.67	4.74	4.74	******	******	******	******
$(\partial \mu/\partial P)_T$	1.12	1.33	1.22	1.31	1.18	1.28	(1.18)	(1.28)	******	******	******	******
$(\partial \sigma/\partial P)_T$	0.883	0.746	0.553	0.474	0.500	0.423	0.518	0.439	******	******	******	******
$(\partial V_P/\partial P)_T$	14.18	15.03	11.37	11.82	10.71	11.17	10.71	11.17	******	******	******	******
$(\partial V_S/\partial P)_T$	2.56	3.62	2.99	3.56	2.86	3.44	2.82	3.41	******	******	******	******
$(\partial V_\phi/\partial P)_T$	15.92	15.92	11.87	11.87	11.12	11.12	11.18	11.18	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.179	-0.179	-0.176	-0.176	-0.095	-0.095	-0.198	-0.198	-0.209	-0.207	-0.239	-0.240
$(\partial K_T/\partial T)_P$	-0.275	-0.275	-0.270	-0.270	-0.195	-0.195	-0.292	-0.292	-0.225	-0.223	-0.249	-0.250
$(\partial \mu/\partial T)_P$	-0.125	-0.134	-0.122	-0.127	-0.105	-0.110	-0.123	-0.128	-0.065	-0.033	-0.049	-0.026
$(\partial \sigma/\partial T)_P$	1.49	2.08	1.43	1.82	2.50	2.82	0.99	1.41	-0.23	-1.20	-1.65	-2.18
$(\partial V_P/\partial T)_P$	-0.612	-0.650	-0.598	-0.622	-0.351	-0.372	-0.651	-0.676	-0.598	-0.518	-0.612	-0.571
$(\partial V_S/\partial T)_P$	-0.424	-0.479	-0.413	-0.448	-0.342	-0.374	-0.416	-0.453	-0.272	-0.140	-0.189	-0.102
$(\partial V_\phi/\partial T)_P$	-0.389	-0.389	-0.382	-0.382	-0.131	-0.131	-0.447	-0.447	-0.510	-0.508	-0.593	-0.601
$(\partial P/\partial T)_{V_P}$	4.313	4.327	5.261	5.261	3.279	3.333	6.078	6.053	******	******	******	******
$(\partial P/\partial T)_{V_S}$	16.60	13.25	13.80	12.59	11.95	10.88	14.75	13.30	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	2.446	2.446	3.218	3.218	1.178	1.178	4.002	4.002	******	******	******	******
$(\partial P/\partial T)_\rho$	4.971	4.971	4.937	4.937	5.011	5.011	4.960	4.960	1.791	1.767	1.778	1.750
γ_{th}	1.839	1.839	1.825	1.825	1.854	1.854	1.833	1.833	0.626	0.618	0.623	0.613
γ_P	2.075	2.194	1.724	1.791	1.657	1.725	1.647	1.715	******	******	******	******
γ_S	0.905	1.159	0.999	1.141	0.980	1.126	0.963	1.109	******	******	******	******
γ_{LT}	0.994	1.235	1.055	1.189	1.031	1.170	1.016	1.154	******	******	******	******
γ_{HT}	1.295	1.504	1.241	1.358	1.206	1.326	1.191	1.311	******	******	******	******
δ_S	3.488	3.488	3.451	3.451	1.834	1.834	3.863	3.863	11.626	11.668	13.390	13.666
δ_T	5.523	5.523	5.470	5.470	3.885	3.885	5.891	5.891	12.561	12.591	14.011	14.277
θ_D	509.7	500.0	508.8	499.1	508.8	499.3	509.7	499.9	392.4	357.5	402.7	367.5
$(\partial K_S/\partial T)_V$	0.128	0.128	0.063	0.063	0.134	0.134	0.032	0.032	******	******	******	******
$(\partial K_P/\partial T)_V$	0.035	0.035	-0.026	-0.026	0.040	0.040	-0.057	-0.057	******	******	******	******
$(\partial \alpha/\partial T)_P$	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	3.34	3.34	3.34	3.34
V_S/V_P	0.549	0.543	0.550	0.543	0.547	0.541	0.550	0.543	0.481	0.452	0.492	0.463
V_M	4.086	4.008	4.078	4.000	4.079	4.002	4.085	4.006	3.107	2.831	3.190	2.911
REF. E.C.	058		119		015+113		060(015)		054		076	
REF. α, Cp	534; 613		534, 613		534, 613		534, 613		528; 612		528; 612	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	MnF_2 Rutile (Tetra.) RESO (1972) ROOM		MnF_2 Rutile (Tetra.) PULS (1978) ROOM		CoF_2 Rutile (Tetra.) RESO (1970) ROOM		CoF_2 Rutile (Tetra.) PULS (1978) ROOM		NiF_2 Rutile (Tetra.) *PULS (1976,1977) 300 K		ZnF_2 Rutile (Tetra.) *PULS (1977) 296 K	
ρ_x	3.922		3.922		4.592		4.592		4.815		4.950	
ρ_B	******		******		******		******		******		******	
M	30.98		30.98		32.31		32.31		32.23		34.43	
a	20.10		20.10		24.50		24.50		23.40		29.00	
C_P	7.309		7.309		7.124		7.124		6.640		6.357	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	879.9	862.0	898.1	886.3	834.8	819.6	1104.1	1090.8	1207.1	1196.5	1051.5	1037.7
K_T	876.6	858.9	894.7	883.0	831.0	815.9	1097.4	1084.3	1199.6	1189.2	1042.7	1029.1
μ	308.4	255.8	308.0	249.5	392.2	324.8	377.1	314.8	459.0	387.4	393.7	344.3
σ	0.343	0.365	0.346	0.371	0.297	0.325	0.347	0.368	0.331	0.354	0.334	0.351
V_P	5.738	5.538	5.777	5.575	5.438	5.223	5.916	5.735	6.147	5.965	5.643	5.499
V_S	2.804	2.554	2.802	2.522	2.922	2.660	2.866	2.618	3.088	2.836	2.820	2.637
V_ϕ	4.737	4.688	4.785	4.754	4.264	4.225	4.903	4.874	5.007	4.985	4.609	4.579
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	5.01	5.04	4.55	4.62
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	5.03	5.06	4.59	4.66
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	-0.54	-1.63	0.05	-0.62
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	0.797	1.109	0.621	0.841
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	4.69	2.49	5.56	4.30
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	-3.09	-7.15	-1.17	-3.66
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	8.30	8.40	7.76	7.97
$(\partial K_S/\partial T)_P$	******	******	******	******	******	******	******	******	-0.211	-0.211	-0.251	-0.249
$(\partial K_T/\partial T)_P$	******	******	******	******	******	******	******	******	-0.247	-0.247	-0.287	-0.284
$(\partial \mu/\partial T)_P$	******	******	******	******	******	******	******	******	-0.021	0.023	-0.054	-0.017
$(\partial \sigma/\partial T)_P$	******	******	******	******	******	******	******	******	-1.91	-3.11	-1.50	-2.56
$(\partial V_P/\partial T)_P$	******	******	******	******	******	******	******	******	-0.332	-0.244	-0.496	-0.419
$(\partial V_S/\partial T)_P$	******	******	******	******	******	******	******	******	-0.036	0.118	-0.153	-0.027
$(\partial V_\phi/\partial T)_P$	******	******	******	******	******	******	******	******	-0.378	-0.381	-0.483	-0.483
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	7.090	9.811	8.931	9.759
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	-1.17	1.65	-13.00	-0.73
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	4.558	4.540	6.226	6.061
$(\partial P/\partial T)_{V_\phi}$	1.762	1.726	1.798	1.775	2.036	1.999	2.689	2.657	2.807	2.783	3.024	2.984
γ_{th}	0.617	0.604	0.630	0.621	0.625	0.614	0.827	0.817	0.883	0.876	0.969	0.956
γ_P	******	******	******	******	******	******	******	******	1.248	0.829	1.360	1.137
γ_S	******	******	******	******	******	******	******	******	-0.869	-2.664	-0.100	-1.093
γ_{LT}	******	******	******	******	******	******	******	******	-0.743	-2.486	-0.015	-0.977
γ_{HT}	******	******	******	******	******	******	******	******	-0.163	-1.499	0.386	-0.350
δ_S	******	******	******	******	******	******	******	******	7.456	7.540	8.231	8.274
δ_T	******	******	******	******	******	******	******	******	8.789	8.861	9.486	9.513
θ_D	397.6	363.2	397.5	359.0	428.1	391.0	422.5	387.2	461.9	425.7	416.7	390.6
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	-0.081	-0.082	-0.120	-0.117
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	-0.106	-0.106	-0.148	-0.145
$(\partial \alpha/\partial T)_P$	3.34	3.34	3.34	3.34	4.06	4.06	4.06	4.06	4.04	4.04	2.96	2.96
V_S/V_P	0.489	0.461	0.485	0.452	0.535	0.509	0.484	0.457	0.502	0.476	0.500	0.480
V_m	3.150	2.877	3.149	2.844	3.263	2.980	3.220	2.951	3.463	3.191	3.164	2.965
REF. E;C.	044		042		046		042		120+121		b91+092	
REF. a, Cp	520; 612		528; 612		528; 613		528; 613		528; 613		528; 612	

V_s/V_p	0.487	0.481	0.483	0.482	0.483	0.480	0.484	0.457	0.502	0.476	0.500	0.480
V_m	3.150	2.877	3.149	2.844	3.263	2.980	3.220	2.951	3.463	3.191	3.164	2.965
REF. E:C.	044		042		046		042		120+121		091+092	
REF. α, Cp	528; 612		528; 612		528; 613		528; 613		528; 613		528; 612	

	ZnF_2 Rutile (Tetra.) PULS (1978) ROOM		SrF_2 Fluorite (Cubic) PULS (1964) 300 K		SrF_2 Fluorite (Cubic) *PULS (1970) 295 K		SrF_2 Fluorite (Cubic) *PULS (1977) ROOM		CdF_2 Fluorite (Cubic) *PULS (1970) 295 K		CdF_2 Fluorite (Cubic) PULS (1977) 295 K	
ρ_x	4.952		4.277		4.278		4.277		6.386		6.386	
ρ_B	******		******		******		4.282		6.386		******	
M	34.43		41.87		41.87		41.87		50.13		50.13	
α	29.00		54.60		54.60		46.91		66.00		66.00	
C_P	6.357		5.560		5.560		6.030		4.453		4.453	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1105.4	1090.0	698.7	698.7	713.0	713.0	713.7	713.7	1054.0	1054.0	1054.3	1054.3
K_T	1095.7	1080.6	680.8	680.8	694.4	694.4	700.9	700.9	1005.3	1005.3	1005.6	1005.6
μ	393.3	342.7	346.0	343.4	349.1	346.9	349.5	347.3	326.2	290.0	330.1	293.1
σ	0.341	0.358	0.287	0.289	0.290	0.291	0.290	0.291	0.360	0.374	0.358	0.373
V_P	5.737	5.589	5.208	5.200	5.248	5.242	5.249	5.242	4.829	4.750	4.838	4.757
V_S	2.818	2.631	2.844	2.833	2.856	2.848	2.857	2.848	2.260	2.131	2.274	2.142
V_ϕ	4.725	4.692	4.042	4.042	4.082	4.082	4.083	4.083	4.063	4.063	4.063	4.063
$(\partial K_S/\partial P)_T$	******	******	(4.76)	(4.76)	4.76	4.76	(4.76)	(4.76)	6.05	6.05	(6.05)	(6.05)
$(\partial K_T/\partial P)_T$	******	******	4.81	4.81	4.79	4.79	4.79	4.79	6.18	6.18	6.16	6.16
$(\partial \mu/\partial P)_T$	******	******	(0.83)	(0.87)	0.83	0.87	(0.83)	(0.87)	1.33	1.52	(1.33)	(1.52)
$(\partial \sigma/\partial P)_T$	******	******	0.806	0.777	0.779	0.751	0.778	0.751	0.213	0.056	0.221	0.063
$(\partial V_P/\partial P)_T$	******	******	9.35	9.50	9.29	9.43	9.31	9.45	10.28	10.96	10.25	10.93
$(\partial V_S/\partial P)_T$	******	******	1.32	1.51	1.34	1.52	1.35	1.54	3.47	4.54	3.44	4.50
$(\partial V_\phi/\partial P)_T$	******	******	10.81	10.81	10.70	10.70	10.71	10.71	9.64	9.64	9.64	9.64
$(\partial K_S/\partial T)_P$	******	******	-0.188	-0.188	-0.163	-0.163	-0.159	-0.159	-0.452	-0.452	-0.420	-0.420
$(\partial K_T/\partial T)_P$	******	******	-0.241	-0.241	-0.219	-0.219	-0.198	-0.198	-0.586	-0.586	-0.555	-0.555
$(\partial \mu/\partial T)_P$	******	******	-0.059	-0.063	-0.081	-0.083	-0.081	-0.083	-0.139	-0.141	-0.155	-0.157
$(\partial \sigma/\partial T)_P$	******	******	-1.78	-1.58	0.05	0.20	0.16	0.31	-0.03	0.65	0.91	1.60
$(\partial V_P/\partial T)_P$	******	******	-0.457	-0.468	-0.458	-0.466	-0.471	-0.479	-0.874	-0.897	-0.855	-0.879
$(\partial V_S/\partial T)_P$	******	******	-0.166	-0.181	-0.252	-0.263	-0.264	-0.275	-0.407	-0.446	-0.459	-0.503
$(\partial V_\phi/\partial T)_P$	******	******	-0.433	-0.433	-0.354	-0.354	-0.359	-0.359	-0.737	-0.737	-0.675	-0.675
$(\partial P/\partial T)_{V_P}$	******	******	4.892	4.928	4.930	4.937	5.057	5.063	8.507	8.188	8.339	8.037
$(\partial P/\partial T)_{V_S}$	******	******	12.60	11.97	18.86	17.27	19.55	17.89	11.74	9.84	13.35	11.18
$(\partial P/\partial T)_{V_\phi}$	******	******	4.010	4.010	3.307	3.307	3.352	3.352	7.644	7.644	7.006	7.006
$(\partial P/\partial T)_\rho$	3.178	3.134	3.717	3.717	3.791	3.791	3.288	3.288	6.635	6.635	6.637	6.637
γ_{th}	1.018	1.004	1.604	1.604	1.637	1.637	1.297	1.297	2.446	2.446	2.447	2.447
γ_P	******	******	1.555	1.577	1.562	1.583	1.577	1.597	2.473	2.653	2.464	2.645
γ_S	******	******	0.649	0.696	0.658	0.704	0.665	0.711	1.877	2.473	1.853	2.446
γ_{LT}	******	******	0.717	0.762	0.725	0.769	0.733	0.777	1.906	2.481	1.883	2.455
γ_{HT}	******	******	0.951	0.989	0.959	0.997	0.969	1.007	2.075	2.533	2.057	2.512
δ_S	******	******	4.928	4.928	4.174	4.174	4.749	4.749	6.496	6.496	6.036	6.036
δ_T	******	******	6.491	6.491	5.768	5.768	6.023	6.023	8.829	8.829	8.370	8.370
θ_D	416.9	390.0	372.8	371.4	374.5	373.4	374.7	373.6	321.9	304.1	323.7	305.7
$(\partial K_S/\partial T)_V$	******	******	-0.005	-0.005	0.024	0.024	0.001	0.001	-0.022	-0.022	0.008	0.008
$(\partial K_P/\partial T)_V$	******	******	-0.063	-0.063	-0.037	-0.037	-0.041	-0.041	-0.176	-0.176	-0.147	-0.147
$(\partial \alpha/\partial T)_P$	2.96	2.96	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†
V_S/V_P	0.491	0.471	0.546	0.545	0.544	0.543	0.544	0.543	0.468	0.449	0.470	0.450
V_m	3.165	2.961	3.172	3.160	3.186	3.177	3.187	3.177	2.544	2.404	2.559	2.416
REF. E.C.	042		032(005)		005		060(005)		006		084(006)	
REF. α, Cp	528, 612		503, 610		503; 610		534; 614		006, 603		006; 603	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	SnF_2 —— (Monoclinic) PULS (1971) 293 K		BaF_2 Flourite (Cubic) PULS (1968) 298 K		BaF_2 Fluorite (Cubic) *PULS (1968) 295 K		BaF_2 Fluorite (Cubic) PULS (1974) ROOM		BaF_2 Fluorite (Cubic) *PULS (1974) ROOM		EuF_2 Fluorite (Cubic) PULS (1971) 300 K	
ρ_X	4.875		4.886		4.886		4.886		4.886		6.320	
ρ_B	4.875		4.886		******		4.884		4.887		******	
M	52.20		58.45		58.45		58.45		58.45		63.32	
n	112.80		61.38		61.38		61.38		61.38		60.65 (CaF_2)	
C_P	(4.801)**		4.062		4.062		4.062		4.062		(3.876)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	171.9	164.9	583.8	583.8	555.2	555.2	580.6	580.6	581.2	581.2	644.0	644.0
K_T	167.2	160.6	565.0	565.0	538.2	538.2	562.0	562.0	562.6	562.6	625.8	625.8
μ	120.6	103.3	254.9	254.9	251.6	251.6	252.5	252.5	255.0	255.0	308.1	307.9
σ	0.216	0.241	0.309	0.309	0.303	0.303	0.310	0.310	0.309	0.309	0.294	0.294
V_P	2.612	2.492	4.348	4.348	4.269	4.269	4.334	4.334	4.342	4.342	4.085	4.085
V_S	1.573	1.456	2.284	2.284	2.269	2.269	2.274	2.274	2.284	2.284	2.208	2.207
V_ϕ	1.878	1.839	3.457	3.457	3.371	3.371	3.448	3.448	3.449	3.449	3.192	3.192
$(\partial K_S/\partial P)_T$	******	******	5.05	5.05	5.72	5.72	(5.05)	(5.05)	(5.05)	(5.05)	******	******
$(\partial K_T/\partial P)_T$	******	******	5.09	5.09	5.74	5.74	5.10	5.10	5.10	5.10	******	******
$(\partial \mu/\partial P)_T$	******	******	0.39	0.39	0.69	0.69	(0.39)	(0.39)	(0.39)	(0.39)	******	******
$(\partial \sigma/\partial P)_T$	******	******	1.184	1.187	1.295	1.294	1.186	1.189	1.195	1.197	******	******
$(\partial V_P/\partial P)_T$	******	******	9.28	9.26	11.92	11.92	9.32	9.30	9.28	9.27	******	******
$(\partial V_S/\partial P)_T$	******	******	-0.26	-0.28	0.98	0.98	-0.26	-0.28	-0.27	-0.29	******	******
$(\partial V_\phi/\partial P)_T$	******	******	11.90	11.90	14.22	14.22	11.94	11.94	11.93	11.93	******	******
$(\partial K_S/\partial T)_P$	-0.102	-0.086	-0.155	-0.155	(-0.162)	(-0.162)	-0.158	-0.158	-0.162	-0.162	-0.530	-0.530
$(\partial K_T/\partial T)_P$	-0.114	-0.098	-0.219	-0.219	-0.219	-0.219	-0.221	-0.221	-0.225	-0.225	-0.574	-0.574
$(\partial \mu/\partial T)_P$	-0.096	-0.081	-0.059	-0.058	(-0.060)	(-0.060)	-0.058	-0.058	-0.060	-0.060	-0.074	-0.07?
$(\partial \sigma/\partial T)_P$	4.67	5.63	-0.57	-0.63	-0.88	-0.88	-0.68	-0.68	-0.69	-0.70	-10.37	-10.4?
$(\partial V_P/\partial T)_P$	-0.756	-0.658	-0.417	-0.413	-0.451	-0.451	-0.425	-0.425	-0.439	-0.438	-1.094	-1.089
$(\partial V_S/\partial T)_P$	-0.537	-0.489	-0.194	-0.190	-0.203	-0.203	-0.194	-0.194	-0.201	-0.200	-0.198	-0.19?
$(\partial V_\phi/\partial T)_P$	-0.451	-0.376	-0.353	-0.353	-0.388	-0.388	-0.364	-0.364	-0.375	-0.375	-1.217	-1.21?
$(\partial P/\partial T)_{V_P}$	******	******	4.491	4.463	3.780	3.780	4.564	4.571	4.726	4.726	******	******
$(\partial P/\partial T)_{V_S}$	******	******	-73.31	-67.08	20.71	20.71	-75.07	-70.17	-73.27	-68.49	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	2.965	2.965	2.731	2.731	3.051	3.051	3.143	3.143	******	******
$(\partial P/\partial T)_\rho$	1.886	1.811	3.468	3.468	3.303	3.303	3.450	3.450	3.453	3.453	3.796	3.795
γ_{th}	0.828	0.795	1.806	1.806	1.717	1.717	1.796	1.796	1.797	1.797	1.594	1.59?
γ_P	******	******	1.539	1.537	1.836	1.836	1.541	1.540	1.536	1.534	******	******
γ_S	******	******	0.268	0.263	0.566	0.566	0.270	0.265	0.266	0.261	******	******
γ_{LT}	******	******	0.354	0.349	0.655	0.655	0.355	0.351	0.352	0.348	******	******
γ_{HT}	******	******	0.691	0.688	0.989	0.989	0.694	0.690	0.689	0.686	******	******
δ_S	5.260	4.623	4.326	4.326	4.754	4.754	4.442	4.442	4.541	4.541	13.569	13.569
δ_T	6.066	5.397	6.304	6.304	6.638	6.638	6.410	6.410	6.510	6.510	15.119	15.119
θ_D	198.4	184.1	280.8	280.8	278.7	278.7	279.5	279.5	280.8	280.8	287.4	287.3
$(\partial K_S/\partial T)_V$	******	******	0.019	0.019	0.026	0.026	0.015	0.015	0.012	0.012	******	******
$(\partial K_P/\partial T)_V$	******	******	-0.042	-0.042	-0.030	-0.030	-0.045	-0.045	-0.049	-0.049	******	******
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	(0.0)†	(0.0)†
V_S/V_P	0.602	0.584	0.525	0.525	0.531	0.531	0.525	0.525	0.526	0.526	0.540	0.540
V_M	1.739	1.614	2.554	2.554	2.536	2.535	2.543	2.543	2.554	2.554	2.464	2.463
REF. E;C.	001		119		031(060)		055(119)		060(119)		068	
REF. α, Cp	001; (CAL)**		534, 610		534, 610		534, 610		534; 610		534; (CAL)**	

	PbF_2 Fluorite (Cubic) PULS (1965) 300 K		PbF_2 Fluorite (Cubic) RESO (1970) ROOM		$LiBaF_3$ —— (Cubic) PULS (1972) 293 K		$KMgF_3$ Perovskite (Cubic) PULS (1969) 293 K		$KMgF_3$ Perovskite (Cubic) *PULS (1979) 298 K		$KMnF_3$ Perovskite (Cubic) PULS (1966) ROOM	
ρ_x	7.790		7.760		5.237		3.188		3.188		3.409	
ρ_B	******		******		5.238		3.150		3.151		******	
M	81.73		81.73		40.25		24.08		24.08		30.21	
α	61.38 (BaF_2)		61.38 (BaF_2)		27.00		60.00 ($KCoF_3$)		60.00 ($KCoF_3$)		51.67	
C_p	3.030		3.030		(5.636)**		(8.951)**		(9.005)**		7.621	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	610.7	610.7	601.7	601.7	742.4	742.4	751.1	751.1	756.0	756.0	648.9	648.9
K_T	593.3	593.3	584.8	584.8	738.4	738.4	730.1	730.1	734.9	734.9	632.2	632.2
μ	229.7	228.9	224.3	223.6	457.8	456.5	487.5	487.3	488.6	488.4	309.6	305.8
σ	0.333	0.333	0.334	0.335	0.244	0.245	0.233	0.233	0.234	0.234	0.294	0.296
V_P	3.431	3.429	3.407	3.405	5.082	5.079	6.669	6.669	6.683	6.683	5.581	5.567
V_S	1.717	1.714	1.700	1.697	2.956	2.952	3.934	3.933	3.938	3.937	3.014	2.995
V_ϕ	2.800	2.800	2.785	2.785	3.765	3.765	4.883	4.883	4.898	4.898	4.363	4.363
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	(5.01)	(5.01)	5.01	5.01	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	5.01	5.01	5.01	5.01	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	(1.99)	(2.01)	1.99	2.01	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	0.570	0.559	0.560	0.550	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	13.66	13.73	13.63	13.71	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	5.32	5.41	5.32	5.42	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	12.94	12.94	12.90	12.90	******	******
$(\partial K_S/\partial T)_P$	******	******	******	******	-0.247	-0.247	-0.156	-0.156	-0.161	-0.161	0.0	0.0
$(\partial K_T/\partial T)_P$	******	******	******	******	-0.259	-0.259	-0.220	-0.220	-0.225	-0.225	-0.042	-0.042
$(\partial \mu/\partial T)_P$	******	******	******	******	-0.188	-0.189	-0.138	-0.140	-0.145	-0.147	0.067	0.046
$(\partial \sigma/\partial T)_P$	******	******	******	******	1.63	1.70	1.65	1.75	1.84	1.95	-3.83	-2.65
$(\partial V_P/\partial T)_P$	******	******	******	******	-0.866	-0.869	-0.609	-0.616	-0.641	-0.649	0.378	0.305
$(\partial V_S/\partial T)_P$	******	******	******	******	-0.566	-0.570	-0.439	-0.448	-0.467	-0.476	0.403	0.303
$(\partial V_\phi/\partial T)_P$	******	******	******	******	-0.576	-0.576	-0.361	-0.361	-0.375	-0.375	0.113	0.113
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	4.460	4.487	4.702	4.732	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	8.25	8.27	8.76	8.79	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	2.786	2.786	2.905	2.905	******	******
$(\partial P/\partial T)_\rho$	3.642	3.642	3.589	3.589	1.994	1.994	4.381	4.381	4.409	4.409	3.287	3.287
γ_{th}	1.588	1.588	1.571	1.571	0.679	0.679	1.598	1.598	1.599	1.599	1.291	1.291
γ_P	******	******	******	******	******	******	1.829	1.837	1.832	1.841	******	******
γ_S	******	******	******	******	******	******	1.320	1.338	1.327	1.345	******	******
γ_{LT}	******	******	******	******	******	******	1.368	1.385	1.374	1.391	******	******
γ_{HT}	******	******	******	******	******	******	1.490	1.505	1.495	1.510	******	******
δ_S	******	******	******	******	12.337	12.337	3.462	3.462	3.549	3.549	0.0	0.0
δ_T	******	******	******	******	13.012	13.012	5.015	5.015	5.103	5.103	1.265	1.265
θ	221.2	220.9	218.8	218.5	417.9	417.3	556.3	556.2	557.0	556.9	408.7	406.3
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	0.070	0.070	0.066	0.066	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	-0.000	-0.000	-0.004	-0.004	******	******
$(\partial \alpha/\partial T)_P$	******	******	******	******	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†
V_S/V_P	0.500	0.500	0.499	0.498	0.582	0.581	0.590	0.590	0.589	0.589	0.540	0.538
V_S/V_m	1.926	1.923	1.907	1.905	3.280	3.275	4.359	4.358	4.364	4.363	3.364	3.344
REF. E.C.	111		045		051		090(059)		059		002	
REF. α, Cp	528, 613		528, 613		053, (CAL)**		515, (CAL)**		515, (CAL)**		525, 605	

REF. α, Cp 001, (CAL)** 534, 610 534, 610 534, 610 534, 610 534, (CAL)

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	$KCoF_3$ Perovskite(Cubic) PULS (1972) ROOM		$KCoF_3$ Perovskite(Cubic) PULS (1975) ROOM		$KNiF_3$ Perovskite(Cubic) PULS (1972) ROOM		$KZnF_3$ Perovskite(Cubic) PULS (1972) 295 K		RbCaF$_3$ Perovskite(Cubic) *PULS (1977) ROOM		$RbMnF_3$ Perovskite(Cubic) PULS (1969) 300 K	
ρ_x	3.821		3.821		3.986		4.024		3.429		4.317	
ρ_B	******		******		******		******		******		******	
M	30.01		30.01		30.96		32.28		36.51		39.48	
α	60.00		60.00		47.93		60.00 (KCoF$_3$)		40.40 (RbCdF$_3$)		57.00	
C_p	7.786		7.786		7.381		(7.152)**		(6.434)**		(5.995)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	786.7	786.7	773.0	773.0	850.7	850.7	799.7	799.7	503.3	503.3	675.0	675.0
K_T	764.9	764.9	751.9	751.9	834.1	834.1	776.4	776.4	497.7	497.7	658.3	658.3
μ	369.2	368.4	368.4	367.9	456.0	450.8	392.0	391.7	272.8	261.6	341.0	339.9
σ	0.297	0.297	0.294	0.295	0.273	0.275	0.289	0.289	0.270	0.278	0.284	0.284
V_P	5.786	5.783	5.752	5.750	6.049	6.035	5.733	5.732	5.028	4.985	5.115	5.112
V_S	3.108	3.105	3.105	3.103	3.382	3.363	3.121	3.120	2.821	2.762	2.811	2.806
V_ϕ	4.537	4.537	4.498	4.498	4.620	4.620	4.458	4.458	3.831	3.831	3.954	3.954
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	5.63	5.63	(4.92)	(4.92)
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	4.91	4.91
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	1.55	1.37	(1.91)	(1.80)
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	1.069	1.121	0.310	0.369
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	17.28	16.82	13.04	12.71
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	5.19	4.47	5.76	5.29
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	17.58	17.58	11.42	11.42
$(\partial K_S/\partial T)_P$	******	******	-0.122	-0.122	******	******	******	******	******	******	-0.116	-0.116
$(\partial K_T/\partial T)_P$	******	******	-0.187	-0.187	******	******	******	******	******	******	-0.168	-0.168
$(\partial \mu/\partial T)_P$	******	******	-0.056	-0.055	******	******	******	******	******	******	-0.098	-0.091
$(\partial \sigma/\partial T)_P$	******	******	-0.13	-0.17	******	******	******	******	******	******	2.14	1.77
$(\partial V_P/\partial T)_P$	******	******	-0.274	-0.272	******	******	******	******	******	******	-0.413	-0.393
$(\partial V_S/\partial T)_P$	******	******	-0.141	-0.138	******	******	******	******	******	******	-0.324	-0.296
$(\partial V_\phi/\partial T)_P$	******	******	-0.221	-0.221	******	******	******	******	******	******	-0.228	-0.228
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	3.170	3.091
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	5.63	5.59
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	1.994	1.994
$(\partial P/\partial T)_\rho$	4.589	4.589	4.511	4.511	3.998	3.998	4.658	4.658	2.011	2.011	3.752	3.752
γ_{th}	1.587	1.587	1.559	1.559	1.386	1.386	1.667	1.667	0.922	0.922	1.487	1.487
γ_P	******	******	******	******	******	******	******	******	2.043	2.012	2.012	1.969
γ_S	******	******	******	******	******	******	******	******	1.249	1.140	1.682	1.575
γ_{LT}	******	******	******	******	******	******	******	******	1.314	1.208	1.707	1.605
γ_{HT}	******	******	******	******	******	******	******	******	1.514	1.430	1.792	1.707
δ_S	******	******	2.635	2.635	******	******	******	******	******	******	3.020	3.020
δ_T	******	******	4.151	4.151	******	******	******	******	******	******	4.470	4.470
θ_D	439.0	438.5	438.4	438.1	478.0	475.4	437.3	437.1	358.7	351.6	376.7	376.1
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	0.073	0.073
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	0.017	0.017
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†
V_S/V_P	0.537	0.537	0.540	0.540	0.559	0.557	0.544	0.544	0.561	0.554	0.549	0.549
V_M	3.471	3.467	3.466	3.464	3.765	3.745	3.482	3.480	3.139	3.077	3.133	3.128
REF. E;C.	095		004		082		033		028		077(080)	
REF. α, Cp	515; 605		515; 605		525, 605		515, {CAL}**		096; {CAL}**		544; {CAL}**	

	$RbMnF_3$ Perovskite(Cubic) *PULS (1973)	$RbCoF_3$ Perovskite(Cubic) PULS (1971)	$RbCdF_3$ Perovskite(Cubic) *PULS (1975,1977)	$CsCdF_3$ Perovskite(Cubic) *PULS(1975)	$TlCdF_3$ Perovskite(Cubic) *PULS (1975,1977)	$TlCdF_3$ Perovskite(Cubic)

$^{a}V_M$	3.471	3.467	3.466	3.464	3.465	3.462						
REF. E:C.	095		004		082		033		028		077(080)	
REF. α, Cp	515;	605	515;	605	525,	605	515,	(CAL)**	096;	(CAL)**	544;	(CAL)**

	RbMnF; Perovskite(Cubic) *PULS (1973) 295 K		RbCoF; Perovskite(Cubic) PULS (1971) 295 K		RbCdF; Perovskite(Cubic) *PULS (1975,1977) ROOM		CsCdF; Perovskite(Cubic) *PULS(1975) ROOM		TlCdF; Perovskite(Cubic) *PULS (1975,1977) ROOM		TlCdF; Perovskite(Cubic) BRIL (1978) ROOM	
ρ_x	4.317		4.757		4.971		5.639		7.309		7.309	
ρ_B	******		******		******		******		******		7.301	
M	39.48		40.28		50.97		60.46		74.74		74.74	
α	57.00		57.00 ($RbMnF_3$)		50.40		44.10		48.90		48.90	
C_P	(5.976)**		(5.824)**		(4.726)**		(4.010)**		(3.301)**		(3.300)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	672.3	672.3	801.3	801.3	614.0	614.0	633.1	633.1	599.3	599.3	609.3	609.3
K_T	655.6	655.6	779.3	779.3	606.2	606.2	622.9	622.9	588.8	588.8	598.4	598.4
μ	341.0	339.9	396.8	396.2	257.0	247.1	280.4	277.5	225.3	215.8	227.7	218.9
σ	0.283	0.284	0.287	0.288	0.316	0.323	0.307	0.309	0.333	0.339	0.334	0.340
V_P	5.109	5.106	5.286	5.287	4.387	4.357	4.226	4.218	3.508	3.484	3.536	3.513
V_S	2.811	2.806	2.888	2.886	2.274	2.230	2.230	2.218	1.756	1.718	1.766	1.732
V_ϕ	3.946	3.946	4.104	4.104	3.514	3.514	3.351	3.351	2.863	2.863	2.889	2.889
$(\partial K_S/\partial P)_T$	4.92	4.92	******	******	1.10	1.10	6.10	6.10	7.57	7.57	(7.57)	(7.57)
$(\partial K_T/\partial P)_T$	4.93	4.93	******	******	1.14	1.14	******	******	******	******	7.53	7.53
$(\partial \mu/\partial P)_T$	1.91	1.80	******	******	0.91	0.62	1.82	1.72	0.36	0.27	(0.36)	(0.27)
$(\partial \sigma/\partial P)_T$	0.317	0.376	******	******	-0.282	-0.112	0.528	0.573	1.638	1.633	1.602	1.603
$(\partial V_P/\partial P)_T$	13.05	12.71	******	******	1.69	0.86	14.50	14.26	12.72	12.61	12.64	12.52
$(\partial V_S/\partial P)_T$	5.75	5.29	******	******	2.15	0.96	5.45	5.09	-0.09	-0.38	-0.08	-0.38
$(\partial V_\phi/\partial P)_T$	11.44	11.44	******	******	0.25	0.25	13.45	13.45	15.65	15.65	15.53	15.53
$(\partial K_S/\partial T)_P$	-0.138	-0.138	******	******	-0.076	-0.076	******	******	******	******	-0.115	-0.115
$(\partial K_T/\partial T)_P$	-0.189	-0.189	******	******	-0.101	-0.101	******	******	******	******	-0.149	-0.149
$(\partial \mu/\partial T)_P$	-0.095	-0.088	******	******	-0.034	-0.015	******	******	******	******	-0.035	-0.021
$(\partial \sigma/\partial T)_P$	1.33	0.98	******	******	0.11	-0.97	******	******	******	******	-0.53	-1.33
$(\partial V_P/\partial T)_P$	-0.454	-0.434	******	******	-0.190	-0.136	******	******	******	******	-0.227	-0.194
$(\partial V_S/\partial T)_P$	-0.310	-0.283	******	******	-0.104	-0.024	******	******	******	******	-0.093	-0.041
$(\partial V_\phi/\partial T)_P$	-0.293	-0.293	******	******	-0.148	-0.148	******	******	******	******	-0.203	-0.203
$(\partial P/\partial T)_{V_P}$	3.477	3.414	******	******	11.277	15.906	******	******	******	******	1.800	1.548
$(\partial P/\partial T)_{V_S}$	5.39	5.35	******	******	4.82	2.55	******	******	******	******	-116.5	-10.85
$(\partial P/\partial T)_{V_\phi}$	2.565	2.565	******	******	59.280	59.280	******	******	******	******	1.307	1.307
$(\partial P/\partial T)_P$	3.737	3.737	4.442	4.442	2.449	2.449	2.747	2.747	2.879	2.879	2.926	2.926
γ_{th}	1.485	1.485	1.649	1.649	1.056	1.056	1.235	1.235	1.215	1.215	1.237	1.237
γ_P	2.008	1.966	******	******	0.566	0.452	2.471	2.439	2.467	2.465	2.472	2.466
γ_S	1.674	1.568	******	******	0.907	0.594	1.855	1.764	0.304	0.202	0.306	0.202
γ_{LT}	1.700	1.599	******	******	0.884	0.585	1.897	1.810	0.431	0.330	0.433	0.330
γ_{HT}	1.786	1.701	******	******	0.793	0.547	2.060	1.989	1.025	0.956	1.028	0.957
δ_S	3.609	3.609	******	******	3.084	3.084	******	******	******	******	3.873	3.873
δ_T	5.058	5.058	******	******	4.127	4.127	******	******	******	******	5.088	5.088
θ_D	376.6	376.0	397.3	397.0	294.5	289.0	284.2	282.8	228.1	223.5	229.4	225.1
$(\partial K_S/\partial T)_V$	0.050	0.050	******	******	-0.048	-0.048	******	******	******	******	0.109	0.109
$(\partial K_P/\partial T)_V$	-0.005	-0.005	******	******	-0.073	-0.073	******	******	******	******	0.071	0.071
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†
V_S/V_P	0.550	0.550	0.546	0.546	0.518	0.512	0.528	0.526	0.500	0.493	0.499	0.493
V_S/V_M	3.133	3.128	3.221	3.219	2.545	2.498	2.493	2.481	1.969	1.929	1.981	1.944
REF. E:C.	080		081		028+096		028+096		028+096		013(028)	
REF. α, Cp	544,	(CAL)**	544,	(CAL)**	096,	(CAL)**	096,	(CAL)**	096,	(CAL)**	096;	(CAL)**

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	CeF_3 — (Hexa.) RESO (1973) ROOM		K_2CuF_4 — (Tetra.) BRIL (1979) ROOM		$MgBaF_4$ — (Ortho.) PULS (1974) 293 K		LiCl Rock salt (Cubic) PULS (1960) 295 K		LiCl Rock salt (Cubic) PULS (1967) 300 K		LiCl Rock salt (Cubic) PULS (1967) 295 K	
ρ_x	6.160		3.310		4.539		2.073		2.074		2.068	
ρ_B	******		******		******		******		******		******	
M	49.28		31.10		39.60		21.20		21.20		21.20	
α	******		******		52.50		134.30		134.30		134.30	
C_P	4.332		******		(5.937)**		11.348		11.348		11.348	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1124.0	1119.0	376.3	363.7	606.5	578.5	316.8	316.8	287.3	287.3	318.2	318.2
K_T	******	******	******	******	595.4	568.4	295.3	295.3	269.5	269.5	296.5	296.5
μ	455.0	434.0	202.8	196.2	331.8	315.5	192.3	183.7	200.4	193.9	192.6	183.1
σ	0.322	0.328	0.272	0.271	0.269	0.269	0.248	0.257	0.217	0.224	0.248	0.259
V_P	5.300	5.250	4.420	4.346	4.807	4.692	5.258	5.206	5.170	5.130	5.273	5.215
V_S	2.718	2.654	2.475	2.435	2.704	2.636	3.046	2.977	3.108	3.058	3.052	2.976
V_ϕ	4.272	4.262	3.372	3.315	3.655	3.570	3.909	3.909	3.722	3.722	3.923	3.923
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	(4.99)	(4.99)	(4.99)	(4.99)	(4.99)	(4.99)
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	5.07	5.07	4.88	4.88	5.02	5.02
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	(2.89)	(3.36)	(2.89)	(3.36)	(2.89)	(3.36)
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	0.157	-0.515	0.683	0.013	0.147	-0.538
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	31.63	35.05	31.61	34.97	31.62	35.10
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	17.69	22.17	16.61	20.80	17.71	22.27
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	24.17	24.17	25.42	25.42	24.14	24.14
$(\partial K_S/\partial T)_P$	******	******	******	******	-0.099	-0.075	-0.176	-0.176	-0.054	-0.054	-0.142	-0.142
$(\partial K_T/\partial T)_P$	******	******	******	******	-0.133	-0.107	-0.246	-0.246	-0.119	-0.119	-0.215	-0.215
$(\partial \mu/\partial T)_P$	******	******	******	******	-0.084	-0.080	-0.170	-0.195	-0.178	-0.205	-0.177	-0.211
$(\partial \sigma/\partial T)_P$	******	******	******	******	1.76	2.42	6.95	10.28	15.98	19.46	9.91	14.30
$(\partial V_P/\partial T)_P$	******	******	******	******	-0.357	-0.303	-1.497	-1.669	-1.010	-1.194	-1.379	-1.613
$(\partial V_S/\partial T)_P$	******	******	******	******	-0.271	-0.265	-1.146	-1.378	-1.168	-1.408	-1.197	-1.515
$(\partial V_\phi/\partial T)_P$	******	******	******	******	-0.202	-0.138	-0.823	-0.823	-0.103	-0.103	-0.612	-0.612
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	4.733	4.763	3.197	3.413	4.361	4.594
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	6.48	6.22	7.03	6.77	6.76	6.80
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	3.407	3.407	0.406	0.406	2.534	2.534
$(\partial P/\partial T)_\rho$	******	******	******	******	3.126	2.984	3.966	3.966	3.619	3.619	3.981	3.981
γ_{th}	******	******	******	******	1.182	1.127	1.809	1.809	1.639	1.639	1.821	1.821
γ_P	******	******	******	******	******	******	2.109	2.322	1.981	2.170	2.111	2.329
γ_S	******	******	******	******	******	******	2.048	2.532	1.773	2.166	2.054	2.552
γ_{LT}	******	******	******	******	******	******	2.054	2.514	1.794	2.167	2.059	2.533
γ_{HT}	******	******	******	******	******	******	2.069	2.462	1.842	2.167	2.073	2.477
δ_S	******	******	******	******	3.109	2.469	4.137	4.137	1.413	1.413	3.323	3.323
δ_T	******	******	******	******	4.269	3.577	6.199	6.199	3.294	3.294	5.398	5.398
θ	382.7	374.1	328.3	322.9	367.4	358.3	391.5	383.1	398.3	392.2	392.0	382.7
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	0.024	0.024	0.121	0.121	0.056	0.056
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	-0.045	-0.045	0.058	0.058	-0.015	-0.015
$(\partial \alpha/\partial T)_P$	******	******	******	******	(0.0)†	(0.0)†	10.00	10.00	10.00	10.00	10.00	10.00
V_S/V_P	0.513	0.506	0.560	0.560	0.562	0.562	0.579	0.572	0.601	0.596	0.579	0.571
V_M	3.044	2.976	2.755	2.710	3.008	2.934	3.380	3.308	3.438	3.385	3.387	3.307
REF. E:C.	043		067		087		052(010)		073(010)		069(010)	
REF. α, Cp	***, 603		***, ***		087, (CAL)**		073, 613		073; 613		073; 613	

REF. EiC.	045		007		---		087, (CAL)**		073, 613		073; 613		073; 613	
REF. α, Cp	***, 603		***, ***											
	NaCl Rock salt (Cubic) PULS (1960) 295 K		NaCl Rock salt (Cubic) PULS (1965) 295 K		NaCl Rock salt (Cubic) PULS (1966) ROOM		NaCl Rock salt (Cubic) PULS (1967) ROOM		NaCl Rock salt (Cubic) PULS (1967) ROOM		NaCl Rock salt (Cubic) PULS (1967) 300 K	
ρ_X	2.164		2.164		2.164		2.164		2.163		2.162	
ρ_B	******		******		******		******		******		******	
M	29.22		29.22		29.22		29.22		29.22		29.22	
α	117.52		119.70		117.52		117.52		117.52		117.52	
C_P	8.651		8.651		8.651		8.651		8.651		8.651	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	250.3	250.3	247.1	247.1	252.3	252.3	249.3	249.3	250.8	250.8	249.7	249.7
K_T	237.2	237.2	233.8	233.8	239.0	239.0	236.3	236.3	237.6	237.6	236.6	236.6
μ	146.6	144.2	146.9	144.6	147.6	145.3	148.0	145.7	148.2	146.0	145.1	143.1
σ	0.255	0.258	0.252	0.255	0.255	0.258	0.252	0.255	0.253	0.256	0.257	0.259
V_P	4.539	4.522	4.524	4.508	4.555	4.540	4.543	4.528	4.553	4.538	4.528	4.514
V_S	2.603	2.581	2.605	2.585	2.611	2.591	2.615	2.595	2.618	2.598	2.591	2.573
V_ϕ	3.401	3.401	3.379	3.379	3.415	3.415	3.394	3.394	3.405	3.405	3.399	3.399
$(\partial K_S/\partial P)_T$	(5.26)	(5.26)	5.27	5.27	5.38	5.38	4.93	4.93	(5.26)	(5.26)	(5.26)	(5.26)
$(\partial K_T/\partial P)_T$	5.30	5.30	5.28	5.28	5.38	5.38	4.96	4.96	5.26	5.26	5.23	5.23
$(\partial \mu/\partial P)_T$	(1.82)	(1.50)	1.82	1.50	1.85	1.52	1.70	1.34	(1.82)	(1.50)	(1.82)	(1.50)
$(\partial \sigma/\partial P)_T$	1.758	2.145	1.855	2.250	1.801	2.197	1.705	2.160	1.789	2.179	1.733	2.132
$(\partial V_P/\partial P)_T$	29.55	27.55	29.61	27.59	30.25	28.21	27.00	24.69	29.43	27.42	29.68	27.65
$(\partial V_S/\partial P)_T$	10.68	8.00	10.54	7.84	10.89	8.16	9.53	6.46	10.57	7.89	10.78	8.06
$(\partial V_\phi/\partial P)_T$	28.54	28.54	28.81	28.81	29.26	29.26	26.36	26.36	28.52	28.52	28.58	28.58
$(\partial K_S/\partial T)_P$	-0.127	-0.127	-0.108	-0.108	-0.106	-0.106	(-0.111)	(-0.111)	-0.102	-0.102	-0.084	-0.084
$(\partial K_T/\partial T)_P$	-0.172	-0.172	-0.154	-0.154	-0.153	-0.153	-0.156	-0.156	-0.148	-0.148	-0.130	-0.130
$(\partial \mu/\partial T)_P$	-0.088	-0.076	-0.087	-0.075	-0.089	-0.077	(-0.088)	(-0.076)	-0.087	-0.075	-0.084	-0.077
$(\partial \sigma/\partial T)_P$	1.94	0.42	3.24	1.60	3.66	2.15	3.01	1.47	3.74	2.25	4.99	4.14
$(\partial V_P/\partial T)_P$	-0.981	-0.904	-0.874	-0.793	-0.870	-0.794	-0.893	-0.816	-0.838	-0.763	-0.737	-0.693
$(\partial V_S/\partial T)_P$	-0.632	-0.531	-0.617	-0.511	-0.630	-0.531	-0.620	-0.520	-0.614	-0.517	-0.600	-0.545
$(\partial V_\phi/\partial T)_P$	-0.664	-0.664	-0.536	-0.536	-0.519	-0.519	-0.558	-0.558	-0.490	-0.490	-0.371	-0.371
$(\partial P/\partial T)_{V_P}$	3.320	3.281	2.953	2.873	2.876	2.814	3.307	3.303	2.847	2.782	2.482	2.507
$(\partial P/\partial T)_{V_S}$	5.92	6.64	5.86	6.52	5.78	6.51	6.51	8.05	5.81	6.55	5.57	6.75
$(\partial P/\partial T)_{V_\phi}$	2.328	2.328	1.861	1.861	1.773	1.773	2.118	2.118	1.720	1.720	1.299	1.299
$(\partial P/\partial T)_\rho$	2.787	2.787	2.799	2.799	2.809	2.809	2.777	2.777	2.792	2.792	2.781	2.781
γ_{th}	1.571	1.571	1.580	1.580	1.584	1.584	1.565	1.565	1.575	1.575	1.569	1.569
γ_P	1.877	1.778	1.864	1.764	1.921	1.818	1.738	1.622	1.869	1.769	1.885	1.783
γ_S	1.306	1.068	1.279	1.043	1.330	1.086	1.194	0.921	1.293	1.055	1.318	1.075
γ_{LT}	1.356	1.129	1.330	1.105	1.381	1.148	1.241	0.982	1.343	1.116	1.366	1.135
γ_{HT}	1.497	1.305	1.474	1.283	1.527	1.330	1.375	1.155	1.485	1.293	1.507	1.311
δ_S	4.324	4.324	3.651	3.651	3.585	3.585	3.798	3.798	3.451	3.451	2.859	2.859
δ_T	6.160	6.160	5.489	5.489	5.435	5.435	5.628	5.628	5.291	5.291	4.693	4.693
θ_D	305.3	302.9	305.5	303.2	306.3	304.0	306.7	304.4	306.9	304.7	303.8	301.8
$(\partial K_S/\partial T)_V$	0.019	0.019	0.038	0.038	0.043	0.043	0.024	0.024	0.043	0.043	0.059	0.059
$(\partial K_P/\partial T)_V$	-0.024	-0.024	-0.006	-0.006	-0.001	-0.001	-0.018	-0.018	-0.001	-0.001	0.015	0.015
$(\partial \alpha/\partial T)_P$	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14
V_S/V_P	0.573	0.571	0.576	0.573	0.573	0.571	0.576	0.573	0.575	0.573	0.572	0.570
V_m	2.891	2.869	2.893	2.871	2.901	2.880	2.904	2.883	2.907	2.887	2.879	2.860
REF. EiC.	052(107)		011		108		026(107)		105(107)		069(107)	
REF. α, Cp	508, 613		533; 613		508; 613		508; 613		508; 613		508, 613	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	NaCl Rock salt (Cubic) RESO (1968) 297 K		NaCl Rock salt (Cubic) PULS (1970) 300 K		NaCl Rock salt (Cubic) PULS (1970) 300 K		NaCl Rock salt (Cubic) PULS (1970) ROOM		NaCl Rock salt (Cubic) *PULS (1972) 300 K		NaCl Rock salt (Cubic) PULS (1973) 300 K	
ρ_x	2.164		2.162		2.161		2.164		2.164		2.166	
ρ_B	******		******		******		******		******		******	
M	29.22		29.22		29.22		29.22		29.22		29.22	
a	117.52		117.52		117.52		117.52		117.52		117.52	
C_P	8.651		8.651		8.651		8.651		8.651		8.651	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	247.8	247.8	250.4	250.4	246.6	246.6	245.6	245.6	252.1	252.1	246.6	246.6
K_T	234.9	234.9	237.2	237.2	233.8	233.8	232.9	232.9	238.8	238.8	233.9	233.9
μ	146.9	144.7	147.4	145.2	143.9	142.3	144.1	142.6	147.6	145.4	143.5	141.9
σ	0.252	0.256	0.254	0.257	0.256	0.258	0.255	0.257	0.255	0.258	0.256	0.259
V_P	4.528	4.513	4.547	4.531	4.504	4.493	4.497	4.487	4.555	4.540	4.496	4.485
V_S	2.605	2.586	2.611	2.591	2.580	2.566	2.580	2.567	2.612	2.592	2.574	2.559
V_ϕ	3.384	3.384	3.403	3.403	3.378	3.378	3.369	3.369	3.413	3.413	3.374	3.374
$(\partial K_S/\partial P)_T$	(5.26)	(5.26)	5.27	5.27	(5.26)	(5.26)	(5.26)	(5.26)	5.26	5.26	(5.26)	(5.26)
$(\partial K_T/\partial P)_T$	5.26	5.26	5.28	5.28	5.18	5.18	5.22	5.22	5.27	5.27	5.16	5.16
$(\partial \mu/\partial P)_T$	(1.82)	(1.50)	1.86	1.53	(1.82)	(1.50)	(1.82)	(1.50)	1.82	1.50	(1.82)	(1.50)
$(\partial \sigma/\partial P)_T$	1.822	2.216	1.737	2.140	1.771	2.183	1.799	2.215	1.746	2.134	1.760	2.173
$(\partial V_P/\partial P)_T$	29.57	27.56	29.86	27.80	29.84	27.77	29.82	27.74	29.44	27.44	29.83	27.76
$(\partial V_S/\partial P)_T$	10.60	7.92	10.98	8.22	10.81	8.05	10.76	8.01	10.64	7.96	10.83	8.07
$(\partial V_\phi/\partial P)_T$	28.69	28.69	28.67	28.67	28.77	28.77	28.81	28.81	28.43	28.43	28.74	28.74
$(\partial K_S/\partial T)_P$	-0.105	-0.105	-0.107	-0.107	-0.058	-0.058	-0.079	-0.079	-0.111	-0.111	-0.047	-0.047
$(\partial K_T/\partial T)_P$	-0.150	-0.150	-0.152	-0.152	-0.105	-0.105	-0.124	-0.124	-0.157	-0.157	-0.095	-0.095
$(\partial \mu/\partial T)_P$	-0.084	-0.074	-0.090	-0.077	-0.087	-0.073	-0.095	-0.083	-0.088	-0.076	-0.087	-0.073
$(\partial \sigma/\partial T)_P$	3.09	1.84	3.81	2.18	7.55	5.66	6.90	5.35	3.11	1.58	8.39	6.55
$(\partial V_P/\partial T)_P$	-0.844	-0.781	-0.888	-0.806	-0.626	-0.534	-0.788	-0.712	-0.889	-0.812	-0.572	-0.483
$(\partial V_S/\partial T)_P$	-0.594	-0.513	-0.645	-0.539	-0.627	-0.507	-0.695	-0.597	-0.621	-0.521	-0.625	-0.510
$(\partial V_\phi/\partial T)_P$	-0.519	-0.519	-0.526	-0.526	-0.197	-0.197	-0.342	-0.342	-0.553	-0.553	-0.127	-0.127
$(\partial P/\partial T)_{V_P}$	2.853	2.833	2.973	2.900	2.099	1.924	2.642	2.567	3.021	2.960	1.919	1.740
$(\partial P/\partial T)_{V_S}$	5.61	6.48	5.88	6.56	5.80	6.30	6.46	7.46	5.84	6.54	5.78	6.31
$(\partial P/\partial T)_{V_\phi}$	1.809	1.809	1.834	1.834	0.684	0.684	1.186	1.186	1.945	1.945	0.441	0.441
$(\partial P/\partial T)_\rho$	2.761	2.761	2.788	2.788	2.748	2.748	2.738	2.738	2.806	2.806	2.748	2.748
γ_{th}	1.556	1.556	1.573	1.573	1.550	1.550	1.541	1.541	1.583	1.583	1.546	1.546
γ_P	1.868	1.768	1.891	1.788	1.882	1.778	1.878	1.774	1.877	1.776	1.885	1.781
γ_S	1.289	1.053	1.331	1.086	1.313	1.067	1.305	1.060	1.306	1.067	1.317	1.071
γ_{LT}	1.340	1.114	1.379	1.146	1.362	1.128	1.355	1.121	1.355	1.127	1.366	1.131
γ_{HT}	1.462	1.291	1.518	1.320	1.503	1.304	1.496	1.298	1.496	1.303	1.506	1.308
δ_S	3.609	3.609	3.630	3.630	1.991	1.991	2.727	2.727	3.757	3.757	1.639	1.639
δ_T	5.428	5.428	5.468	5.468	3.804	3.804	4.530	4.530	5.605	5.605	3.448	3.448
θ_D	305.5	303.3	306.1	303.9	302.5	300.9	302.6	301.1	306.3	304.1	302.0	300.4
$(\partial K_S/\partial T)_V$	0.038	0.038	0.038	0.038	0.083	0.083	0.062	0.062	0.035	0.035	0.092	0.092
$(\partial K_P/\partial T)_V$	-0.004	-0.004	-0.005	-0.005	0.038	0.038	0.019	0.019	-0.009	-0.009	0.047	0.047
$(\partial \alpha/\partial T)_P$	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14	9.14
V_S/V_P	0.575	0.573	0.574	0.572	0.573	0.571	0.574	0.572	0.573	0.571	0.572	0.571
V_m	2.893	2.873	2.900	2.879	2.867	2.851	2.866	2.852	2.902	2.881	2.860	2.844
REF. E.C.	048(107)		034		101(107)		036(107)		107		007(107)	
REF. α, Cp	508; 613		508; 613		508; 613		508; 613		508; 613		508; 613	

NaCl	NaCl	NaCl	NaCl-NaBr(11.5%)	NaCl-NaBr(26%)	NaCl-NaBr(50.5%)
Rock salt (Cubic)	Rock salt (Cubic)	Rock salt (Cubic)	Rock salt (Cubic)	Rock salt (Cubic)	Rock salt (Cubic)

REF. E.C.	048(107)	034	101(107)	036(107)	107	007(107)
REF. α, Cp	508; 613	508; 613	508; 613	508; 613	508; 613	508; 613

	NaCl Rock salt (Cubic) BRIL (1976) 300 K		NaCl Rock salt (Cubic) PULS (1979) 293 K		NaCl Rock salt (Cubic) PULS (1979) ROOM		NaCl-NaBr (11.5%) Rock salt (Cubic) PULS (1973) 300 K		NaCl-NaBr (26%) Rock salt (Cubic) PULS (1973) 300 K		NaCl-NaBr (50.5%) Rock salt (Cubic) PULS (1973) 300 K	
ρ_x	2.164		2.164		2.164		2.311		2.567		2.886	
ρ_B	******		******		******		******		******		******	
M	29.22		29.22		29.22		31.78		35.00		40.45	
α	117.52		117.52		117.52		119.47		121.94		126.10	
C_p	8.651		8.651		8.651		7.971		7.256		6.306	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	247.0	247.0	240.0	240.0	253.3	253.3	240.8	240.8	235.3	235.3	225.4	225.4
K_T	234.2	234.2	227.9	227.9	239.9	239.9	228.0	228.0	222.7	222.7	212.8	212.8
μ	145.0	143.0	147.0	144.0	157.8	155.2	139.9	138.3	134.8	133.3	127.9	126.4
σ	0.255	0.257	0.246	0.250	0.242	0.246	0.257	0.259	0.259	0.262	0.261	0.264
V_P	4.511	4.497	4.489	4.468	4.629	4.612	4.300	4.289	4.021	4.011	3.704	3.694
V_S	2.589	2.571	2.606	2.580	2.700	2.678	2.460	2.446	2.291	2.279	2.105	2.093
V_ϕ	3.378	3.378	3.330	3.330	3.421	3.421	3.228	3.228	3.027	3.027	2.795	2.795
$(\partial K_S/\partial P)_T$	5.91	5.91	5.10	5.10	3.72	3.72	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	5.90	5.90	5.13	5.13	3.82	3.82	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	1.93	1.69	1.68	1.36	1.43	1.17	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	2.177	2.457	2.069	2.461	1.201	1.506	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	33.84	32.37	27.96	25.94	18.44	16.86	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	11.72	9.74	9.21	6.51	6.61	4.54	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	33.21	33.21	28.08	28.08	17.99	17.99	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	(-0.111)	(-0.111)	(-0.111)	(-0.111)	(-0.111)	(-0.111)	-0.044	-0.044	-0.055	-0.055	-0.094	-0.094
$(\partial K_T/\partial T)_P$	-0.155	-0.155	-0.153	-0.153	-0.158	-0.158	-0.091	-0.091	-0.101	-0.101	-0.138	-0.138
$(\partial \mu/\partial T)_P$	(-0.088)	(-0.076)	(-0.088)	(-0.076)	(-0.088)	(-0.076)	-0.088	-0.074	-0.087	-0.074	-0.077	-0.066
$(\partial \sigma/\partial T)_P$	3.15	1.57	2.79	1.26	2.47	0.99	9.10	7.18	8.27	6.44	3.69	2.10
$(\partial V_P/\partial T)_P$	-0.903	-0.825	-0.910	-0.834	-0.867	-0.791	-0.552	-0.463	-0.581	-0.502	-0.685	-0.620
$(\partial V_S/\partial T)_P$	-0.630	-0.528	-0.623	-0.525	-0.591	-0.494	-0.625	-0.510	-0.597	-0.494	-0.499	-0.414
$(\partial V_\phi/\partial T)_P$	-0.563	-0.563	-0.577	-0.577	-0.551	-0.551	-0.100	-0.100	-0.169	-0.169	-0.406	-0.406
$(\partial p/\partial T)_{V_P}$	2.670	2.548	3.256	3.213	4.700	4.692	******	******	******	******	******	******
$(\partial p/\partial T)_{V_S}$	5.37	5.42	6.77	8.06	8.94	10.89	******	******	******	******	******	******
$(\partial p/\partial T)_{V_\phi}$	1.694	1.694	2.053	2.053	3.061	3.061	******	******	******	******	******	******
$(\partial p/\partial T)_\rho$	2.752	2.752	2.678	2.678	2.819	2.819	2.724	2.724	2.716	2.716	2.684	2.684
γ_{th}	1.551	1.551	1.507	1.507	1.590	1.590	1.562	1.562	1.540	1.540	1.562	1.562
γ_P	2.090	2.019	1.753	1.656	1.289	1.210	******	******	******	******	******	******
γ_S	1.394	1.221	1.139	0.909	0.920	0.740	******	******	******	******	******	******
γ_{LT}	1.454	1.289	1.193	0.974	0.953	0.782	******	******	******	******	******	******
γ_{HT}	1.626	1.487	1.343	1.158	1.043	0.897	******	******	******	******	******	******
ϕ_S	3.834	3.834	3.946	3.946	3.739	3.739	1.519	1.519	1.917	1.917	3.304	3.304
ϕ_T	5.647	5.647	5.711	5.711	5.596	5.596	3.348	3.348	3.726	3.726	5.142	5.142
θ_D	303.6	301.6	305.4	302.4	316.2	313.7	286.9	285.3	268.0	266.6	244.0	242.7
$(\partial K_S/\partial T)_V$	0.050	0.050	0.024	0.024	-0.008	-0.008	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	0.007	0.007	-0.016	-0.016	-0.050	-0.050	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	9.14	9.14	9.14	9.14	9.14	9.14	9.42	9.42	9.78	9.78	10.38	10.38
V_S/V_P	0.574	0.572	0.581	0.577	0.583	0.581	0.572	0.570	0.570	0.568	0.568	0.566
V_M	2.875	2.856	2.892	2.864	2.995	2.972	2.734	2.719	2.547	2.533	2.340	2.327
REF. E.C.	118(107)		115(107)		063(107)		007		007		007	
REF. α, Cp	508, 613		508, 613		508; 613		507+508, 613		507+508, 613		507+508, 613	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	NaCl-NaBr (63%) Rock salt (Cubic) PULS (1973) 300 K		NaCl-NaBr (78.5%) Rock salt (Cubic) PULS (1973) 300 K		KCl Rock salt (Cubic) PULS (1960) 295 K		KCl Rock salt (Cubic) RESO (1960) 298 K		KCl Rock salt (Cubic) PULS (1965) 295 K		KCl Rock salt (Cubic) PULS (1967) ROOM	
ρ_x	2.883		3.044		1.987		1.987		1.987		1.987	
ρ_B	******		******		******		******		******		******	
M	43.23		46.67		37.28		37.28		37.28		37.28	
α	128.22		130.86		105.00		105.00		105.00		105.00	
C_P	5.913		5.492		6.887		6.887		6.887		6.887	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	219.9	219.9	217.2	217.2	182.5	182.5	164.1	164.1	181.5	181.5	183.3	183.3
K_T	206.7	206.7	203.6	203.6	174.8	174.8	157.8	157.8	173.9	173.9	175.5	175.5
μ	124.1	122.6	119.9	118.4	95.0	84.4	95.9	84.6	94.4	84.0	94.6	83.8
σ	0.263	0.265	0.267	0.269	0.278	0.300	0.255	0.280	0.278	0.300	0.280	0.302
V_P	3.656	3.646	3.520	3.510	3.945	3.853	3.833	3.733	3.933	3.843	3.946	3.853
V_S	2.075	2.062	1.985	1.972	2.187	2.061	2.197	2.064	2.180	2.056	2.182	2.054
V_ϕ	2.762	2.762	2.671	2.671	3.031	3.031	2.874	2.874	3.022	3.022	3.037	3.037
$(\partial K_S/\partial P)_T$	******	******	******	******	(5.34)	(5.34)	(5.34)	(5.34)	5.34	5.34	5.37	5.37
$(\partial K_T/\partial P)_T$	******	******	******	******	5.39	5.39	5.34	5.34	5.37	5.37	5.40	5.40
$(\partial \mu/\partial P)_T$	******	******	******	******	(1.08)	(0.15)	(1.08)	(0.15)	1.08	0.15	0.96	-0.04
$(\partial \sigma/\partial P)_T$	******	******	******	******	3.376	4.765	4.348	5.770	3.391	4.792	3.608	5.130
$(\partial V_P/\partial P)_T$	******	******	******	******	31.99	25.18	32.39	25.54	32.09	25.25	31.15	23.76
$(\partial V_S/\partial P)_T$	******	******	******	******	6.21	-4.03	5.45	-4.67	6.23	-4.04	4.81	-6.34
$(\partial V_\phi/\partial P)_T$	******	******	******	******	35.67	35.67	37.65	37.65	35.77	35.77	35.87	35.87
$(\partial K_S/\partial T)_P$	-0.109	-0.109	-0.117	-0.117	-0.093	-0.093	-0.066	-0.066	-0.083	-0.083	(-0.083)	(-0.083)
$(\partial K_T/\partial T)_P$	-0.154	-0.154	-0.163	-0.163	-0.121	-0.121	-0.089	-0.089	-0.111	-0.111	-0.112	-0.112
$(\partial \mu/\partial T)_P$	-0.074	-0.064	-0.072	-0.062	-0.058	-0.033	-0.056	-0.034	-0.056	-0.032	(-0.056)	(-0.032)
$(\partial \sigma/\partial T)_P$	2.05	0.55	1.22	-0.27	1.89	-2.04	3.84	0.08	2.61	-1.43	2.66	-1.33
$(\partial V_P/\partial T)_P$	-0.750	-0.689	-0.761	-0.702	-0.874	-0.689	-0.722	-0.554	-0.804	-0.617	-0.800	-0.614
$(\partial V_S/\partial T)_P$	-0.486	-0.406	-0.464	-0.387	-0.549	-0.293	-0.530	-0.309	-0.534	-0.278	-0.534	-0.278
$(\partial V_\phi/\partial T)_P$	-0.506	-0.506	-0.542	-0.542	-0.610	-0.610	-0.424	-0.424	-0.532	-0.532	-0.528	-0.528
$(\partial P/\partial T)_{V_P}$	******	******	******	******	2.733	2.736	2.230	2.167	2.505	2.442	2.568	2.584
$(\partial P/\partial T)_{V_S}$	******	******	******	******	8.85	-7.29	9.72	-6.61	8.57	-6.88	11.09	-4.39
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	1.709	1.709	1.125	1.125	1.488	1.488	1.473	1.473
$(\partial P/\partial T)_\rho$	2.651	2.651	2.664	2.664	1.835	1.835	1.657	1.657	1.826	1.826	1.843	1.843
γ_{th}	1.654	1.654	1.700	1.700	1.400	1.400	1.259	1.259	1.392	1.392	1.406	1.406
γ_P	******	******	******	******	1.751	1.476	1.667	1.413	1.752	1.476	1.719	1.416
γ_S	******	******	******	******	0.830	-0.008	0.725	-0.024	0.831	-0.008	0.720	-0.209
γ_{LT}	******	******	******	******	0.902	0.097	0.806	0.088	0.903	0.097	0.798	-0.094
γ_{HT}	******	******	******	******	1.137	0.486	1.039	0.455	1.138	0.486	1.053	0.333
δ_S	3.855	3.855	4.102	4.102	4.832	4.832	3.807	3.807	4.355	4.355	4.313	4.313
δ_T	5.799	5.799	6.101	6.101	6.592	6.592	5.396	5.396	6.105	6.105	6.079	6.079
θ_D	235.2	233.8	223.4	222.1	230.5	217.8	230.9	217.6	229.7	217.2	230.0	217.1
$(\partial K_S/\partial T)_V$	******	******	******	******	0.003	0.003	0.020	0.020	0.011	0.011	0.013	0.013
$(\partial K_P/\partial T)_V$	******	******	******	******	-0.022	-0.022	-0.001	-0.001	-0.013	-0.013	-0.012	-0.012
$(\partial \alpha/\partial T)_P$	10.69	10.69	11.07	11.07	10.91	10.91	10.91	10.91	10.91	10.91	10.91	10.91
V_S/V_P	0.567	0.566	0.564	0.562	0.554	0.535	0.573	0.553	0.554	0.535	0.553	0.533
V_m	2.307	2.293	2.208	2.195	2.436	2.302	2.440	2.299	2.428	2.296	2.431	2.294
REF. E.C.	007		007		052(011)		027(011)		011		026(011)	
REF. α, Cp	507+508; 613		507+508; 613		537; 613		537; 613		537; 613		537; 613	

	KCl Rock salt (Cubic) PULS (1967)	KCl Rock salt (Cubic) RESO (1968)	KCl Rock salt (Cubic) PULS (1969)	KCl Rock salt (Cubic) RESO (1970)	KCl Rock salt (Cubic) PULS (1970)	KCl-KBr (7.7%) Rock salt (Cubic) PULS (1976)

REF. α, Cp	507+508; 613		507+508; 613		537; 613		537; 613		537; 613		537; 613	
	KCl Rock salt (Cubic) PULS (1967) 298 K		KCl Rock salt (Cubic) RESO (1968) 297 K		KCl Rock salt (Cubic) PULS (1969) ROOM		KCl Rock salt (Cubic) RESO (1970) 300 K		KCl Rock salt (Cubic) PULS (1970) 300 K		KCl-KBr (7.7%) Rock salt (Cubic) PULS (1976) ROOM	
ρ_x	1.984		1.987		1.987		1.987		1.986		2.040	
ρ_B	******		******		******		******		******		******	
M	37.28		37.28		37.28		37.28		37.28		39.00	
α	105.00		105.00		105.00		105.00		105.00		105.40	
C_p	6.887		6.887		6.887		6.887		6.887		6.593	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	183.0	183.0	180.3	180.3	179.0	179.0	179.1	179.1	181.3	181.3	181.0	181.0
K_T	175.2	175.2	172.8	172.8	171.6	171.6	171.7	171.7	173.7	173.7	173.2	173.2
μ	94.6	84.1	94.7	84.2	95.9	85.2	93.6	83.3	92.9	83.0	92.3	81.9
σ	0.280	0.301	0.276	0.298	0.273	0.295	0.277	0.299	0.281	0.301	0.282	0.303
V_P	3.947	3.857	3.928	3.837	3.929	3.837	3.910	3.821	3.919	3.834	3.861	3.772
V_S	2.183	2.059	2.183	2.059	2.196	2.071	2.170	2.047	2.162	2.044	2.127	2.004
V_ϕ	3.037	3.037	3.012	3.012	3.001	3.001	3.002	3.002	3.021	3.021	2.979	2.979
$(\partial K_S/\partial P)_T$	(5.34)	(5.34)	(5.34)	(5.34)	5.39	5.39	(5.34)	(5.34)	(5.34)	(5.34)	5.38	5.38
$(\partial K_T/\partial P)_T$	5.34	5.34	5.39	5.39	5.42	5.42	5.43	5.43	5.43	5.43	5.40	5.40
$(\partial \mu/\partial P)_T$	(1.08)	(0.15)	(1.08)	(0.15)	1.14	0.21	(1.08)	(0.15)	(1.08)	(0.15)	1.10	0.16
$(\partial \sigma/\partial P)_T$	3.333	4.728	3.459	4.861	3.504	4.897	3.458	4.877	3.325	4.756	3.327	4.746
$(\partial V_P/\partial P)_T$	32.05	25.22	32.07	25.25	32.83	26.01	32.26	25.37	32.29	25.36	32.28	25.45
$(\partial V_S/\partial P)_T$	6.27	-4.00	6.16	-4.09	6.71	-3.46	6.23	-4.08	6.38	-4.00	6.48	-3.84
$(\partial V_\phi/\partial P)_T$	35.65	35.65	35.89	35.89	36.44	36.44	36.01	36.01	35.79	35.79	35.67	35.67
$(\partial K_S/\partial T)_P$	-0.067	-0.067	-0.089	-0.089	(-0.083)	(-0.083)	-0.107	-0.107	-0.108	-0.108	(-0.076)	(-0.076)
$(\partial K_T/\partial T)_P$	-0.096	-0.096	-0.117	-0.117	-0.111	-0.111	-0.134	-0.134	-0.136	-0.136	-0.105	-0.105
$(\partial \mu/\partial T)_P$	-0.056	-0.032	-0.054	-0.033	(-0.056)	(-0.032)	-0.054	-0.032	-0.054	-0.031	(-0.054)	(-0.031)
$(\partial \sigma/\partial T)_P$	4.21	0.29	1.49	-1.69	2.36	-1.67	-0.37	-3.67	-0.32	-3.92	3.10	-0.73
$(\partial V_P/\partial T)_P$	-0.691	-0.511	-0.825	-0.674	-0.805	-0.618	-0.951	-0.791	-0.951	-0.779	-0.735	-0.561
$(\partial V_S/\partial T)_P$	-0.527	-0.284	-0.509	-0.300	-0.529	-0.274	-0.516	-0.291	-0.514	-0.271	-0.510	-0.271
$(\partial V_\phi/\partial T)_P$	-0.393	-0.393	-0.584	-0.584	-0.538	-0.538	-0.742	-0.742	-0.744	-0.744	-0.467	-0.467
$(\partial P/\partial T)_{V_P}$	2.157	2.028	2.572	2.667	2.452	2.376	2.950	3.117	2.947	3.069	2.276	2.203
$(\partial P/\partial T)_{V_S}$	8.40	-7.09	8.26	-7.34	7.88	-7.93	8.27	-7.12	8.05	-6.77	7.87	-7.06
$(\partial P/\partial T)_{V_\phi}$	1.103	1.103	1.629	1.629	1.477	1.477	2.062	2.062	2.078	2.078	1.308	1.308
$(\partial P/\partial T)_\rho$	1.840	1.840	1.814	1.814	1.802	1.802	1.803	1.803	1.824	1.824	1.826	1.826
γ_{th}	1.406	1.406	1.383	1.383	1.373	1.373	1.374	1.374	1.392	1.392	1.418	1.418
γ_P	1.756	1.479	1.745	1.470	1.767	1.497	1.749	1.473	1.764	1.483	1.782	1.502
γ_S	0.837	-0.007	0.821	-0.010	0.857	0.047	0.826	-0.009	0.846	-0.007	0.861	0.001
γ_{LT}	0.909	0.098	0.894	0.096	0.930	0.152	0.899	0.097	0.917	0.098	0.932	0.106
γ_{HT}	1.143	0.488	1.129	0.484	1.161	0.530	1.134	0.485	1.152	0.490	1.168	0.502
δ_S	3.466	3.466	4.696	4.696	4.416	4.416	5.711	5.711	5.689	5.689	3.973	3.973
δ_T	5.232	5.232	6.435	6.435	6.143	6.143	7.439	7.439	7.438	7.438	5.749	5.749
θ_D	230.0	217.5	230.1	217.5	231.3	218.7	228.7	216.3	228.0	216.0	222.9	210.5
$(\partial K_S/\partial T)_V$	0.028	0.028	0.005	0.005	0.011	0.011	-0.013	-0.013	-0.013	-0.013	0.019	0.019
$(\partial K_P/\partial T)_V$	0.002	0.002	-0.019	-0.019	-0.013	-0.013	-0.036	-0.036	-0.037	-0.037	-0.006	-0.006
$(\partial \alpha/\partial T)_P$	10.91	10.91	10.91	10.91	10.91	10.91	10.91	10.91	10.91	10.91	10.82	10.82
V_S/V_P	0.553	0.534	0.556	0.536	0.559	0.540	0.555	0.536	0.552	0.533	0.551	0.531
V_M	2.432	2.300	2.432	2.299	2.445	2.311	2.417	2.286	2.410	2.283	2.371	2.239
REF. E.C.	104(011)		048(011)		025(011)		022(011)		101(011)		016(100)	
REF. α, Cp	537, 613		537, 613		537, 613		537, 613		537, 613		537; 613	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	KCl-KBr (16.8%) Rock salt (Cubic) PULS (1967) 298 K		KCl-KBr (38.2%) Rock salt (Cubic) PULS (1967) 298 K		KCl-KBr (59.8%) Rock salt (Cubic) PULS (1967) 298 K		KCl-KBr (79.5%) Rock salt (Cubic) PULS (1967) 298 K		KCl-RbCl (25%) Rock salt (Cubic) RESO (1970) 300 K		KCl-RbCl (50%) Rock salt (Cubic) RESO (1970) 300 K	
ρ_x	2.129		2.302		2.473		2.613		2.218		2.434	
ρ_B	******		******		******		******		******		******	
M	41.01		45.77		50.57		54.95		43.07		48.87	
a	105.90		107.00		108.20		109.20		108.60		112.20	
C_p	6.281		5.652		5.137		4.745		5.968		5.266	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_s	176.7	176.7	169.3	169.3	163.0	163.0	159.1	159.1	173.2	173.2	169.0	169.0
K_T	169.2	169.2	162.1	162.1	156.0	156.0	152.1	152.1	165.5	165.5	161.0	161.0
μ	91.1	80.9	87.2	77.5	83.5	73.9	80.8	71.2	87.5	77.0	83.4	72.5
σ	0.280	0.301	0.280	0.301	0.281	0.303	0.283	0.305	0.284	0.306	0.288	0.312
V_p	3.742	3.656	3.522	3.441	3.331	3.252	3.195	3.118	3.615	3.527	3.393	3.304
V_s	2.068	1.950	1.947	1.835	1.838	1.728	1.758	1.650	1.986	1.863	1.851	1.726
V_ϕ	2.881	2.881	2.712	2.712	2.567	2.567	2.468	2.468	2.794	2.794	2.635	2.635
$(\partial K_s/\partial P)_T$	(5.38)	(5.38)	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	5.40	5.40	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	(1.10)	(0.16)	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	3.457	4.909	******	******	******	******	******	******	******	******	******	******
$(\partial V_p/\partial P)_T$	31.87	25.11	******	******	******	******	******	******	******	******	******	******
$(\partial V_s/\partial P)_T$	6.32	-3.85	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	35.34	35.34	******	******	******	******	******	******	******	******	******	******
$(\partial K_s/\partial T)_P$	-0.076	-0.076	-0.080	-0.080	-0.075	-0.075	-0.075	-0.075	-0.109	-0.109	-0.105	-0.105
$(\partial K_T/\partial T)_P$	-0.104	-0.104	-0.107	-0.107	-0.100	-0.100	-0.100	-0.100	-0.135	-0.135	-0.131	-0.131
$(\partial \mu/\partial T)_P$	-0.054	-0.031	-0.053	-0.031	-0.052	-0.029	-0.050	-0.028	-0.055	-0.033	-0.050	-0.027
$(\partial \sigma/\partial T)_P$	3.08	-0.83	2.55	-1.33	2.97	-1.04	2.79	-1.22	-0.05	-3.42	-0.42	-4.00
$(\partial V_p/\partial T)_P$	-0.729	-0.557	-0.746	-0.583	-0.692	-0.533	-0.677	-0.525	-0.934	-0.780	-0.848	-0.695
$(\partial V_s/\partial T)_P$	-0.504	-0.268	-0.491	-0.266	-0.468	-0.250	-0.451	-0.240	-0.512	-0.293	-0.450	-0.229
$(\partial V_\phi/\partial T)_P$	-0.465	-0.465	-0.499	-0.499	-0.450	-0.450	-0.448	-0.448	-0.724	-0.724	-0.671	-0.671
$(\partial P/\partial T)_{V_P}$	2.289	2.218	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	7.97	-6.96	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	1.317	1.317	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_P$	1.792	1.792	1.734	1.734	1.688	1.688	1.661	1.661	1.798	1.798	1.806	1.806
γ_{th}	1.399	1.399	1.392	1.392	1.388	1.388	1.401	1.401	1.421	1.421	1.479	1.479
γ_P	1.774	1.495	******	******	******	******	******	******	******	******	******	******
γ_S	0.851	-0.000	******	******	******	******	******	******	******	******	******	******
γ_{LT}	0.923	0.105	******	******	******	******	******	******	******	******	******	******
γ_{HT}	1.159	0.498	******	******	******	******	******	******	******	******	******	******
δ_S	4.051	4.051	4.438	4.438	4.241	4.241	4.328	4.328	5.768	5.768	5.537	5.537
δ_T	5.797	5.797	6.162	6.162	5.946	5.946	6.036	6.036	7.491	7.491	7.269	7.269
θ_D	216.1	204.3	201.3	190.2	188.3	177.6	178.5	168.0	207.1	194.8	191.0	178.6
$(\partial K_s/\partial T)_V$	0.018	0.018	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	-0.007	-0.007	******	******	******	******	******	******	******	******	******	******
$(\partial a/\partial T)_P$	10.72	10.72	10.47	10.47	10.22	10.22	9.99	9.99	9.73	9.73	8.56	8.56
V_S/V_P	0.553	0.533	0.553	0.533	0.552	0.532	0.550	0.529	0.549	0.528	0.546	0.522
V_m	2.304	2.178	2.169	2.050	2.048	1.931	1.960	1.845	2.214	2.083	2.065	1.931
REF. E.C.	104;(016)		104		104		104		022		022	
REF. α, Cp	537; 613		537, 613		537; 613		537, 613		537; 611+613		537; 611+613	

KCl-RbCl (75%) CuCl RbCl RbCl RbCl RbCl

	KCl-RbCl(75%) Rock salt (Cubic) RESO (1970) 300 K		CuCl Zincblende(Cubic) PULS (1974) 300 K		RbCl Rock salt (Cubic) PULS (1960) 295 K		RbCl Rock salt (Cubic) PULS (1967) 298 K		RbCl Rock salt (Cubic) PULS (1967) 300 K		RbCl Rock salt (Cubic) PULS (1970) 295 K	
ρ_X	2.636		4.138		2.825		2.818		2.797		2.818	
ρ_B	******		******		******		******		******		******	
M	54.67		49.50		60.46		60.46		60.46		60.46	
α	115.80		46.20		119.40		119.40		114.40		119.40	
C_P	4.714		4.928		4.267		4.267		4.267		4.267	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	164.9	164.9	393.3	393.3	162.1	162.1	164.1	164.1	164.8	164.8	162.0	162.0
K_T	156.5	156.5	388.5	388.5	153.3	153.3	155.1	155.1	156.3	156.3	153.2	153.2
μ	79.2	67.8	87.8	75.7	76.3	64.3	76.1	64.7	77.3	65.7	(77.5)[A]	(65.6)[A]
σ	0.293	0.319	0.396	0.410	0.297	0.325	0.299	0.326	0.297	0.324	0.294	0.322
V_P	3.203	3.112	3.512	3.456	3.056	2.962	3.070	2.980	3.094	3.004	3.068	2.975
V_S	1.733	1.604	1.456	1.353	1.643	1.509	1.643	1.515	1.662	1.533	1.658	1.525
V_ϕ	2.501	2.501	3.083	3.083	2.396	2.396	2.413	2.413	2.427	2.427	2.398	2.398
$(\partial K_S/\partial P)_T$	******	******	4.21	4.21	(5.35)	(5.35)	4.55	4.55	(5.35)	(5.35)	5.48	5.48
$(\partial K_T/\partial P)_T$	******	******	4.39	4.39	5.38	5.38	4.62	4.62	5.51	5.51	5.50	5.50
$(\partial \mu/\partial P)_T$	******	******	-0.55	-0.55	(0.86)	(-0.26)	0.96	-0.13	(0.86)	(-0.26)	0.91	-0.20
$(\partial \sigma/\partial P)_T$	******	******	1.641	1.530	3.813	5.720	2.619	4.577	3.737	5.650	3.935	5.801
$(\partial V_P/\partial P)_T$	******	******	7.43	7.68	27.68	20.27	23.79	16.41	27.65	20.20	28.67	21.36
$(\partial V_S/\partial P)_T$	******	******	-6.45	-6.68	3.93	-7.92	5.09	-6.42	3.96	-7.89	4.29	-7.34
$(\partial V_\phi/\partial P)_T$	******	******	12.52	12.52	31.71	31.71	25.64	25.64	31.64	31.64	32.73	32.73
$(\partial K_S/\partial T)_P$	-0.098	-0.098	-0.328	-0.328	-0.082	-0.082	(-0.080)	(-0.080)	-0.127	-0.127	(-0.080)[B]	(-0.080)[B]
$(\partial K_T/\partial T)_P$	-0.124	-0.124	-0.344	-0.344	-0.109	-0.109	-0.109	-0.109	-0.152	-0.152	-0.108	-0.108
$(\partial \mu/\partial T)_P$	-0.046	-0.025	-0.009	-0.010	-0.051	-0.025	(-0.049)	(-0.023)	-0.039	-0.018	(-0.049)[B]	(-0.023)[B]
$(\partial \sigma/\partial T)_P$	-0.13	-3.66	-7.09	-5.99	2.79	-1.75	2.64	-1.97	-4.74	-7.70	2.38	-2.18
$(\partial V_P/\partial T)_P$	-0.760	-0.616	-1.089	-1.113	-0.680	-0.511	-0.654	-0.483	-0.855	-0.727	-0.654	-0.485
$(\partial V_S/\partial T)_P$	-0.407	-0.198	-0.040	-0.056	-0.446	-0.204	-0.427	-0.182	-0.321	-0.123	-0.421	-0.180
$(\partial V_\phi/\partial T)_P$	-0.597	-0.597	-1.215	-1.215	-0.460	-0.460	-0.444	-0.444	-0.797	-0.797	-0.449	-0.449
$(\partial P/\partial T)_{V_P}$	******	******	14.663	14.487	2.457	2.520	2.749	2.943	3.091	3.602	2.283	2.269
$(\partial P/\partial T)_{V_S}$	******	******	-0.62	-0.84	11.34	-2.58	8.39	-2.84	8.11	-1.56	9.82	-2.45
$(\partial P/\partial T)_{V_\phi}$	******	******	9.705	9.705	1.450	1.450	1.732	1.732	2.518	2.518	1.372	1.372
$(\partial P/\partial T)_\rho$	1.813	1.813	1.795	1.795	1.831	1.831	1.851	1.851	1.788	1.788	1.829	1.829
γ_{th}	1.537	1.537	0.891	0.891	1.606	1.606	1.629	1.629	1.579	1.579	1.609	1.609
γ_P	******	******	1.155	1.197	1.722	1.382	1.535	1.187	1.730	1.384	1.764	1.433
γ_S	******	******	-1.387	-1.584	0.700	-0.471	0.814	-0.324	0.706	-0.471	0.730	-0.404
γ_{LT}	******	******	-1.299	-1.503	0.774	-0.357	0.865	-0.231	0.779	-0.355	0.806	-0.288
γ_{HT}	******	******	-0.540	-0.657	1.041	0.146	1.054	0.180	1.047	0.148	1.075	0.208
δ_S	5.122	5.122	18.062	18.062	4.215	4.215	4.083	4.083	6.737	6.737	4.136	4.136
δ_T	6.859	6.859	19.148	19.148	5.970	5.970	5.862	5.862	8.479	8.479	5.894	5.894
θ_D	177.0	164.3	181.1	168.6	166.2	153.1	166.1	153.6	167.5	155.0	167.4	154.6
$(\partial K_S/\partial T)_V$	******	******	-0.252	-0.252	0.018	0.018	0.006	0.006	-0.028	-0.028	0.022	0.022
$(\partial K_P/\partial T)_V$	******	******	-0.265	-0.265	-0.011	-0.011	-0.023	-0.023	-0.053	-0.053	-0.007	-0.007
$(\partial \alpha/\partial T)_P$	7.38	7.38	3.60	3.60	6.20	6.20	6.20	6.20	6.20	6.20	6.20	6.20
V_S/V_P	0.541	0.515	0.415	0.391	0.538	0.509	0.535	0.508	0.537	0.510	0.540	0.513
V_M	1.934	1.796	1.648	1.534	1.835	1.691	1.835	1.698	1.856	1.718	1.851	1.709
REF. E.C.	022		040		b52(b20)		114(035)		073(020)		693(020;035[B])	
REF. α, Cp	537, 611+613		527; 613		537, 611		537; 611		073, 611		537, 611	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	RbCl Rock salt (Cubic) RESO (1970) 300 K		RbCl Rock salt (Cubic) *PULS (1970) 300 K		RbCl Rock salt (Cubic) PULS (1970) 300 K		RbCl Rock salt (Cubic) *PULS (1971) 298 K		RbCl Rock salt (Cubic) *PULS (1977) ROOM		AgCl Rock salt (Cubic) PULS (1967) 295 K	
ρ_x	2.825		2.797		2.817		2.818		2.818		5.569	
ρ_B	******		******		******		******		******		******	
M	60.46		60.46		60.46		60.46		60.46		71.66	
a	119.40		114.40		114.40		106.20		119.40		105.00	
C_p	4.267		4.267		4.267		4.267		4.267		3.534	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_s	163.3	163.3	161.6	161.6	161.9	161.9	163.0	163.0	(163.0)[A]	(163.0)[A]	434.1	434.1
K_T	154.4	154.4	153.5	153.5	153.8	153.8	155.8	155.8	154.0	154.0	404.6	404.6
μ	76.9	65.2	76.4	64.6	76.0	64.4	77.5	65.6	(77.5)[A]	(65.6)[A]	79.4	76.0
σ	0.296	0.324	0.296	0.324	0.297	0.324	0.295	0.323	0.295	0.323	0.414	0.417
V_P	3.068	2.976	3.070	2.976	3.057	2.966	3.074	2.981	3.074	2.981	3.114	3.101
V_S	1.650	1.519	1.653	1.520	1.642	1.512	1.658	1.525	1.658	1.525	1.194	1.168
V_ϕ	2.404	2.404	2.404	2.404	2.397	2.397	2.405	2.405	2.405	2.405	2.792	2.792
$(\partial K_S/\partial P)_T$	(5.35)	(5.35)	5.47	5.47	(5.35)	(5.35)	5.35	5.35	5.33	5.33	(6.57)	(6.57)
$(\partial K_T/\partial P)_T$	5.42	5.42	5.50	5.50	5.35	5.35	5.39	5.39	5.36	5.36	6.75	6.75
$(\partial\mu/\partial P)_T$	(0.86)	(-0.26)	0.93	-0.25	(0.86)	(-0.26)	0.86	-0.26	0.89	-0.23	(0.55)	(0.09)
$(\partial\sigma/\partial P)_T$	3.793	5.704	3.818	5.856	3.806	5.737	3.842	5.744	3.749	5.655	0.669	1.091
$(\partial V_P/\partial P)_T$	27.56	20.15	29.10	21.20	27.80	20.34	27.66	20.25	27.67	20.25	17.20	15.54
$(\partial V_S/\partial P)_T$	3.91	-7.90	4.71	-7.83	3.98	-7.92	3.91	-7.87	4.18	-7.59	2.64	-0.76
$(\partial V_\phi/\partial P)_T$	31.60	31.60	32.85	32.85	31.81	31.81	31.76	31.76	31.52	31.52	17.68	17.68
$(\partial K_S/\partial T)_P$	-0.093	-0.093	-0.080	-0.080	-0.069	-0.069	(-0.080)	(-0.080)	(-0.080)[B]	(-0.080)[B]	-0.294	-0.294
$(\partial K_T/\partial T)_P$	-0.121	-0.121	-0.106	-0.106	-0.095	-0.095	-0.105	-0.105	-0.108	-0.108	-0.391	-0.391
$(\partial\mu/\partial T)_P$	-0.043	-0.021	-0.049	-0.023	-0.053	-0.026	(-0.049)	(-0.023)	(-0.049)[B]	(-0.023)[B]	-0.089	-0.067
$(\partial\sigma/\partial T)_P$	-0.23	-3.81	2.49	-2.10	4.68	-0.38	2.43	-2.13	2.43	-2.13	3.63	1.63
$(\partial V_P/\partial T)_P$	-0.686	-0.547	-0.668	-0.497	-0.632	-0.449	-0.673	-0.503	-0.653	-0.483	-1.027	-0.948
$(\partial V_S/\partial T)_P$	-0.363	-0.157	-0.431	-0.187	-0.474	-0.216	-0.432	-0.190	-0.421	-0.180	-0.609	-0.456
$(\partial V_\phi/\partial T)_P$	-0.544	-0.544	-0.457	-0.457	-0.373	-0.373	-0.463	-0.463	-0.447	-0.447	-0.799	-0.799
$(\partial P/\partial T)_{V_P}$	2.490	2.713	2.295	2.343	2.275	2.206	2.433	2.482	2.359	2.385	5.973	6.104
$(\partial P/\partial T)_{V_S}$	9.28	-1.99	9.17	-2.39	11.91	-2.73	11.06	-2.41	10.08	-2.37	23.02	-60.01
$(\partial P/\partial T)_{V_\phi}$	1.722	1.722	1.393	1.393	1.172	1.172	1.457	1.457	1.417	1.417	4.519	4.519
$(\partial P/\partial T)_P$	1.843	1.843	1.756	1.756	1.759	1.759	1.655	1.655	1.839	1.839	4.248	4.248
γ_{th}	1.618	1.618	1.549	1.549	1.541	1.541	1.439	1.439	1.618	1.618	2.316	2.316
γ_P	1.720	1.378	1.788	1.426	1.732	1.388	1.735	1.392	1.720	1.380	2.568	2.360
γ_S	0.699	-0.469	0.770	-0.458	0.706	-0.472	0.701	-0.471	0.722	-0.433	1.229	0.070
γ_{LT}	0.772	-0.354	0.844	-0.340	0.780	-0.356	0.776	-0.354	0.794	-0.319	1.266	0.130
γ_{HT}	1.039	0.147	1.110	0.170	1.048	0.148	1.046	0.150	1.054	0.171	1.675	0.834
δ_S	4.790	4.790	4.327	4.327	3.720	3.720	4.622	4.622	4.111	4.111	6.450	6.450
δ_T	6.557	6.557	6.037	6.037	5.421	5.421	6.325	6.325	5.879	5.879	9.213	9.213
θ_D	166.9	154.1	166.6	153.7	165.9	153.3	167.5	154.6	167.5	154.6	145.3	142.2
$(\partial K_S/\partial T)_V$	0.008	0.008	0.017	0.017	0.026	0.026	0.008	0.008	0.020	0.020	-0.014	-0.014
$(\partial K_P/\partial T)_V$	-0.021	-0.021	-0.009	-0.009	-0.001	-0.001	-0.015	-0.015	-0.010	-0.010	-0.105	-0.105
$(\partial\alpha/\partial T)_P$	6.20	6.20	6.20	6.20	6.20	6.20	8.40	8.40	6.20	6.20	9.80	9.80
V_S/V_P	0.538	0.510	0.539	0.511	0.537	0.510	0.539	0.512	0.539	0.512	0.384	0.377
V_M	1.843	1.702	1.846	1.703	1.834	1.694	1.851	1.709	1.851	1.709	1.355	1.326
REF. E.C.	022(020)		033		036(020)		020(035)		116(020[A], 035[B])		111(070)	
REF. α, Cp	537; 611		035, 611		036; 611		020; 611		537; 611		111; 607	

REF. E.C.	022(020)	039	036(020)	020(035)	118(020^{A};035^{B})	111(070)
REF. α, Cp	537; 611	035, 611	036; 611	020; 611	537; 611	111; 607

	AgCl Rock salt (Cubic) PULS (1967) 293 K		AgCl Rock salt (Cubic) PULS (1970) 300 K		AgCl-AgBr (21.3%) Rock salt (Cubic) PULS (1977) 298 K		AgCl-AgBr (43.4%) Rock salt (Cubic) PULS (1977) 298 K		AgCl-AgBr (60.9%) Rock salt (Cubic) PULS (1977) 298 K		AgCl-AgBr (80.5%) Rock salt (Cubic) PULS (1977) 298 K	
ρ_X	5.589		5.570		5.600		5.650		5.689		5.733	
ρ_B	******		******		******		******		******		******	
M	71.66		71.66		76.40		81.31		85.20		89.55	
α	93.00		93.00		95.00		98.20		100.30		102.70	
C_P	3.534		3.534		3.333		3.149		3.019		2.886	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	441.9	441.9	440.3	440.3	419.0	419.0	407.0	407.0	404.0	404.0	405.0	405.0
K_T	417.7	417.7	416.1	416.1	394.7	394.7	381.7	381.7	377.2	377.2	375.9	375.9
μ	79.7	76.0	81.0	77.0	81.4	78.0	82.6	79.6	84.3	81.5	86.1	83.4
σ	0.415	0.419	0.413	0.417	0.409	0.412	0.405	0.408	0.402	0.405	0.401	0.404
V_P	3.132	3.118	3.137	3.122	3.069	3.056	3.025	3.014	3.013	3.002	3.011	3.001
V_S	1.194	1.166	1.206	1.176	1.206	1.180	1.209	1.187	1.217	1.197	1.225	1.206
V_ϕ	2.812	2.812	2.812	2.812	2.735	2.735	2.684	2.684	2.665	2.665	2.658	2.658
$(\partial K_S/\partial P)_T$	(6.57)	(6.57)	6.57	6.57	6.63	6.63	6.65	6.65	6.74	6.74	6.76	6.76
$(\partial K_T/\partial P)_T$	6.79	6.79	6.79	6.79	6.90	6.90	6.97	6.97	7.09	7.09	7.12	7.12
$(\partial \mu/\partial P)_T$	(0.55)	(0.09)	0.55	0.09	0.60	0.18	0.68	0.29	0.73	0.34	0.82	0.44
$(\partial \sigma/\partial P)_T$	0.642	1.054	0.666	1.075	0.727	1.116	0.722	1.099	0.735	1.107	0.669	1.032
$(\partial V_P/\partial P)_T$	17.10	15.46	17.12	15.48	17.71	16.20	18.14	16.70	18.50	17.09	18.73	17.35
$(\partial V_S/\partial P)_T$	2.67	-0.71	2.63	-0.73	2.89	-0.14	3.39	0.58	3.64	0.92	4.18	1.56
$(\partial V_\phi/\partial P)_T$	17.54	17.54	17.60	17.60	18.18	18.18	18.41	18.41	18.70	18.70	18.65	18.65
$(\partial K_S/\partial T)_P$	-0.329	-0.329	-0.325	-0.325	-0.348	-0.348	-0.362	-0.362	-0.374	-0.374	-0.362	-0.362
$(\partial K_T/\partial T)_P$	-0.414	-0.414	-0.410	-0.410	-0.428	-0.428	-0.443	-0.443	-0.457	-0.457	-0.452	-0.452
$(\partial \mu/\partial T)_P$	-0.083	-0.062	-0.083	-0.061	-0.105	-0.081	-0.114	-0.089	-0.122	-0.098	-0.128	-0.103
$(\partial \sigma/\partial T)_P$	2.41	0.53	2.34	0.45	3.99	1.73	4.34	2.01	4.78	2.43	5.45	3.08
$(\partial V_P/\partial T)_P$	-1.110	-1.035	-1.100	-1.024	-1.275	-1.187	-1.354	-1.265	-1.415	-1.326	-1.387	-1.297
$(\partial V_S/\partial T)_P$	-0.568	-0.420	-0.562	-0.413	-0.724	-0.557	-0.773	-0.608	-0.821	-0.658	-0.845	-0.683
$(\partial V_\phi/\partial T)_P$	-0.915	-0.915	-0.907	-0.907	-1.005	-1.005	-1.062	-1.062	-1.100	-1.100	-1.051	-1.051
$(\partial P/\partial T)_{V_P}$	6.490	6.692	6.428	6.615	7.197	7.326	7.462	7.575	7.652	7.762	7.405	7.477
$(\partial P/\partial T)_{V_S}$	21.22	-58.87	21.35	-56.36	25.01	******	22.77	105.30	22.59	71.73	20.23	43.90
$(\partial P/\partial T)_{V_\phi}$	5.218	5.218	5.152	5.152	5.530	5.530	5.767	5.767	5.882	5.882	5.638	5.638
$(\partial P/\partial T)_\rho$	3.884	3.884	3.870	3.870	3.773	3.773	3.749	3.749	3.784	3.784	3.860	3.860
γ_{th}	2.081	2.081	2.080	2.080	2.146	2.146	2.246	2.246	2.359	2.359	2.514	2.514
γ_P	2.614	2.405	2.604	2.396	2.611	2.425	2.622	2.449	2.649	2.480	2.671	2.507
γ_S	1.269	0.078	1.242	0.074	1.281	0.286	1.405	0.519	1.460	0.622	1.615	0.818
γ_{LT}	1.305	0.137	1.279	0.134	1.320	0.346	1.442	0.576	1.498	0.680	1.649	0.871
γ_{HT}	1.717	0.853	1.696	0.848	1.724	0.999	1.811	1.162	1.856	1.242	1.967	1.381
δ_S	7.998	7.998	7.934	7.934	8.688	8.688	9.057	9.057	9.230	9.230	8.703	8.703
δ_T	10.650	10.650	10.586	10.586	11.344	11.344	11.808	11.808	12.092	12.092	11.718	11.718
θ_D	145.5	142.2	146.7	143.2	143.8	140.8	141.6	139.0	140.6	138.3	139.5	137.4
$(\partial K_S/\partial T)_V$	-0.078	-0.078	-0.075	-0.075	-0.097	-0.097	-0.109	-0.109	-0.113	-0.113	-0.094	-0.094
$(\partial K_P/\partial T)_V$	-0.150	-0.150	-0.147	-0.147	-0.168	-0.168	-0.181	-0.181	-0.189	-0.189	-0.178	-0.178
$(\partial \alpha/\partial T)_P$	10.80	10.80	10.80	10.80	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
V_S/V_P	0.381	0.374	0.384	0.377	0.393	0.386	0.400	0.394	0.404	0.399	0.407	0.402
V_Φ/V_P	1.355	1.323	1.367	1.334	1.366	1.338	1.370	1.345	1.378	1.356	1.387	1.366
REF. E.C.	056(070)	070	017	017	017	017						
REF. α, Cp	523, 607	523, 607	017, 607	017, 607	017, 607	017; 607						

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	CsCl CsCl-str.(Cubic) PULS (1960) 293 K		CsCl CsCl-str.(Cubic) PULS (1967) ROOM		CsCl CsCl-str.(Cubic) *PULS (1977) 286 K		TlCl CsCl-str.(Cubic) PULS (1972) 298 K		TlCl CsCl-str.(Cubic) PULS (1975) 300 K		$SrCl_2$ Fluorite (Cubic) RESO (1970) 300 K	
ρ_x	3.990		3.988		3.991		7.018		7.018		3.097	
ρ_B	******		******		******		******		******		******	
M	84.18		84.18		84.18		119.91		119.91		52.84	
α	138.00		139.50		139.50		158.05		157.50		60.65	
C_P	3.118		3.118		3.118		2.198		2.198		5.941	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	182.7	182.7	180.9	180.9	182.2	182.2	236.3	236.3	240.4	240.4	378.8	378.8
K_T	168.6	168.6	166.8	166.8	167.9	167.9	212.0	212.0	215.5	215.5	370.4	370.4
μ	99.1	95.8	100.3	96.7	101.4	97.9	94.3	91.9	92.4	89.9	146.9	131.0
σ	0.270	0.277	0.266	0.273	0.265	0.272	0.324	0.328	0.330	0.334	0.328	0.345
V_P	2.809	2.789	2.809	2.788	2.820	2.800	2.271	2.261	2.276	2.266	4.307	4.227
V_S	1.576	1.550	1.586	1.557	1.594	1.567	1.159	1.144	1.147	1.132	2.178	2.057
V_ϕ	2.140	2.140	2.130	2.130	2.137	2.137	1.835	1.835	1.851	1.851	3.497	3.497
$(\partial K_S/\partial P)_T$	(5.64)	(5.64)	(5.64)	(5.64)	5.64	5.64	6.69	6.69	(6.69)	(6.69)	******	******
$(\partial K_T/\partial P)_T$	5.73	5.73	5.69	5.69	5.69	5.69	6.81	6.81	6.80	6.80	******	******
$(\partial \mu/\partial P)_T$	(2.87)	(3.24)	(2.87)	(3.24)	2.87	3.24	1.91	2.17	(1.91)	(2.17)	******	******
$(\partial \sigma/\partial P)_T$	0.377	-0.566	0.511	-0.453	0.530	-0.418	1.246	0.719	1.075	0.546	******	******
$(\partial V_P/\partial P)_T$	33.88	36.49	33.81	36.46	33.64	36.25	23.63	24.86	23.64	24.87	******	******
$(\partial V_S/\partial P)_T$	18.12	21.63	17.91	21.44	17.79	21.27	9.03	10.80	9.21	11.03	******	******
$(\partial V_\phi/\partial P)_T$	26.68	26.68	26.81	26.81	26.71	26.71	21.65	21.65	21.45	21.45	******	******
$(\partial K_S/\partial T)_P$	-0.108	-0.108	-0.097	-0.097	(-0.097)	(-0.097)	(-0.196)	(-0.196)	-0.196	-0.196	******	******
$(\partial K_T/\partial T)_P$	-0.157	-0.157	-0.147	-0.147	-0.147	-0.147	-0.262	-0.262	-0.264	-0.264	******	******
$(\partial \mu/\partial T)_P$	-0.085	-0.095	-0.085	-0.095	(-0.085)	(-0.095)	(-0.107)	(-0.114)	-0.107	-0.114	******	******
$(\partial \sigma/\partial T)_P$	5.28	7.72	6.26	8.60	6.17	8.47	4.76	6.20	5.19	6.64	******	******
$(\partial V_P/\partial T)_P$	-0.793	-0.861	-0.744	-0.810	-0.739	-0.804	-0.884	-0.917	-0.881	-0.915	******	******
$(\partial V_S/\partial T)_P$	-0.569	-0.664	-0.565	-0.655	-0.560	-0.650	-0.567	-0.617	-0.575	-0.627	******	******
$(\partial V_\phi/\partial T)_P$	-0.482	-0.482	-0.421	-0.421	-0.418	-0.418	-0.616	-0.616	-0.609	-0.609	******	******
$(\partial P/\partial T)_{V_P}$	2.339	2.360	2.200	2.221	2.196	2.217	3.739	3.688	3.729	3.678	******	******
$(\partial P/\partial T)_{V_S}$	3.14	3.07	3.15	3.06	3.15	3.05	6.28	5.71	6.24	5.68	******	******
$(\partial P/\partial T)_{V_\phi}$	1.806	1.806	1.569	1.569	1.565	1.565	2.847	2.847	2.839	2.839	******	******
$(\partial P/\partial T)_\rho$	2.326	2.326	2.326	2.326	2.342	2.342	3.350	3.350	3.393	3.393	2.246	2.246
γ_{th}	2.027	2.027	2.030	2.030	2.043	2.043	2.421	2.421	2.455	2.455	1.249	1.249
γ_P	2.366	2.538	2.341	2.514	2.336	2.507	2.539	2.663	2.571	2.698	******	******
γ_S	2.272	2.686	2.217	2.629	2.207	2.613	1.984	2.334	2.064	2.433	******	******
γ_{LT}	2.279	2.675	2.227	2.620	2.217	2.604	2.019	2.354	2.094	2.449	******	******
γ_{HT}	2.303	2.637	2.258	2.591	2.250	2.577	2.169	2.444	2.233	2.521	******	******
δ_S	4.264	4.264	3.831	3.831	3.805	3.805	5.251	5.251	5.178	5.178	******	******
δ_T	6.739	6.739	6.302	6.302	6.289	6.289	7.824	7.824	7.786	7.786	******	******
θ_D	159.6	157.0	160.5	157.7	161.3	158.7	126.8	125.2	125.6	123.9	238.4	225.7
$(\partial K_S/\partial T)_V$	0.022	0.022	0.032	0.032	0.033	0.033	0.043	0.043	0.046	0.046	******	******
$(\partial K_P/\partial T)_V$	-0.024	-0.024	-0.014	-0.014	-0.014	-0.014	-0.034	-0.034	-0.033	-0.033	******	******
$(\partial \alpha/\partial T)_P$	14.90	14.90	14.90	14.90	14.90	14.90	9.75	9.75	9.75	9.75	2.90	2.90
V_S/V_P	0.561	0.556	0.565	0.559	0.565	0.560	0.510	0.506	0.504	0.499	0.506	0.486
V_ϕ/V_m	1.754	1.726	1.764	1.734	1.773	1.744	1.299	1.283	1.287	1.270	2.441	2.311
REF. E.C.	051(021)		106(021)		021(106)		064(037)		037(064)		041	
REF. α, Cp	051; 613		537, 613		537; 613		064, 064		530; 064		534; 606	

REF. E.C.	051(021)	106(021)	021(106)	064(051)	051(064)	534
REF. α, Cp	051; 613	537, 613	537; 613	064, 064	530; 064	534; 606

	$SrCl_2$ Fluorite (Cubic) PULS (1971) 300 K		$SrCl_2$ Fluorite (Cubic) BRIL (1977) ROOM		$PbCl_2$ —— (Ortho.) BRIL (1975) ROOM		Hg_2Cl_2 —— (Tetra.) PULS (1975) ROOM		Hg_2Cl_2 —— (Tetra.) BRIL (1977) ROOM		$CsPbCl_3$ Perovskite(Cubic) PULS (1978) 323 K	
ρ_X	3.052		3.052		5.850		7.190		7.190		4.168	
ρ_B	******		******		******		******		******		******	
M	52.84		52.84		92.71		118.03		118.03		89.29	
α	60.65		60.65		******		103.00		103.00		90.00	
C_P	5.941		5.941		2.631		2.162		2.162		2.900	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	335.0	335.0	368.1	368.1	289.4	287.5	209.4	179.7	208.3	178.5	205.0	205.0
K_T	328.3	328.3	360.0	360.0	******	******	200.8	173.3	199.8	172.2	196.9	196.9
μ	143.4	126.7	144.1	127.3	102.4	92.6	68.7	32.6	68.8	31.6	56.7	56.1
σ	0.313	0.332	0.327	0.345	0.342	0.355	0.352	0.414	0.351	0.416	0.373	0.375
V_P	4.152	4.063	4.284	4.198	2.698	2.650	2.046	1.762	2.043	1.751	2.594	2.591
V_S	2.168	2.037	2.173	2.042	1.323	1.258	0.978	0.674	0.978	0.663	1.166	1.160
V_ϕ	3.313	3.313	3.473	3.473	2.224	2.217	1.706	1.581	1.702	1.575	2.218	2.218
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.108	-0.108	-0.149	-0.149	******	******	******	******	-0.077	-0.048	-0.011	-0.011
$(\partial K_T/\partial T)_P$	-0.131	-0.131	-0.176	-0.176	******	******	******	******	-0.110	-0.073	-0.041	-0.041
$(\partial \mu/\partial T)_P$	-0.041	-0.035	-0.065	-0.065	******	******	******	******	-0.089	-0.154	0.026	0.021
$(\partial \sigma/\partial T)_P$	-0.65	-0.68	0.72	1.50	******	******	******	******	12.43	36.26	-5.92	-5.02
$(\partial V_P/\partial T)_P$	-0.513	-0.500	-0.773	-0.796	******	******	******	******	-0.564	-0.915	0.226	0.198
$(\partial V_S/\partial T)_P$	-0.240	-0.220	-0.426	-0.463	******	******	******	******	-0.585	-1.579	0.319	0.275
$(\partial V_\phi/\partial T)_P$	-0.433	-0.433	-0.599	-0.599	******	******	******	******	-0.229	-0.132	0.040	0.040
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	1.991	1.991	2.184	2.184	******	******	2.068	1.785	2.058	1.773	1.772	1.772
γ_{th}	1.121	1.121	1.231	1.231	******	******	1.387	1.191	1.380	1.183	1.526	1.526
γ_P	******	******	******	******	******	******	******	******	******	******	******	******
γ_S	******	******	******	******	******	******	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	******	******	******	******	******	******
δ_S	5.311	5.311	6.687	6.687	******	******	******	******	3.612	2.628	0.596	0.596
δ_T	6.566	6.566	8.065	8.065	******	******	******	******	5.321	4.101	2.307	2.307
θ_D	235.7	222.1	236.7	223.0	148.7	141.7	108.8	75.6	108.8	74.4	119.0	118.5
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	2.90	2.90	2.90	2.90	******	******	10.00	10.00	10.00	10.00	5.00	5.00
V_S/V_P	0.522	0.501	0.507	0.486	0.490	0.475	0.478	0.382	0.479	0.378	0.449	0.448
V_M	2.425	2.285	2.435	2.295	1.486	1.415	1.100	0.764	1.100	0.752	1.315	1.309
REF. E.C.	068		019		085		103		018		057	
REF. α, Cp	534, 606		534, 606		***; 613		518; 613		518; 613		057; 057	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	LiBr Rock salt (Cubic) PULS (1960) 295 K		LiBr Rock salt (Cubic) PULS (1969) 300 K		NaBr Rock salt (Cubic) PULS (1960) 295 K		NaBr Rock salt (Cubic) PULS (1967) 300 K		NaBr Rock salt (Cubic) *PULS (1967) 298 K		NaBr Rock salt (Cubic) RESO (1970) 293 K	
ρ_x	3.470		3.468		3.205		3.202		3.203		3.192	
ρ_B	******		******		******		******		******		******	
M	43.42		43.42		51.45		51.45		51.45		51.45	
α	139.80		139.80		134.51		134.51		134.51		134.51	
C_p	5.643		5.643		5.001		5.001		5.001		5.001	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_s	255.0	255.0	256.7	256.7	206.5	206.5	199.1	199.1	202.1	202.1	219.5	219.5
K_T	236.9	236.9	238.3	238.3	193.0	193.0	186.5	186.5	189.1	189.1	204.2	204.2
μ	150.6	143.8	147.0	140.4	115.7	113.6	117.1	114.9	119.1	116.9	115.6	113.8
σ	0.253	0.263	0.259	0.269	0.264	0.268	0.254	0.258	0.254	0.258	0.276	0.279
V_p	3.624	3.588	3.613	3.578	3.355	3.342	3.330	3.317	3.357	3.343	3.421	3.410
V_s	2.083	2.036	2.059	2.012	1.900	1.883	1.912	1.894	1.928	1.910	1.903	1.888
V_ϕ	2.711	2.711	2.721	2.721	2.538	2.538	2.493	2.493	2.512	2.512	2.622	2.622
$(\partial K_s/\partial P)_T$	******	******	******	******	(4.95)	(4.95)	(4.95)	(4.95)	4.95	4.95	(4.95)	(4.95)
$(\partial K_T/\partial P)_T$	******	******	******	******	5.02	5.02	4.99	4.99	4.99	4.99	5.28	5.28
$(\partial \mu/\partial P)_T$	******	******	******	******	(1.86)	(1.51)	(1.86)	(1.51)	1.86	1.51	(1.86)	(1.51)
$(\partial \sigma/\partial P)_T$	******	******	******	******	1.566	2.099	1.841	2.379	1.824	2.353	1.228	1.752
$(\partial V_p/\partial P)_T$	******	******	******	******	25.90	23.87	25.95	23.91	25.72	23.70	25.68	23.65
$(\partial V_s/\partial P)_T$	******	******	******	******	10.38	7.64	10.10	7.38	9.99	7.30	10.68	7.91
$(\partial V_\phi/\partial P)_T$	******	******	******	******	23.87	23.87	24.33	24.33	24.14	24.14	23.17	23.17
$(\partial K_s/\partial T)_P$	-0.149	-0.149	-0.037	-0.037	-0.107	-0.107	-0.095	-0.095	(-0.095)	(-0.095)	-0.219	-0.219
$(\partial K_T/\partial T)_P$	-0.205	-0.205	-0.102	-0.102	-0.153	-0.153	-0.138	-0.138	-0.140	-0.140	-0.263	-0.263
$(\partial \mu/\partial T)_P$	-0.151	-0.174	-0.154	-0.182	-0.070	-0.058	-0.072	-0.063	(-0.072)	(-0.063)	-0.058	-0.051
$(\partial \sigma/\partial T)_P$	8.63	12.49	18.30	22.54	1.60	-0.24	2.92	1.43	2.85	1.38	-9.39	-10.43
$(\partial V_p/\partial T)_P$	-1.141	-1.280	-0.716	-0.876	-0.705	-0.636	-0.675	-0.619	-0.666	-0.610	-1.131	-1.088
$(\partial V_s/\partial T)_P$	-0.900	-1.089	-0.937	-1.163	-0.443	-0.352	-0.464	-0.391	-0.457	-0.386	-0.354	-0.294
$(\partial V_\phi/\partial T)_P$	-0.604	-0.604	-0.005	-0.005	-0.489	-0.489	-0.427	-0.427	-0.421	-0.421	-1.133	-1.133
$(\partial P/\partial T)_{V_p}$	******	******	******	******	2.721	2.663	2.600	2.589	2.588	2.576	4.403	4.599
$(\partial P/\partial T)_{V_s}$	******	******	******	******	4.27	4.60	4.59	5.30	4.58	5.28	3.31	3.71
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	2.051	2.051	1.756	1.756	1.746	1.746	4.891	4.891
$(\partial P/\partial T)_\rho$	3.312	3.312	3.332	3.332	2.596	2.596	2.508	2.508	2.544	2.544	2.747	2.747
γ_{th}	1.820	1.820	1.834	1.834	1.733	1.733	1.672	1.672	1.697	1.697	1.849	1.849
γ_P	******	******	******	******	1.823	1.712	1.786	1.678	1.782	1.674	1.866	1.750
γ_s	******	******	******	******	1.388	1.117	1.318	1.060	1.313	1.056	1.480	1.189
γ_{LT}	******	******	******	******	1.424	1.166	1.359	1.113	1.354	1.109	1.511	1.233
γ_{HT}	******	******	******	******	1.533	1.315	1.474	1.266	1.470	1.262	1.609	1.376
δ_s	4.185	4.185	1.028	1.028	3.867	3.867	3.548	3.548	3.495	3.495	7.425	7.425
δ_T	6.192	6.192	3.049	3.049	5.905	5.905	5.520	5.520	5.494	5.494	9.591	9.591
θ_D	250.6	245.1	247.8	242.4	210.6	208.7	211.6	209.7	213.4	211.5	210.9	209.4
$(\partial K_s/\partial T)_V$	******	******	******	******	0.020	0.020	0.028	0.028	0.029	0.029	-0.077	-0.077
$(\partial K_T/\partial T)_V$	******	******	******	******	-0.023	-0.023	-0.013	-0.013	-0.013	-0.013	-0.119	-0.119
$(\partial \alpha/\partial T)_P$	8.70	8.70	8.70	8.70	11.60	11.60	11.60	11.60	11.60	11.60	11.60	11.60
V_s/V_p	0.575	0.567	0.570	0.562	0.566	0.563	0.574	0.571	0.574	0.571	0.556	0.554
V_m	2.314	2.263	2.289	2.239	2.113	2.094	2.124	2.105	2.142	2.123	2.119	2.104
REF. E.C.	052		072		052(064)		069(064)		065(069)		083(065)	
REF: α, Cp	518, 613		518, 613		507, 613		507, 613		507, 613		507, 613	

NaBr	NaBr	KBr	KBr	KBr	KBr

	NaBr Rock salt (Cubic) PULS (1970) 295 K		NaBr Rock salt (Cubic) PULS (1973) 300 K		KBr Rock salt (Cubic) PULS (1960) 295 K		KBr Rock salt (Cubic) PULS (1965) 300 K		KBr Rock salt (Cubic) PULS (1967) 298 K		KBr Rock salt (Cubic) RESO (1969) 293 K	
ρ_x	3.205		3.235		2.746		2.746		2.744		2.750	
ρ_B	******		******		******		******		******		******	
M	51.45		51.45		59.51		59.51		59.51		59.51	
α	134.51		134.51		110.30		110.30		110.30		110.30	
C_p	5.001		5.001		4.400		4.400		4.400		4.400	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_s	206.5	206.5	207.0	207.0	153.9	153.9	148.6	148.6	154.3	154.3	147.4	147.4
K_T	193.0	193.0	193.5	193.5	147.0	147.0	142.2	142.2	147.4	147.4	141.1	141.1
μ	115.7	113.6	114.1	112.5	78.6	68.6	78.6	68.6	78.3	68.5	79.4	68.9
σ	0.264	0.268	0.267	0.270	0.282	0.306	0.275	0.300	0.283	0.307	0.272	0.298
V_P	3.355	3.342	3.332	3.322	3.069	2.989	3.038	2.957	3.071	2.992	3.035	2.950
V_S	1.900	1.883	1.878	1.865	1.691	1.580	1.691	1.581	1.690	1.580	1.699	1.583
V_ϕ	2.538	2.538	2.529	2.529	2.367	2.367	2.326	2.326	2.371	2.371	2.315	2.315
$(\partial K_s/\partial P)_T$	5.29	5.29	(4.95)	(4.95)	(5.38)	(5.38)	5.38	5.38	(5.38)	(5.38)	(5.38)	(5.38)
$(\partial K_T/\partial P)_T$	5.30	5.30	5.11	5.11	5.41	5.41	5.42	5.42	5.41	5.41	5.45	5.45
$(\partial \mu/\partial P)_T$	1.87	1.53	(1.86)	(1.51)	(1.11)	(0.15)	1.11	0.15	(1.11)	(0.15)	(1.11)	(0.15)
$(\partial \sigma/\partial P)_T$	1.879	2.381	1.493	2.044	3.875	5.536	4.207	5.899	3.834	5.503	4.349	6.009
$(\partial V_P/\partial P)_T$	27.51	25.58	25.90	23.84	30.31	23.84	30.48	23.97	30.33	23.85	30.39	23.95
$(\partial V_S/\partial P)_T$	10.44	7.83	10.49	7.71	6.24	-3.64	6.05	-3.83	6.28	-3.63	5.90	-3.89
$(\partial V_\phi/\partial P)_T$	25.94	25.94	23.73	23.73	33.34	33.34	33.94	33.94	33.31	33.31	34.06	34.06
$(\partial K_s/\partial T)_P$	(-0.095)	(-0.095)	-0.147	-0.147	-0.073	-0.073	(-0.075)	(-0.075)	-0.075	-0.075	-0.087	-0.087
$(\partial K_T/\partial T)_P$	-0.142	-0.142	-0.191	-0.191	-0.098	-0.098	-0.097	-0.097	-0.099	-0.099	-0.109	-0.109
$(\partial \mu/\partial T)_P$	(-0.072)	(-0.063)	-0.065	-0.057	-0.051	-0.028	(-0.048)	(-0.026)	-0.048	-0.026	-0.046	-0.026
$(\partial \sigma/\partial T)_P$	3.31	1.84	-2.77	-4.02	3.21	-1.18	2.08	-2.13	2.40	-1.74	-0.35	-3.84
$(\partial V_P/\partial T)_P$	-0.666	-0.610	-0.863	-0.815	-0.670	-0.509	-0.665	-0.512	-0.655	-0.503	-0.722	-0.589
$(\partial V_S/\partial T)_P$	-0.468	-0.395	-0.410	-0.346	-0.456	-0.234	-0.425	-0.213	-0.426	-0.214	-0.395	-0.209
$(\partial V_\phi/\partial T)_P$	-0.413	-0.413	-0.731	-0.731	-0.434	-0.434	-0.457	-0.457	-0.444	-0.444	-0.559	-0.559
$(\partial P/\partial T)_{V_P}$	2.420	2.386	3.332	3.421	2.210	2.135	2.183	2.135	2.160	2.108	2.376	2.458
$(\partial P/\partial T)_{V_S}$	4.48	5.04	3.91	4.49	7.30	-6.43	7.02	-5.57	6.77	-5.90	6.70	-5.38
$(\partial P/\partial T)_{V_\phi}$	1.593	1.593	3.079	3.079	1.302	1.302	1.347	1.347	1.333	1.333	1.643	1.643
$(\partial P/\partial T)_P$	2.596	2.596	2.603	2.603	1.622	1.622	1.569	1.569	1.626	1.626	1.557	1.557
γ_{th}	1.733	1.733	1.721	1.721	1.405	1.405	1.357	1.357	1.410	1.410	1.344	1.344
γ_P	1.916	1.810	1.838	1.722	1.785	1.506	1.761	1.486	1.789	1.508	1.747	1.479
γ_S	1.394	1.136	1.415	1.133	0.876	-0.006	0.842	-0.011	0.882	-0.005	0.824	-0.013
γ_{LT}	1.437	1.191	1.449	1.181	0.946	0.098	0.915	0.095	0.951	0.099	0.898	0.094
γ_{HT}	1.568	1.361	1.556	1.330	1.179	0.498	1.148	0.488	1.184	0.499	1.131	0.484
δ_S	3.420	3.420	5.295	5.295	4.325	4.325	4.563	4.563	4.395	4.395	5.382	5.382
δ_T	5.459	5.459	7.320	7.320	6.023	6.023	6.206	6.206	6.099	6.099	7.009	7.009
θ_D	210.6	208.7	208.8	207.4	170.0	159.3	169.8	159.2	169.8	159.2	170.6	159.5
$(\partial K_s/\partial T)_V$	0.041	0.041	-0.017	-0.017	0.012	0.012	0.008	0.008	0.011	0.011	-0.004	-0.004
$(\partial K_P/\partial T)_V$	-0.004	-0.004	-0.058	-0.058	-0.010	-0.010	-0.012	-0.012	-0.011	-0.011	-0.024	-0.024
$(\partial \alpha/\partial T)_P$	11.60	11.60	11.60	11.60	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75
V_S/V_P	0.566	0.563	0.564	0.561	0.551	0.529	0.557	0.535	0.550	0.528	0.560	0.537
V_M	2.113	2.094	2.089	2.075	1.885	1.766	1.883	1.766	1.883	1.766	1.891	1.768
REF. E.C.	094(069)		007(065)		052(088)		088(104)		104(088)		047(088)	
REF. α, Cp	507, 613		507; 613		537, 613		537; 613		537; 613		537; 613	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	KBr Rock salt (Cubic) PULS (1971) 300 K		KBr-KI(23.5%) Rock salt (Cubic) PULS (1972) 300 K		KBr-KI(61.5%) Rock salt (Cubic) PULS (1972) 300 K		KBr-KI(78%) Rock salt (Cubic) PULS (1972) 300 K		CuBr Zincblende(Cubic) PULS (1972) 300 K		RbBr Rock salt (Cubic) PULS (1960) 295 K	
ρ_x	2.747		2.850		2.997		3.054		5.169		3.359	
ρ_B	******		******		******		******		******		******	
M	59.51		65.03		73.96		77.83		71.72		82.69	
α	116.40		112.09		114.99		116.25		41.46		116.75	
C_P	4.400		4.034		3.559		3.387		3.829		3.130	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	150.4	150.4	140.1	140.1	127.0	127.0	122.7	122.7	187.3	187.3	138.4	138.4
K_T	143.2	143.2	133.9	133.9	121.2	121.2	117.1	117.1	186.4	186.4	131.3	131.3
μ	79.0	68.7	73.2	63.4	65.4	56.0	62.6	53.3	161.8	159.1	64.6	53.2
σ	0.276	0.302	0.278	0.303	0.280	0.308	0.282	0.310	0.165	0.169	0.298	0.330
V_P	3.051	2.968	2.868	2.808	2.673	2.594	2.599	2.518	2.792	2.780	2.585	2.496
V_S	1.696	1.582	1.602	1.492	1.477	1.367	1.432	1.320	1.769	1.754	1.387	1.258
V_ϕ	2.340	2.340	2.217	2.217	2.058	2.058	2.004	2.004	1.904	1.904	2.030	2.030
$(\partial K_S/\partial P)_T$	(5.38)	(5.38)	******	******	******	******	******	******	******	******	(5.30)	(5.30)
$(\partial K_T/\partial P)_T$	5.39	5.39	******	******	******	******	******	******	******	******	5.34	5.34
$(\partial \mu/\partial P)_T$	(1.11)	(0.15)	******	******	******	******	******	******	******	******	(0.91)	(-0.27)
$(\partial \sigma/\partial P)_T$	4.126	5.781	******	******	******	******	******	******	******	******	4.238	6.558
$(\partial V_P/\partial P)_T$	30.30	23.85	******	******	******	******	******	******	******	******	27.64	19.94
$(\partial V_S/\partial P)_T$	6.03	-3.80	******	******	******	******	******	******	******	******	4.47	-8.01
$(\partial V_\phi/\partial P)_T$	33.68	33.68	******	******	******	******	******	******	******	******	31.14	31.14
$(\partial K_S/\partial T)_P$	-0.069	-0.069	-0.077	-0.077	-0.063	-0.063	-0.069	-0.069	******	******	-0.072	-0.072
$(\partial K_T/\partial T)_P$	-0.094	-0.094	-0.099	-0.099	-0.084	-0.084	-0.089	-0.089	******	******	-0.094	-0.094
$(\partial \mu/\partial T)_P$	-0.043	-0.025	-0.044	-0.022	-0.039	-0.018	-0.038	-0.015	******	******	-0.044	-0.020
$(\partial \sigma/\partial T)_P$	1.63	-1.70	0.91	-3.40	1.98	-2.97	0.94	-4.53	******	******	2.68	-2.14
$(\partial V_P/\partial T)_P$	-0.575	-0.452	-0.659	-0.508	-0.568	-0.410	-0.602	-0.431	******	******	-0.601	-0.447
$(\partial V_S/\partial T)_P$	-0.363	-0.192	-0.389	-0.177	-0.360	-0.140	-0.353	-0.112	******	******	-0.388	-0.167
$(\partial V_\phi/\partial T)_P$	-0.400	-0.400	-0.484	-0.484	-0.393	-0.393	-0.444	-0.444	******	******	-0.413	-0.413
$(\partial P/\partial T)_{V_P}$	1.899	1.893	******	******	******	******	******	******	******	******	2.176	2.244
$(\partial P/\partial T)_{V_S}$	6.02	-5.06	******	******	******	******	******	******	******	******	8.69	-2.08
$(\partial P/\partial T)_{V_\phi}$	1.187	1.187	******	******	******	******	******	******	******	******	1.325	1.325
$(\partial P/\partial T)_\rho$	1.666	1.666	1.501	1.501	1.394	1.394	1.361	1.361	0.773	0.773	1.533	1.533
γ_{th}	1.448	1.448	1.366	1.366	1.369	1.369	1.379	1.379	0.392	0.392	1.537	1.537
γ_P	1.755	1.484	******	******	******	******	******	******	******	******	1.737	1.382
γ_S	0.842	-0.010	******	******	******	******	******	******	******	******	0.756	-0.502
γ_{LT}	0.914	0.095	******	******	******	******	******	******	******	******	0.827	-0.389
γ_{HT}	1.146	0.488	******	******	******	******	******	******	******	******	1.083	0.126
δ_S	3.936	3.936	4.898	4.898	4.322	4.322	4.809	4.809	******	******	4.482	4.482
δ_T	5.634	5.634	6.562	6.562	6.006	6.006	6.513	6.513	******	******	6.130	6.130
θ_D	170.4	159.4	158.2	147.8	142.1	132.0	136.4	126.2	203.6	202.0	133.8	122.0
$(\partial K_S/\partial T)_V$	0.020	0.020	******	******	******	******	******	******	******	******	0.011	0.011
$(\partial K_P/\partial T)_V$	-0.004	-0.004	******	******	******	******	******	******	******	******	-0.012	-0.012
$(\partial \alpha/\partial T)_P$	9.00	9.00	10.26	10.26	11.07	11.07	11.43	11.43	0.0	0.0	5.09	5.09
V_S/V_P	0.556	0.533	0.555	0.531	0.553	0.527	0.551	0.524	0.634	0.631	0.536	0.504
V_ϕ/V_m	1.889	1.767	1.785	1.667	1.646	1.528	1.596	1.477	1.946	1.931	1.549	1.411
REF. E.C.	100(088)		014		014		014		039		052(020)	
REF. α, Cp	100; 613		537; 613		537; 613		537, 613		527; 603		537; 602	

REF. E.C.	100(088)	014	014	014	039	052(020)
REF. α, Cp	100; 613	537; 613	537; 613	537, 613	527; 603	537; 602

	RbBr Rock salt (Cubic) PULS (1965) 300 K		RbBr Rock salt (Cubic) PULS (1967) 300 K		RbBr Rock salt (Cubic) *PULS (1970) 300K		RbBr Rock salt (Cubic) PULS (1970) 295 K		RbBr Rock salt (Cubic) *PULS (1971) 298 K		AgBr Rock salt (Cubic) PULS (1970) 300 K	
ρ_x	3.359		3.349		3.350		3.359		3.359		6.476	
ρ_B	******		******		******		******		******		******	
M	82.69		82.69		82.69		82.69		82.69		93.89	
α	116.75		116.75		116.75		116.75		112.80		105.00	
C_P	3.130		3.130		3.130		3.130		3.130		2.797	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	138.0	138.0	137.9	137.9	138.4	138.4	(138.4)	(138.4)	136.6	136.6	405.0	405.0
K_T	131.0	131.0	130.9	130.9	131.3	131.3	131.3	131.3	130.1	130.1	377.1	377.1
μ	64.6	53.2	63.5	52.5	64.5	53.2	(64.6)	(53.2)	65.4	53.8	87.8	85.4
σ	0.297	0.329	0.301	0.331	0.298	0.330	0.298	0.330	0.294	0.326	0.399	0.401
V_P	2.584	2.494	2.578	2.492	2.588	2.500	2.585	2.496	2.581	2.490	2.839	2.831
V_S	1.387	1.259	1.377	1.252	1.388	1.260	1.387	1.258	1.395	1.265	1.165	1.149
V_ϕ	2.027	2.027	2.029	2.029	2.033	2.033	2.030	2.030	2.016	2.016	2.501	2.501
$(\partial K_S/\partial P)_T$	6.54	6.54	(5.30)	(5.30)	5.52	5.52	5.45	5.45	5.30	5.30	7.02	7.02
$(\partial K_T/\partial P)_T$	6.51	6.51	5.37	5.37	5.54	5.54	5.48	5.48	5.34	5.34	7.25	7.25
$(\partial \mu/\partial P)_T$	0.89	-0.09	(0.91)	(-0.27)	0.89	-0.30	0.91	-0.26	0.91	-0.27	0.93	0.56
$(\partial \sigma/\partial P)_T$	5.879	7.430	4.172	6.539	4.547	6.865	4.420	6.690	4.434	6.749	0.640	0.997
$(\partial V_P/\partial P)_T$	34.67	28.78	27.86	20.06	28.82	21.05	28.53	20.92	27.64	19.94	18.68	17.42
$(\partial V_S/\partial P)_T$	4.29	-5.88	4.59	-8.03	4.31	-8.33	4.50	-7.88	4.33	-8.06	4.60	2.21
$(\partial V_\phi/\partial P)_T$	40.28	40.28	31.24	31.24	32.77	32.77	32.24	32.24	31.38	31.38	18.36	18.36
$(\partial K_S/\partial T)_P$	(-0.070)	(-0.070)	-0.081	-0.081	-0.070	-0.070	(-0.072)	(-0.072)	(-0.070)	(-0.070)	-0.320	-0.320
$(\partial K_T/\partial T)_P$	-0.092	-0.092	-0.102	-0.102	-0.092	-0.092	-0.094	-0.094	-0.092	-0.092	-0.409	-0.409
$(\partial \mu/\partial T)_P$	(-0.044)	(-0.020)	-0.047	-0.025	-0.044	-0.020	(-0.044)	(-0.020)	(-0.044)	(-0.020)	-0.107	-0.088
$(\partial \sigma/\partial T)_P$	3.03	-2.08	2.52	-1.60	3.07	-2.05	2.68	-2.14	2.85	-2.26	4.08	2.22
$(\partial V_P/\partial T)_P$	-0.593	-0.431	-0.680	-0.543	-0.593	-0.431	-0.601	-0.447	-0.599	-0.438	-1.110	-1.045
$(\partial V_S/\partial T)_P$	-0.392	-0.161	-0.425	-0.229	-0.393	-0.161	-0.388	-0.167	-0.392	-0.162	-0.651	-0.532
$(\partial V_\phi/\partial T)_P$	-0.398	-0.398	-0.479	-0.479	-0.398	-0.398	-0.413	-0.413	-0.405	-0.405	-0.857	-0.857
$(\partial P/\partial T)_{V_P}$	1.710	1.499	2.439	2.708	2.059	2.050	2.108	2.139	2.168	2.194	5.944	5.998
$(\partial P/\partial T)_{V_S}$	9.15	-2.73	9.26	-2.85	9.13	-1.93	8.63	-2.11	9.05	-2.00	14.17	24.02
$(\partial P/\partial T)_{V_\phi}$	0.988	0.988	1.533	1.533	1.213	1.213	1.279	1.279	1.291	1.291	4.667	4.667
$(\partial P/\partial T)_\rho$	1.529	1.529	1.528	1.528	1.533	1.533	1.533	1.533	1.468	1.468	3.960	3.960
γ_{th}	1.533	1.533	1.536	1.536	1.541	1.541	1.537	1.537	1.465	1.465	2.348	2.348
γ_P	2.091	1.845	1.748	1.387	1.795	1.439	1.782	1.434	1.727	1.376	2.814	2.654
γ_S	0.738	-0.270	0.770	-0.506	0.741	-0.535	0.759	-0.489	0.737	-0.496	1.821	1.061
γ_{LT}	0.835	-0.150	0.839	-0.393	0.816	-0.416	0.832	-0.373	0.810	-0.381	1.854	1.112
γ_{HT}	1.189	0.429	1.096	0.125	1.092	0.123	1.100	0.152	1.067	0.128	2.152	1.592
δ_S	4.362	4.362	5.044	5.044	4.351	4.351	4.482	4.482	4.563	4.563	7.525	7.525
δ_T	6.007	6.007	6.692	6.692	6.004	6.004	6.130	6.130	6.238	6.238	10.336	10.336
θ_D	133.9	122.0	132.8	121.2	133.8	122.0	133.8	122.0	134.6	122.6	135.9	134.1
$(\partial K_S/\partial T)_V$	0.032	0.032	0.002	0.002	0.016	0.016	0.013	0.013	0.008	0.008	-0.038	-0.038
$(\partial K_P/\partial T)_V$	0.008	0.008	-0.020	-0.020	-0.007	-0.007	-0.010	-0.010	-0.013	-0.013	-0.122	-0.122
$(\partial \alpha/\partial T)_P$	5.09	5.09	5.09	5.09	5.09	5.09	5.09	5.09	7.50	7.50	(10.00)†	(10.00)†
V_S/V_P	0.537	0.505	0.534	0.503	0.536	0.504	0.536	0.504	0.541	0.508	0.410	0.406
V_ϕ/V_P	1.549	1.411	1.538	1.404	1.550	1.413	1.549	1.411	1.557	1.418	1.318	1.300
REF. E.C.	088(035)		089(020)		035		093(052)		020(035)		070	
REF. α, Cp	537, 602		537, 602		537, 602		537; 602		020; 602		070; 602	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	AgBr Rock salt (Cubic) PULS (1977) 298 K		CsBr CsCl-str.(Cubic) PULS (1960) 293 K		CsBr CsCl-str.(Cubic) PULS (1961) 300 K		CsBr CsCl-str.(Cubic) PULS (1961) 295 K		CsBr CsCl-str.(Cubic) PULS (1964) 300 K		CsBr CsCl-str.(Cubic) PULS (1965) 300 K	
ρ_x	6.476		4.450		4.454		4.454		4.472		4.454	
ρ_B	******		******		******		******		******		******	
M	93.89		106.41		106.41		106.41		106.41		106.41	
α	105.00		138.06		138.06		138.06		138.06		138.06	
C_P	2.797		2.434		2.434		2.434		2.434		2.434	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	406.0	406.0	159.3	159.3	153.6	153.6	163.4	163.4	155.7	155.7	159.1	159.1
K_T	378.0	378.0	146.9	146.9	142.1	142.1	150.5	150.5	144.0	144.0	146.8	146.8
μ	88.9	86.4	88.4	86.7	88.3	86.3	87.4	85.9	86.9	84.8	88.1	86.3
σ	0.398	0.401	0.266	0.270	0.259	0.263	0.273	0.276	0.265	0.270	0.266	0.270
V_P	2.846	2.837	2.496	2.485	2.468	2.456	2.507	2.498	2.464	2.451	2.492	2.481
Vs	1.172	1.155	1.409	1.396	1.408	1.392	1.401	1.388	1.394	1.377	1.406	1.392
V_ϕ	2.504	2.504	1.892	1.892	1.857	1.857	1.916	1.916	1.866	1.866	1.890	1.890
$(\partial K_S/\partial P)_T$	6.82	6.82	(5.38)	(5.36)	(5.38)	(5.38)	(5.38)	(5.38)	(5.38)	(5.38)	4.85	4.85
$(\partial K_T/\partial P)_T$	7.12	7.12	5.47	5.47	5.48	5.48	5.39	5.39	5.48	5.48	4.96	4.96
$(\partial \mu/\partial P)_T$	0.88	0.50	(2.78)	(3.08)	(2.78)	(3.08)	(2.76)	(3.08)	(2.78)	(3.08)	2.47	2.73
$(\partial \sigma/\partial P)_T$	0.661	1.017	0.457	-0.344	0.711	-0.132	0.210	-0.564	0.501	-0.351	0.480	-0.228
$(\partial V_P/\partial P)_T$	17.90	16.64	32.42	34.43	32.66	34.72	32.36	34.34	32.68	34.76	28.20	29.98
$(\partial V_S/\partial P)_T$	4.22	1.84	17.37	20.05	17.23	19.94	17.64	20.30	17.47	20.24	14.93	17.29
$(\partial V_\phi/\partial P)_T$	17.72	17.72	25.51	25.51	25.99	25.99	25.16	25.16	25.75	25.75	22.37	22.37
$(\partial K_S/\partial T)_P$	-0.356	-0.356	-0.090	-0.090	-0.092	-0.092	-0.066	-0.066	-0.090	-0.090	(-0.083)	(-0.083)
$(\partial K_T/\partial T)_P$	-0.443	-0.443	-0.134	-0.134	-0.133	-0.133	-0.114	-0.114	-0.132	-0.132	-0.127	-0.127
$(\partial \mu/\partial T)_P$	-0.130	-0.106	-0.079	-0.086	-0.068	-0.077	-0.082	-0.088	-0.079	-0.088	(-0.072)	(-0.080)
$(\partial \sigma/\partial T)_P$	5.61	3.29	6.48	8.36	3.46	5.87	10.21	11.84	6.62	9.01	5.89	7.73
$(\partial V_P/\partial T)_P$	-1.288	-1.206	-0.708	-0.755	-0.661	-0.722	-0.610	-0.652	-0.720	-0.781	-0.638	-0.685
$(\partial V_S/\partial T)_P$	-0.798	-0.651	-0.532	-0.598	-0.445	-0.526	-0.557	-0.616	-0.541	-0.623	-0.481	-0.545
$(\partial V_\phi/\partial T)_P$	-0.966	-0.966	-0.404	-0.404	-0.429	-0.429	-0.255	-0.255	-0.413	-0.413	-0.364	-0.364
$(\partial P/\partial T)_{V_P}$	7.195	7.249	2.182	2.193	2.024	2.079	1.884	1.899	2.205	2.246	2.263	2.286
$(\partial P/\partial T)_{V_S}$	18.92	35.34	3.06	2.98	2.58	2.64	3.16	3.04	3.10	3.08	3.22	3.15
$(\partial P/\partial T)_{V_\phi}$	5.454	5.454	1.585	1.585	1.649	1.649	1.012	1.012	1.603	1.603	1.629	1.629
$(\partial P/\partial T)_\rho$	3.969	3.969	2.029	2.029	1.962	1.962	2.077	2.077	1.987	1.987	2.026	2.026
γ_{th}	2.354	2.354	2.031	2.031	1.956	1.956	2.081	2.081	1.975	1.975	2.026	2.026
γ_P	2.711	2.550	2.242	2.369	2.213	2.342	2.276	2.402	2.242	2.374	1.995	2.107
γ_S	1.693	0.936	2.145	2.444	2.072	2.369	2.228	2.533	2.138	2.449	1.892	2.157
γ_{LT}	1.728	0.988	2.153	2.438	2.084	2.367	2.232	2.523	2.147	2.443	1.900	2.153
γ_{HT}	2.033	1.474	2.177	2.419	2.119	2.360	2.244	2.489	2.173	2.424	1.926	2.140
δ_S	8.351	8.351	4.097	4.097	4.343	4.343	2.925	2.925	4.205	4.205	3.792	3.792
δ_T	11.168	11.168	6.595	6.595	6.757	6.757	5.481	5.481	6.640	6.640	6.285	6.285
θ_D	136.7	134.8	136.8	135.6	136.6	135.1	136.1	135.0	135.5	133.9	136.5	135.2
$(\partial K_S/\partial T)_V$	-0.079	-0.079	0.017	0.017	0.011	0.011	0.041	0.041	0.014	0.014	0.012	0.012
$(\partial K_P/\partial T)_V$	-0.161	-0.161	-0.023	-0.023	-0.025	-0.025	-0.002	-0.002	-0.023	-0.023	-0.027	-0.027
$(\partial \alpha/\partial T)_P$	10.00	10.00	15.36	15.36	15.36	15.36	15.36	15.36	15.36	15.36	15.36	15.36
V_S/V_P	0.412	0.407	0.565	0.562	0.570	0.567	0.559	0.556	0.566	0.562	0.564	0.561
V_m	1.326	1.308	1.568	1.553	1.564	1.548	1.559	1.546	1.550	1.532	1.564	1.549
REF. E,C,	D17		D97(021)		D71(021)		D89(021)		110(021)		D88(106)	
REF. α, Cp	070; 602		537; 602		537; 602		537; 602		537, 602		537, 602	

CsBr CsCl-str.(Cubic)	CsBr CsCl-str.(Cubic)	TlBr CsCl-str.(Cubic)	TlBr CsCl-str.(Cubic)	TlBr CsCl-str.(Cubic)	Hg_2Br_2 —— (Tetra.)

REF. E.C.	017	097(021)	071(021)	089(021)	110(021)	088(106)
REF. α, Cp	070; 602	537; 602	537; 602	537; 602	537, 602	537, 602

	CsBr CsCl-str.(Cubic) *PULS (1967) 286 K		CsBr CsCl-str.(Cubic) PULS (1967) ROOM		TlBr CsCl-str.(Cubic) PULS (1960) 293 K		TlBr CsCl-str.(Cubic) PULS (1966) 300 K		TlBr CsCl-str.(Cubic) PULS (1967) 298 K		Hg_2Br_2 —— (Tetra.) PULS (1977) ROOM	
ρ_x	4.454		4.456		7.560		7.462		7.453		7.307	
ρ_B	******		******		******		******		******		******	
M	106.41		106.41		142.10		142.10		142.10		140.26	
α	138.06		138.06		251.80		169.90		148.08		******	
C_P	2.434		2.434		1.849		1.849		1.849		1.867	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	157.7	157.7	155.9	155.9	224.7	224.7	224.3	224.3	222.5	222.5	203.1	154.3
K_T	145.6	145.6	144.1	144.1	202.2	202.2	196.6	196.6	201.2	201.2	******	******
μ	89.0	87.3	88.4	86.6	89.5	87.6	87.9	86.2	89.6	87.7	60.5	23.2
σ	0.263	0.266	0.262	0.266	0.324	0.327	0.327	0.330	0.323	0.326	0.365	0.428
V_P	2.491	2.481	2.478	2.468	2.133	2.125	2.139	2.132	2.142	2.134	1.971	1.592
Vs	1.413	1.400	1.408	1.394	1.088	1.076	1.085	1.075	1.096	1.085	0.910	0.563
V_ϕ	1.882	1.882	1.870	1.870	1.724	1.724	1.734	1.734	1.728	1.728	1.667	1.453
$(\partial K_S/\partial P)_T$	5.38	5.38	(5.38)	(5.38)	******	******	(6.62)	(6.62)	6.62	6.62	******	******
$(\partial K_T/\partial P)_T$	5.45	5.45	5.45	5.45	******	******	6.73	6.73	6.67	6.67	******	******
$(\partial \mu/\partial P)_T$	2.78	3.08	(2.78)	(3.08)	******	******	(2.41)	(2.63)	2.41	2.63	******	******
$(\partial \sigma/\partial P)_T$	0.571	-0.230	0.609	-0.210	******	******	0.319	-0.160	0.443	-0.046	******	******
$(\partial V_P/\partial P)_T$	32.41	34.41	32.54	34.57	******	******	25.35	26.41	25.46	26.53	******	******
$(\partial V_S/\partial P)_T$	17.24	19.89	17.27	19.96	******	******	12.12	13.69	12.02	13.59	******	******
$(\partial V_\phi/\partial P)_T$	25.63	25.63	25.78	25.78	******	******	21.16	21.16	21.39	21.39	******	******
$(\partial K_S/\partial T)_P$	(-0.083)	(-0.083)	-0.083	-0.083	******	******	-0.181	-0.181	-0.155	-0.155	******	******
$(\partial K_T/\partial T)_P$	-0.127	-0.127	-0.126	-0.126	******	******	-0.251	-0.251	-0.215	-0.215	******	******
$(\partial \mu/\partial T)_P$	(-0.072)	(-0.080)	-0.072	-0.080	******	******	-0.095	-0.099	-0.089	-0.093	******	******
$(\partial \sigma/\partial T)_P$	5.71	7.54	5.71	7.59	******	******	4.11	5.14	4.59	5.63	******	******
$(\partial V_P/\partial T)_P$	-0.639	-0.685	-0.643	-0.690	******	******	-0.781	-0.803	-0.699	-0.721	******	******
$(\partial V_S/\partial T)_P$	-0.477	-0.541	-0.480	-0.544	******	******	-0.492	-0.526	-0.462	-0.497	******	******
$(\partial V_b/\partial T)_P$	-0.367	-0.367	-0.371	-0.371	******	******	-0.553	-0.553	-0.475	-0.475	******	******
$(\partial P/\partial T)_{V_P}$	1.971	1.991	1.976	1.997	******	******	3.082	3.043	2.744	2.718	******	******
$(\partial P/\partial T)_{V_S}$	2.77	2.72	2.78	2.72	******	******	4.06	3.84	3.84	3.65	******	******
$(\partial P/\partial T)_{V_\phi}$	1.432	1.432	1.437	1.437	******	******	2.615	2.615	2.221	2.221	******	******
$(\partial P/\partial T)_\rho$	2.010	2.010	1.989	1.989	3.070	3.070	3.341	3.341	2.979	2.979	******	******
γ_{th}	2.008	2.008	1.984	1.984	2.440	2.440	2.762	2.762	2.391	2.391	******	******
γ_P	2.227	2.353	2.225	2.352	******	******	2.663	2.768	2.724	2.834	******	******
γ_S	2.109	2.402	2.100	2.396	******	******	2.528	2.837	2.539	2.854	******	******
γ_{LT}	2.119	2.398	2.111	2.392	******	******	2.537	2.833	2.551	2.853	******	******
γ_{HT}	2.148	2.385	2.142	2.381	******	******	2.573	2.814	2.601	2.847	******	******
δ_S	3.826	3.826	3.870	3.870	******	******	4.757	4.757	4.713	4.713	******	******
δ_T	6.299	6.299	6.316	6.316	******	******	7.521	7.521	7.208	7.208	******	******
θ_D	137.2	136.0	136.7	135.4	115.3	114.1	114.5	113.5	115.6	114.4	96.2	60.1
$(\partial K_S/\partial T)_V$	0.022	0.022	0.021	0.021	******	******	0.062	0.062	0.054	0.054	******	******
$(\partial K_P/\partial T)_V$	-0.017	-0.017	-0.017	-0.017	******	******	-0.026	-0.026	-0.016	-0.016	******	******
$(\partial \alpha/\partial T)_P$	15.36	15.36	15.36	15.36	9.80	9.80	8.00	8.00	7.62	7.62	******	******
V_S/V_P	0.567	0.564	0.568	0.565	0.510	0.506	0.507	0.504	0.512	0.508	0.462	0.354
V_m	1.571	1.558	1.566	1.551	1.219	1.207	1.217	1.205	1.228	1.216	1.025	0.640
REF. E.C.	021(106)		106(021)		051		109(079)		079		009	
REF. α, Cp	537; 602		537, 602		530; 603		109, 603		079; 603		***, 613	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	LiI Rock salt (Cubic) PULS (1972) 295 K		NaI Rock salt (Cubic) PULS (1960) 295 K		NaI Rock salt (Cubic) PULS (1960) 300 K		NaI Rock salt (Cubic) PULS (1970) 295 K		NaI Rock salt (Cubic) *PULS (1971) 298 K		NaI Rock salt (Cubic) RESO (1974) 300 K	
ρ_X	4.067		3.665		3.669		3.665		3.667		3.644	
ρ_B	******		******		******		******		******		******	
M	66.92		74.95		74.95		74.95		74.95		74.95	
α	180.00		137.70		137.70		137.70		137.70		137.70	
C_P	3.751		3.487		3.487		3.487		3.487		3.487	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	191.6	191.6	159.2	159.2	161.0	161.0	159.2	159.2	162.2	162.2	160.9	160.9
K_T	170.8	170.8	148.6	148.6	150.3	150.3	148.6	148.6	151.3	151.3	150.1	150.1
μ	108.9	103.6	86.0	84.5	84.6	83.3	86.0	84.5	85.6	84.3	91.3	89.9
σ	0.261	0.271	0.271	0.274	0.276	0.279	0.271	0.274	0.276	0.278	0.261	0.264
V_P	2.878	2.848	2.733	2.724	2.732	2.723	2.733	2.724	2.745	2.737	2.785	2.776
V_S	1.636	1.596	1.532	1.519	1.518	1.507	1.532	1.519	1.528	1.516	1.583	1.571
V_ϕ	2.170	2.170	2.084	2.084	2.095	2.095	2.084	2.084	2.103	2.103	2.101	2.101
$(\partial K_S/\partial P)_T$	******	******	(5.48)	(5.48)	(5.48)	(5.48)	5.40	5.40	5.48	5.48	(5.48)	(5.48)
$(\partial K_T/\partial P)_T$	******	******	5.53	5.53	5.44	5.44	5.45	5.45	5.52	5.52	5.43	5.43
$(\partial \mu/\partial P)_T$	******	******	(1.96)	(1.66)	(1.96)	(1.66)	1.98	1.66	1.96	1.66	(1.96)	(1.66)
$(\partial \sigma/\partial P)_T$	******	******	2.255	2.833	2.066	2.651	2.122	2.728	2.079	2.660	2.528	3.096
$(\partial V_P/\partial P)_T$	******	******	31.20	29.38	31.28	29.44	30.91	29.01	31.12	29.29	30.59	28.78
$(\partial V_S/\partial P)_T$	******	******	12.31	9.81	12.54	10.01	12.45	9.85	12.44	9.92	11.71	9.27
$(\partial V_\phi/\partial P)_T$	******	******	28.86	28.86	28.68	28.68	28.34	28.34	28.58	28.58	28.78	28.78
$(\partial K_S/\partial T)_P$	-0.140	-0.140	-0.091	-0.091	-0.064	-0.064	(-0.091)	(-0.091)	(-0.091)	(-0.091)	-0.061	-0.061
$(\partial K_T/\partial T)_P$	-0.197	-0.197	-0.127	-0.127	-0.102	-0.102	-0.127	-0.127	-0.128	-0.128	-0.099	-0.099
$(\partial \mu/\partial T)_P$	-0.127	-0.146	-0.058	-0.048	-0.064	-0.054	(-0.058)	(-0.048)	(-0.058)	(-0.048)	-0.068	-0.062
$(\partial \sigma/\partial T)_P$	8.82	13.14	1.94	-0.02	6.89	4.75	1.94	-0.02	2.16	0.21	7.32	6.19
$(\partial V_P/\partial T)_P$	-1.065	-1.188	-0.653	-0.593	-0.559	-0.495	-0.653	-0.593	-0.648	-0.588	-0.556	-0.521
$(\partial V_S/\partial T)_P$	-0.810	-0.980	-0.410	-0.330	-0.473	-0.386	-0.410	-0.330	-0.411	-0.331	-0.480	-0.435
$(\partial V_\phi/\partial T)_P$	-0.598	-0.598	-0.454	-0.454	-0.273	-0.273	-0.454	-0.454	-0.447	-0.447	-0.254	-0.254
$(\partial P/\partial T)_{V_P}$	******	******	2.092	2.018	1.788	1.681	2.112	2.045	2.082	2.007	1.817	1.809
$(\partial P/\partial T)_{V_S}$	******	******	3.33	3.37	3.77	3.86	3.30	3.35	3.31	3.33	4.10	4.69
$(\partial P/\partial T)_{V_\phi}$	******	******	1.574	1.574	0.951	0.951	1.603	1.603	1.565	1.565	0.883	0.883
$(\partial P/\partial T)_\rho$	3.074	3.074	2.047	2.047	2.069	2.069	2.047	2.047	2.083	2.083	2.067	2.067
γ_{th}	2.260	2.260	1.715	1.715	1.733	1.733	1.715	1.715	1.747	1.747	1.744	1.744
γ_P	******	******	2.030	1.937	2.054	1.958	2.014	1.916	2.049	1.953	1.982	1.890
γ_S	******	******	1.528	1.294	1.574	1.332	1.542	1.297	1.565	1.323	1.444	1.219
γ_{LT}	******	******	1.568	1.345	1.612	1.380	1.580	1.346	1.603	1.373	1.489	1.275
γ_{HT}	******	******	1.695	1.508	1.734	1.540	1.699	1.503	1.726	1.533	1.623	1.443
δ_S	4.059	4.059	4.166	4.166	2.891	2.891	4.166	4.166	4.088	4.088	2.758	2.758
δ_T	6.410	6.410	6.186	6.186	4.931	4.931	6.186	6.186	6.143	6.143	4.809	4.809
θ_D	179.8	175.6	156.7	155.5	155.5	154.4	156.7	155.5	156.5	155.3	161.5	160.3
$(\partial K_S/\partial T)_V$	******	******	0.021	0.021	0.047	0.047	0.019	0.019	0.023	0.023	0.050	0.050
$(\partial K_P/\partial T)_V$	******	******	-0.013	-0.013	0.011	0.011	-0.015	-0.015	-0.013	-0.013	0.013	0.013
$(\partial \alpha/\partial T)_P$	(10.00)†	(10.00)†	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
V_S/V_P	0.569	0.561	0.560	0.558	0.556	0.553	0.560	0.558	0.557	0.554	0.568	0.566
V_M	1.819	1.777	1.705	1.691	1.691	1.679	1.705	1.691	1.702	1.689	1.760	1.747
REF. E.C.	075		052(008)		024(008)		094(052)		008(052)		038(008)	
REF. α; Cp	075, 604		522, 613		522, 613		522, 613		522, 613		522; 613	

REF. E.C.	075	052(008)	024(008)	094(052)	008(052)	038(008)
REF. α; Cp	075, 604	522, 613	522, 613	522, 613	522, 613	522; 613

	KI Rock salt (Cubic) PULS (1960) 295 K		KI Rock salt (Cubic) *PULS (1965) 300 K		KI Rock salt (Cubic) PULS (1970) 295 K		KI Rock salt (Cubic) *PULS (1971) 298 K		KI Rock salt (Cubic) PULS (1972) 300 K		CuI Zincblende(Cubic) PULS (1972) 300 K	
ρ_x	3.125		3.125		3.125		3.126		3.125		5.686	
ρ_B	######		######		######		######		######		######	
M	83.00		83.00		83.00		83.00		83.00		95.22	
α	117.93		117.93		117.93		126.00		117.93		49.69	
C_p	3.182		3.182		3.182		3.182		3.182		2.848	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	121.3	121.3	116.2	116.2	121.3	121.3	121.5	121.5	118.5	118.5	199.3	198.3
K_T	115.4	115.4	110.8	110.8	115.4	115.4	114.8	114.8	112.9	112.9	196.5	196.5
μ	59.7	50.9	59.1	50.6	59.7	50.9	60.1	51.2	60.3	51.1	185.0	184.9
σ	0.289	0.316	0.283	0.310	0.289	0.316	0.288	0.315	0.282	0.311	0.144	0.144
V_P	2.536	2.460	2.498	2.424	2.536	2.460	2.540	2.464	2.523	2.444	2.797	2.797
V_S	1.382	1.276	1.375	1.272	1.382	1.276	1.387	1.280	1.389	1.279	1.804	1.803
V_ϕ	1.970	1.970	1.929	1.929	1.970	1.970	1.972	1.972	1.948	1.948	1.867	1.867
$(\partial K_S/\partial P)_T$	(5.10)	(5.10)	6.28	6.28	5.47	5.47	5.10	5.10	(5.10)	(5.10)	######	######
$(\partial K_T/\partial P)_T$	5.14	5.14	6.27	6.27	5.50	5.50	5.14	5.14	5.15	5.15	######	######
$(\partial \mu/\partial P)_T$	(1.20)	(0.19)	1.18	0.19	1.23	0.19	1.20	0.19	(1.20)	(0.19)	######	######
$(\partial \sigma/\partial P)_T$	3.982	6.171	6.329	8.345	4.460	6.689	4.014	6.187	4.298	6.465	######	######
$(\partial V_P/\partial P)_T$	31.30	24.20	39.00	32.14	33.85	26.54	31.14	24.06	31.32	24.26	######	######
$(\partial V_S/\partial P)_T$	7.92	-3.08	7.51	-3.39	8.20	-3.18	7.81	-3.14	7.68	-3.22	######	######
$(\partial V_\phi/\partial P)_T$	32.88	32.88	43.36	43.36	35.89	35.89	32.79	32.79	33.27	33.27	######	######
$(\partial K_S/\partial T)_P$	-0.060	-0.060	(-0.062)	(-0.062)	(-0.062)	(-0.062)	(-0.062)	(-0.062)	-0.062	-0.062	######	######
$(\partial K_T/\partial T)_P$	-0.081	-0.081	-0.081	-0.081	-0.083	-0.083	-0.086	-0.086	-0.082	-0.082	######	######
$(\partial \mu/\partial T)_P$	-0.041	-0.020	(-0.037)	(-0.014)	(-0.037)	(-0.014)	(-0.037)	(-0.014)	-0.037	-0.014	######	######
$(\partial \sigma/\partial T)_P$	3.54	-1.72	1.79	-4.10	2.03	-3.66	1.97	-3.69	1.74	-3.96	######	######
$(\partial V_P/\partial T)_P$	-0.576	-0.417	-0.563	-0.389	-0.551	-0.380	-0.539	-0.368	-0.555	-0.384	######	######
$(\partial V_S/\partial T)_P$	-0.395	-0.173	-0.350	-0.105	-0.347	-0.104	-0.339	-0.098	-0.344	-0.103	######	######
$(\partial V_\phi/\partial T)_P$	-0.372	-0.372	-0.397	-0.397	-0.384	-0.384	-0.376	-0.376	-0.391	-0.391	######	######
$(\partial P/\partial T)_{V_P}$	1.841	1.725	1.444	1.212	1.626	1.430	1.730	1.531	1.771	1.582	######	######
$(\partial P/\partial T)_{V_S}$	5.00	-5.61	4.66	-3.10	4.23	-3.27	4.34	-3.12	4.48	-3.21	######	######
$(\partial P/\partial T)_{V_\phi}$	1.131	1.131	0.916	0.916	1.070	1.070	1.145	1.145	1.176	1.176	######	######
$(\partial P/\partial T)_\rho$	1.361	1.361	1.307	1.307	1.361	1.361	1.447	1.447	1.332	1.332	0.976	0.976
γ_{th}	1.439	1.439	1.378	1.378	1.439	1.439	1.539	1.539	1.406	1.406	0.608	0.608
γ_P	1.758	1.469	2.064	1.803	1.874	1.578	1.741	1.454	1.735	1.454	######	######
γ_S	0.994	0.054	0.938	0.038	1.019	0.045	0.980	0.052	0.958	0.049	######	######
γ_{LT}	1.052	0.147	1.025	0.157	1.083	0.145	1.037	0.144	1.017	0.143	######	######
γ_{HT}	1.249	0.526	1.314	0.626	1.304	0.556	1.233	0.519	1.217	0.517	######	######
δ_S	4.201	4.201	4.494	4.494	4.306	4.306	4.024	4.024	4.407	4.407	######	######
δ_T	5.985	5.985	6.206	6.206	6.090	6.090	5.915	5.915	6.151	6.151	######	######
θ_D	129.9	120.4	129.1	119.9	129.9	120.4	130.4	120.8	130.5	120.6	194.6	194.5
$(\partial K_S/\partial T)_V$	0.008	0.008	0.019	0.019	0.011	0.011	0.010	0.010	0.005	0.005	######	######
$(\partial K_P/\partial T)_V$	-0.011	-0.011	0.001	0.001	-0.008	-0.008	-0.011	-0.011	-0.013	-0.013	######	######
$(\partial \alpha/\partial T)_P$	11.90	11.90	11.90	11.90	11.90	11.90	12.60	12.60	11.90	11.90	(0.0)†	(0.0)†
V_S/V_P	0.545	0.519	0.550	0.525	0.545	0.519	0.546	0.520	0.551	0.523	0.645	0.645
V_M	1.542	1.428	1.532	1.422	1.542	1.428	1.547	1.433	1.548	1.431	1.980	1.980
REF. E.C.	052(008)		088(014)		094(014)		008(014)		014(008)		039	
REF. α, Cp	537, 613		537; 613		537; 613		008, 613		537, 613		527; 602	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	RbI Rock salt (Cubic) PULS (1960) 295 K		RbI Rock salt (Cubic) PULS (1967) 300 K		RbI Rock salt (Cubic) *PULS (1970) 295 K		RbI Rock salt (Cubic) PULS (1970) 295 K		RbI Rock salt (Cubic) PULS (1970) 295 K		RbI Rock salt(Cubic) *PULS (1971) 298 K	
ρ_x	3.566		3.549		3.551		3.566		3.565		3.564	
ρ_B	######		######		######		######		######		######	
M	106.19		106.19		106.19		106.19		106.19		106.19	
α	116.46		116.46		116.46		116.46		116.46		118.50	
C_p	2.442		2.442		2.442		2.442		2.442		2.442	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	110.8	110.8	107.7	107.7	110.7	110.7	(110.8)[A]	(110.8)[A]	112.5	112.5	110.9	110.9
K_T	105.3	105.3	102.5	102.5	105.2	105.2	105.3	105.3	106.9	106.9	105.3	105.3
μ	50.3	39.7	50.2	39.6	49.9	39.6	(50.3)[A]	(39.7)[A]	49.7	39.5	50.2	39.8
σ	0.303	0.340	0.298	0.336	0.304	0.340	0.303	0.340	0.308	0.343	0.303	0.340
V_p	2.233	2.143	2.218	2.127	2.234	2.146	2.233	2.143	2.239	2.153	2.234	2.145
V_s	1.188	1.055	1.190	1.056	1.185	1.056	1.188	1.055	1.180	1.053	1.187	1.056
V_ϕ	1.763	1.763	1.742	1.742	1.766	1.766	1.763	1.763	1.776	1.776	1.764	1.764
$(\partial K_S/\partial P)_T$	(5.41)	(5.41)	(5.41)	(5.41)	5.34	5.34	5.44	5.44	5.49	5.49	5.41	5.41
$(\partial K_T/\partial P)_T$	5.46	5.46	5.55	5.55	5.38	5.38	5.48	5.48	5.50	5.50	5.45	5.45
$(\partial \mu/\partial P)_T$	(0.94)	(-0.28)	(0.94)	(-0.28)	0.89	-0.31	0.95	-0.30	0.84	-0.31	0.94	-0.28
$(\partial \sigma/\partial P)_T$	5.178	7.990	5.521	8.362	5.150	8.011	5.180	8.100	5.352	7.991	5.149	7.984
$(\partial V_p/\partial P)_T$	31.19	22.78	31.45	22.99	30.54	22.07	31.49	22.80	30.94	22.98	31.19	22.75
$(\partial V_s/\partial P)_T$	5.40	-8.74	5.27	-8.90	5.00	-9.20	5.55	-9.01	4.46	-9.10	5.42	-8.75
$(\partial V_\phi/\partial P)_T$	34.67	34.67	35.26	35.26	34.16	34.16	34.91	34.91	35.05	35.05	34.64	34.64
$(\partial K_S/\partial T)_P$	-0.062	-0.062	-0.082	-0.082	-0.059	-0.059	(-0.059)[B]	(-0.059)[B]	-0.051	-0.051	(-0.059)	(-0.059)
$(\partial K_T/\partial T)_P$	-0.080	-0.060	-0.098	-0.098	-0.077	-0.077	-0.077	-0.077	-0.070	-0.070	-0.077	-0.077
$(\partial \mu/\partial T)_P$	-0.036	-0.014	-0.030	-0.012	-0.036	-0.014	(-0.036)[B]	(-0.014)[B]	-0.035	-0.014	(-0.036)	(-0.014)
$(\partial \sigma/\partial T)_P$	2.72	-2.89	-2.78	-6.56	3.30	-2.52	3.22	-2.53	4.11	-1.58	3.24	-2.53
$(\partial V_p/\partial T)_P$	-0.557	-0.400	-0.647	-0.527	-0.543	-0.383	-0.541	-0.382	-0.479	-0.324	-0.539	-0.379
$(\partial V_s/\partial T)_P$	-0.355	-0.125	-0.288	-0.103	-0.360	-0.125	-0.357	-0.125	-0.344	-0.118	-0.356	-0.123
$(\partial V_\phi/\partial T)_P$	-0.387	-0.387	-0.561	-0.561	-0.365	-0.365	-0.364	-0.364	-0.299	-0.299	-0.362	-0.362
$(\partial P/\partial T)_{V_P}$	1.784	1.755	2.056	2.294	1.779	1.734	1.717	1.673	1.548	1.410	1.726	1.666
$(\partial P/\partial T)_{V_S}$	6.57	-1.43	5.47	-1.15	7.19	-1.36	6.43	-1.38	7.71	-1.30	6.58	-1.41
$(\partial P/\partial T)_{V_\phi}$	1.115	1.115	1.591	1.591	1.070	1.070	1.044	1.044	0.854	0.854	1.046	1.046
$(\partial P/\partial T)_P$	1.227	1.227	1.194	1.194	1.226	1.226	1.227	1.227	1.245	1.245	1.248	1.248
γ_{th}	1.482	1.482	1.447	1.447	1.487	1.487	1.482	1.482	1.505	1.505	1.511	1.511
γ_P	1.805	1.453	1.787	1.442	1.772	1.416	1.819	1.455	1.810	1.474	1.803	1.450
γ_S	0.812	-0.540	0.788	-0.530	0.778	-0.584	0.826	-0.566	0.737	-0.591	0.814	-0.539
γ_{LT}	0.882	-0.427	0.859	-0.417	0.847	-0.472	0.895	-0.452	0.810	-0.476	0.883	-0.427
γ_{HT}	1.143	0.125	1.121	0.127	1.109	0.083	1.157	0.107	1.095	0.098	1.144	0.124
δ_S	4.766	4.766	6.530	6.530	4.553	4.553	4.549	4.549	3.893	3.893	4.465	4.465
δ_T	6.506	6.506	8.231	8.231	6.298	6.298	6.289	6.289	5.658	5.658	6.149	6.149
θ_D	107.6	96.1	107.6	96.0	107.3	96.0	107.6	96.1	107.0	95.9	107.6	96.2
$(\partial K_S/\partial T)_V$	0.005	0.005	-0.016	-0.016	0.006	0.006	0.008	0.008	0.017	0.017	0.010	0.010
$(\partial K_P/\partial T)_V$	-0.013	-0.013	-0.032	-0.032	-0.011	-0.011	-0.010	-0.010	-0.002	-0.002	-0.009	-0.009
$(\partial \alpha/\partial T)_P$	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	6.90	6.90
V_S/V_P	0.532	0.492	0.536	0.497	0.531	0.492	0.532	0.492	0.527	0.489	0.531	0.492
V_M	1.327	1.184	1.328	1.185	1.324	1.185	1.327	1.184	1.320	1.183	1.326	1.186
REF. E.C.	052(020)		069(020)		035		093(052A, 035B)		030		020(035)	
REF. α, Cp	537, 602		537, 602		537, 602		537, 602		537, 602		020; 602	

REF. α, Cp	537, 602		537, 602		537, 602		537, 602		537, 602		020; 602			

	AgI Wurtzite (Hexa.) PULS (1974) 298 K		CsI CsCl-str.(Cubic) PULS (1960) 293 K		CsI CsCl-str.(Cubic) PULS (1961) 295 K		CsI CsCl-str.(Cubic) PULS (1964) 300 K		CsI CsCl-str.(Cubic) PULS (1965) 300 K		CsI CsCl-str.(Cubic) PUL (1967) ROOM	
ρ_x	5.683		4.520		4.529		4.537		4.529		4.525	
ρ_B	******		******		******		******		******		******	
M	117.39		129.91		129.91		129.91		129.91		129.91	
α	0.00		138.29		138.29		138.29		138.29		138.29	
C_P	2.327		1.983		1.983		1.983		1.983		1.983	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_s	238.4	237.9	129.0	129.0	123.5	123.5	125.0	125.0	121.5	121.5	125.6	125.6
K_T	238.4	237.9	119.2	119.2	114.5	114.5	115.8	115.8	112.8	112.8	116.3	116.3
μ	43.9	42.5	71.0	70.1	72.8	71.7	72.8	71.6	73.7	72.6	72.4	71.3
σ	0.413	0.416	0.267	0.270	0.254	0.257	0.256	0.259	0.248	0.251	0.258	0.261
V_P	2.286	2.277	2.224	2.219	2.207	2.200	2.212	2.205	2.203	2.196	2.215	2.208
V_S	0.879	0.865	1.253	1.245	1.268	1.258	1.267	1.257	1.275	1.266	1.265	1.255
V_ϕ	2.048	2.046	1.689	1.689	1.652	1.652	1.660	1.660	1.638	1.638	1.666	1.666
$(\partial K_S/\partial P)_T$	(-2.00)	(-2.00)	(5.46)	(5.46)	(5.46)	(5.46)	(5.46)	(5.46)	7.13	7.13	(5.46)	(5.46)
$(\partial K_T/\partial P)_T$	-2.00	-2.00	5.54	5.54	5.53	5.53	5.52	5.52	7.08	7.08	5.51	5.51
$(\partial \mu/\partial P)_T$	(-1.40)	(-1.40)	(2.81)	(3.06)	(2.81)	(3.06)	(2.81)	(3.06)	2.64	2.76	(2.81)	(3.06)
$(\partial \sigma/\partial P)_T$	1.921	1.952	0.524	-0.266	1.133	0.298	1.020	0.185	4.777	4.279	0.926	0.103
$(\partial V_P/\partial P)_T$	-19.68	-19.73	36.46	38.26	36.43	38.28	36.32	38.16	43.60	44.61	36.40	38.23
$(\partial V_S/\partial P)_T$	-15.86	-16.06	19.58	21.97	18.97	21.37	19.01	21.43	17.21	18.47	19.15	21.55
$(\partial V_\phi/\partial P)_T$	-12.89	-12.90	28.64	28.64	29.27	29.27	29.06	29.06	40.76	40.76	29.03	29.03
$(\partial K_S/\partial T)_P$	-0.281	-0.282	-0.074	-0.074	-0.071	-0.071	-0.070	-0.070	(-0.071)	(-0.071)	-0.067	-0.067
$(\partial K_T/\partial T)_P$	-0.281	-0.282	-0.108	-0.108	-0.102	-0.102	-0.102	-0.102	-0.101	-0.101	-0.099	-0.099
$(\partial \mu/\partial T)_P$	-0.036	-0.030	-0.063	-0.068	-0.065	-0.070	-0.056	-0.061	(-0.065)	(-0.070)	-0.061	-0.066
$(\partial \sigma/\partial T)_P$	-2.98	-3.82	6.21	7.74	6.69	8.38	4.37	5.93	6.39	8.08	6.45	8.04
$(\partial V_P/\partial T)_P$	-1.264	-1.243	-0.637	-0.672	-0.635	-0.673	-0.571	-0.606	-0.637	-0.675	-0.587	-0.623
$(\partial V_S/\partial T)_P$	-0.357	-0.304	-0.473	-0.521	-0.480	-0.531	-0.403	-0.450	-0.476	-0.526	-0.449	-0.498
$(\partial V_\phi/\partial T)_P$	-1.206	-1.211	-0.370	-0.370	-0.357	-0.357	-0.351	-0.351	-0.362	-0.362	-0.327	-0.327
$(\partial P/\partial T)_{V_P}$	-6.422	-6.299	1.746	1.756	1.743	1.758	1.572	1.588	1.460	1.512	1.613	1.631
$(\partial P/\partial T)_{V_S}$	-2.25	-1.89	2.42	2.37	2.53	2.48	2.12	2.10	2.77	2.85	2.35	2.31
$(\partial P/\partial T)_{V_\phi}$	-9.357	-9.390	1.293	1.293	1.220	1.220	1.207	1.207	0.888	0.888	1.125	1.125
$(\partial P/\partial T)_P$	0.000	0.000	1.648	1.648	1.583	1.583	1.601	1.601	1.560	1.560	1.608	1.608
γ_{th}	0.000	0.000	1.990	1.990	1.902	1.902	1.921	1.921	1.871	1.871	1.936	1.936
γ_P	-1.719	-1.728	2.286	2.388	2.224	2.326	2.234	2.337	2.565	2.624	2.244	2.346
γ_S	-3.968	-4.085	2.195	2.436	2.047	2.278	2.071	2.307	1.855	1.978	2.093	2.329
γ_{LT}	-3.906	-4.022	2.202	2.432	2.062	2.283	2.085	2.310	1.918	2.035	2.106	2.331
γ_{HT}	-3.218	-3.299	2.225	2.420	2.106	2.294	2.125	2.317	2.092	2.194	2.143	2.335
δ_S	******	******	4.171	4.171	4.127	4.127	4.055	4.055	4.195	4.195	3.834	3.834
δ_T	******	******	6.555	6.555	6.414	6.414	6.364	6.364	6.447	6.447	6.159	6.159
θ_D	91.3	89.9	114.4	113.7	115.6	114.8	115.6	114.8	116.3	115.5	115.4	114.6
$(\partial K_S/\partial T)_V$	-0.281	-0.282	0.015	0.015	0.015	0.015	0.016	0.016	0.040	0.040	0.020	0.020
$(\partial K_P/\partial T)_V$	-0.281	-0.282	-0.017	-0.017	-0.014	-0.014	-0.013	-0.013	0.010	0.010	-0.010	-0.010
$(\partial \alpha/\partial T)_P$	0.0	0.0	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70
V_S/V_P	0.385	0.380	0.563	0.561	0.574	0.572	0.573	0.570	0.579	0.577	0.571	0.568
V_m	0.997	0.981	1.394	1.386	1.408	1.398	1.407	1.397	1.416	1.406	1.405	1.396
REF: E.C.	029(102)		051(021)		089(021)		110(021)		066(089)		106(021)	
REF. α, Cp	520; 602		537; 602		537; 602		537; 602		537; 602		537; 602	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	CsI CsCl-str.(1967) *PULS (1967) 286 K		CdI_2 CdI_2-str. (Tri.) BRIL (1975) ROOM		HgI_2 —— (Tetra.) PULS (1975) 293 K		PbI_2 CdI_2-str.(Tri.) BRIL (1975) ROOM		Hg_2I_2 —— (Tetra.) PULS (1977) ROOM	
ρ_x	4.529		5.679		6.364		6.211		7.700	
ρ_B	******		******		******		******		******	
M	129.91		122.07		151.44		153.67		163.76	
α	138.29		107.00		64.00		108.00		******	
C_P	1.983		2.152		1.714		1.762		1.618	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	126.0	126.0	190.0	174.3	150.8	145.7	154.4	153.3	197.9	108.9
K_T	116.6	116.6	180.4	166.2	148.3	143.4	147.1	146.1	******	******
μ	73.7	72.7	85.1	78.5	58.5	47.9	65.9	59.8	57.4	19.5
σ	0.255	0.258	0.305	0.304	0.328	0.352	0.313	0.327	0.368	0.416
V_P	2.225	2.219	2.312	2.216	1.896	1.815	1.975	1.937	1.868	1.324
V_S	1.276	1.267	1.224	1.176	0.959	0.868	1.030	0.981	0.863	0.503
V_ϕ	1.668	1.668	1.829	1.752	1.539	1.513	1.577	1.571	1.603	1.189
$(\partial K_S/\partial P)_T$	5.46	5.46	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	5.53	5.53	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	2.81	3.06	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	1.050	0.243	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	36.15	37.95	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	18.88	21.25	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	28.97	28.97	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	(-0.071)	(-0.071)	******	******	-0.061	-0.062	******	******	******	******
$(\partial K_T/\partial T)_P$	-0.103	-0.103	******	******	-0.069	-0.068	******	******	******	******
$(\partial \mu/\partial T)_P$	(-0.065)	(-0.070)	******	******	-0.028	-0.029	******	******	******	******
$(\partial \sigma/\partial T)_P$	6.66	8.29	******	******	1.09	2.44	******	******	******	******
$(\partial V_P/\partial T)_P$	-0.627	-0.664	******	******	-0.348	-0.376	******	******	******	******
$(\partial V_S/\partial T)_P$	-0.476	-0.526	******	******	-0.199	-0.235	******	******	******	******
$(\partial V_\phi/\partial T)_P$	-0.351	-0.351	******	******	-0.264	-0.271	******	******	******	******
$(\partial P/\partial T)_{V_P}$	1.735	1.751	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	2.52	2.47	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	1.213	1.213	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	1.613	1.613	1.930	1.778	0.949	0.918	1.589	1.578	******	******
γ_{th}	1.940	1.940	1.664	1.526	0.885	0.855	1.524	1.513	******	******
γ_P	2.228	2.328	******	******	******	******	******	******	******	******
γ_S	2.060	2.289	******	******	******	******	******	******	******	******
γ_{LT}	2.074	2.292	******	******	******	******	******	******	******	******
γ_{HT}	2.116	2.302	******	******	******	******	******	******	******	******
δ_S	4.046	4.046	******	******	6.351	6.605	******	******	******	******
δ_T	6.375	6.375	******	******	7.221	7.446	******	******	******	******
θ_D	116.4	115.6	123.7	118.8	94.0	85.3	99.4	94.9	88.3	51.8
$(\partial K_S/\partial T)_V$	0.016	0.016	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	-0.014	-0.014	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	13.70	13.70	(10.00)†	(10.00)†	(0.0)†	(0.0)†	(10.00)†	(10.00)†	******	******
V_S/V_P	0.573	0.571	0.530	0.530	0.506	0.478	0.522	0.507	0.457	0.380
V_M	1.417	1.408	1.368	1.314	1.075	0.976	1.152	1.100	0.973	0.571
REF. E.C.	021(089)		098		050		098		009	
REF. α, Cp	537; 602		518, 602		050, 613		518; 602		***; 613	

B. Simple Oxide Series

BeO	BeO	MgO	MgO	MgO	MgO

REF. α, Cp	537; 602		518, 602		050, 613		518; 602		***; 613			

B. Simple Oxide Series

	BeO Wurtzite (Hexa.) PULS (1966) ROOM		BeO Wurtzite (Hexa.) PULS (1967) 298 K		MgO Rock salt (Cubic) *PULS (1965) 298 K		MgO Rock salt (Cubic) *PULS (1966) 300 K		MgO Rock salt (Cubic) *PULS (1969) 298 K		MgO Rock salt (Cubic) *PULS (1970) 300 K	
ρ_x	3.010		3.010		3.584		3.584		3.581		3.584	
ρ_B	******		******		3.579		3.583		3.579		3.583	
M	12.51		12.51		20.15		20.15		20.15		20.15	
α	18.00		18.00		30.90		31.50		30.90		30.90	
C_p	10.282		10.282		9.258		9.258		9.258		9.258	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	2495.0	2495.0	2244.0	2243.9	1626.0	1626.0	1622.0	1622.0	1622.6	1622.6	1628.0	1628.0
K_T	2475.6	2475.6	2228.3	2228.2	1603.5	1603.5	1598.7	1598.7	1600.2	1600.2	1605.4	1605.4
μ	1595.0	1588.0	1653.3	1642.1	1310.4	1280.6	1308.4	1278.6	1308.4	1278.8	1311.1	1281.3
σ	0.237	0.237	0.204	0.206	0.182	0.188	0.182	0.188	0.182	0.188	0.183	0.188
V_P	12.391	12.379	12.157	12.136	9.708	9.651	9.693	9.635	9.699	9.642	9.707	9.649
V_S	7.279	7.263	7.411	7.386	6.051	5.982	6.043	5.973	6.046	5.977	6.049	5.980
V_ϕ	9.104	9.104	8.634	8.634	6.740	6.740	6.728	6.728	6.733	6.733	6.740	6.740
$(\partial K_S/\partial P)_T$	******	******	******	******	4.16	4.16	4.49	4.49	4.27	4.27	3.85	3.85
$(\partial K_T/\partial P)_T$	******	******	******	******	4.18	4.18	4.50	4.50	4.29	4.29	3.87	3.87
$(\partial \mu/\partial P)_T$	******	******	******	******	2.48	2.80	2.54	2.88	2.48	2.82	2.45	2.79
$(\partial \sigma/\partial P)_T$	******	******	******	******	0.167	0.092	0.208	0.127	0.185	0.106	0.124	0.047
$(\partial V_P/\partial P)_T$	******	******	******	******	7.71	8.41	8.30	9.05	7.88	8.61	7.21	7.94
$(\partial V_S/\partial P)_T$	******	******	******	******	3.83	4.67	3.97	4.86	3.84	4.71	3.77	4.64
$(\partial V_\phi/\partial P)_T$	******	******	******	******	6.52	6.52	7.21	7.21	6.76	6.76	5.87	5.87
$(\partial K_S/\partial T)_P$	******	******	******	******	(-0.153)	(-0.153)	-0.160	-0.160	(-0.153)	(-0.153)	-0.153	-0.153
$(\partial K_T/\partial T)_P$	******	******	******	******	-0.272	-0.272	-0.278	-0.278	-0.272	-0.272	-0.273	-0.273
$(\partial \mu/\partial T)_P$	******	******	******	******	(-0.229)	(-0.261)	-0.219	-0.249	(-0.229)	(-0.261)	-0.229	-0.261
$(\partial \sigma/\partial T)_P$	******	******	******	******	2.03	2.71	1.73	2.37	2.03	2.71	2.02	2.71
$(\partial V_P/\partial T)_P$	******	******	******	******	-0.510	-0.576	-0.499	-0.560	-0.511	-0.577	-0.509	-0.575
$(\partial V_S/\partial T)_P$	******	******	******	******	-0.436	-0.517	-0.411	-0.487	-0.436	-0.517	-0.435	-0.516
$(\partial V_\phi/\partial T)_P$	******	******	******	******	-0.213	-0.213	-0.226	-0.226	-0.213	-0.213	-0.213	-0.213
$(\partial P/\partial T)_{V_P}$	******	******	******	******	6.613	6.842	6.004	6.185	6.485	6.693	7.071	7.246
$(\partial P/\partial T)_{V_S}$	******	******	******	******	11.37	11.06	10.36	10.00	11.38	10.97	11.57	11.12
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	3.266	3.266	3.134	3.134	3.159	3.159	3.621	3.621
$(\partial P/\partial T)_\rho$	4.456	4.456	4.011	4.011	4.955	4.955	5.036	5.036	4.944	4.944	4.961	4.961
γ_{th}	1.451	1.451	1.305	1.305	1.516	1.516	1.540	1.540	1.513	1.513	1.516	1.516
γ_P	******	******	******	******	1.607	1.731	1.703	1.836	1.633	1.763	1.525	1.654
γ_S	******	******	******	******	1.349	1.586	1.384	1.635	1.349	1.595	1.333	1.579
γ_{LT}	******	******	******	******	1.377	1.601	1.418	1.656	1.379	1.613	1.354	1.587
γ_{HT}	******	******	******	******	1.435	1.634	1.490	1.702	1.443	1.651	1.397	1.604
δ_S	******	******	******	******	3.045	3.045	3.132	3.132	3.052	3.052	3.041	3.041
δ_T	******	******	******	******	5.499	5.499	5.517	5.517	5.500	5.500	5.495	5.495
θ_D	1261.8	1259.2	1280.0	1275.9	942.3	932.1	941.4	931.2	941.6	931.4	942.4	932.2
$(\partial K_S/\partial T)_V$	******	******	******	******	0.009	0.009	0.026	0.026	0.014	0.014	-0.006	-0.006
$(\partial K_P/\partial T)_V$	******	******	******	******	-0.065	-0.065	-0.051	-0.051	-0.060	-0.060	-0.080	-0.080
$(\partial \alpha/\partial T)_P$	3.00	3.00	3.00	3.00	6.60	6.60	6.00	6.00	6.60	6.60	6.60	6.60
V_S/V_P	0.587	0.587	0.610	0.609	0.623	0.620	0.623	0.620	0.623	0.620	0.623	0.620
V_m	8.069	8.052	8.186	8.159	6.668	6.595	6.658	6.586	6.662	6.591	6.666	6.593
REF. E.C.	217		230		220(279)		205		225(279)		279	
REF. α, Cp	535, 613		535, 613		540; 613		205, 613		540; 613		540; 613	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	MgO Rock salt (Cubic) PULS (1971) 300 K		MgO Rock salt (Cubic) RESO (1976) 293 K		MgO Rock salt (Cubic) RESO (1980) 293 K		CaO Rock salt (Cubic) PULS (1967) 273 K		CaO Rock salt (Cubic) PULS (1972) ROOM		CaO Rock salt (Cubic) *PULS (1977) 298 K	
ρ_x	3.584		3.584		3.584		3.295		3.346		3.346	
ρ_B	3.583		3.579		3.587		******		******		******	
M	20.15		20.15		20.15		28.04		28.04		28.04	
α	31.50		30.90		30.90		37.98		37.98		29.04	
C_P	9.258		9.258		9.258		7.717		7.717		7.717	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1622.3	1622.3	1633.0	1633.0	1628.0	1628.0	1087.0	1087.0	1140.0	1140.0	1125.0	1125.0
K_T	1599.0	1599.0	1610.3	1610.3	1605.5	1605.5	1067.3	1067.3	1118.6	1118.6	1112.7	1112.7
μ	1296.0	1267.6	1305.3	1275.3	1303.4	1277.9	740.0	740.0	814.0	814.0	810.0	810.0
σ	0.185	0.190	0.184	0.190	0.183	0.189	0.223	0.223	0.212	0.212	0.210	0.210
V_P	9.670	9.615	9.709	9.651	9.696	9.638	7.933	7.933	8.155	8.155	8.118	8.118
V_S	6.014	5.948	6.039	5.969	6.040	5.969	4.739	4.739	4.932	4.932	4.920	4.920
V_ϕ	6.729	6.729	6.755	6.755	6.737	6.737	5.744	5.744	5.837	5.837	5.798	5.798
$(\partial K_S/\partial P)_T$	(3.85)	(3.85)	******	******	(3.85)	(3.85)	(4.83)	(4.83)	6.00	6.00	4.83	4.83
$(\partial K_T/\partial P)_T$	3.88	3.88	******	******	3.87	3.87	4.88	4.88	6.01	6.01	4.84	4.84
$(\partial \mu/\partial P)_T$	(2.45)	(2.79)	******	******	(2.45)	(2.79)	(1.76)	(1.74)	1.71	1.70	1.76	1.74
$(\partial \sigma/\partial P)_T$	0.120	0.043	******	******	0.123	0.045	0.468	0.474	0.737	0.740	0.498	0.503
$(\partial V_P/\partial P)_T$	7.24	7.97	******	******	7.21	7.94	10.00	9.95	11.53	11.50	9.55	9.50
$(\partial V_S/\partial P)_T$	3.80	4.68	******	******	3.77	4.65	3.40	3.34	2.98	2.95	3.12	3.06
$(\partial V_\phi/\partial P)_T$	5.88	5.88	******	******	5.87	5.87	10.07	10.07	12.75	12.75	9.84	9.84
$(\partial K_S/\partial T)_P$	-0.191	-0.191	******	******	-0.153	-0.153	-0.230	-0.230	-0.192	-0.192	-0.128	-0.128
$(\partial K_T/\partial T)_P$	-0.309	-0.309	******	******	-0.272	-0.272	-0.312	-0.312	-0.281	-0.281	-0.176	-0.176
$(\partial \mu/\partial T)_P$	-0.285	-0.310	******	******	-0.235	-0.264	0.022	0.022	-0.149	-0.149	-0.148	-0.147
$(\partial \sigma/\partial T)_P$	2.54	3.12	******	******	2.14	2.78	-5.46	-5.46	0.34	0.33	1.61	1.58
$(\partial V_P/\partial T)_P$	-0.672	-0.726	******	******	-0.521	-0.581	-0.233	-0.233	-0.561	-0.560	-0.482	-0.479
$(\partial V_S/\partial T)_P$	-0.567	-0.634	******	******	-0.449	-0.524	0.160	0.160	-0.358	-0.356	-0.378	-0.375
$(\partial V_\phi/\partial T)_P$	-0.290	-0.290	******	******	-0.212	-0.212	-0.499	-0.499	-0.381	-0.381	-0.246	-0.246
$(\partial P/\partial T)_{V_P}$	9.274	9.109	******	******	7.221	7.322	2.332	2.344	4.869	4.866	5.041	5.041
$(\partial P/\partial T)_{V_S}$	14.90	13.56	******	******	11.91	11.28	-4.72	-4.81	12.03	12.09	12.11	12.25
$(\partial P/\partial T)_{V_\phi}$	4.937	4.937	******	******	3.621	3.621	4.951	4.951	2.985	2.985	2.504	2.504
$(\partial P/\partial T)_\rho$	5.037	5.037	4.976	4.976	4.961	4.961	4.053	4.053	4.249	4.249	3.231	3.231
γ_{th}	1.541	1.541	1.523	1.523	1.515	1.515	1.624	1.624	1.677	1.677	1.265	1.265
γ_P	1.531	1.660	******	******	1.527	1.656	1.679	1.672	1.914	1.911	1.643	1.636
γ_S	1.344	1.591	******	******	1.336	1.584	1.100	1.085	1.008	1.001	1.039	1.026
γ_{LT}	1.364	1.598	******	******	1.356	1.592	1.155	1.142	1.099	1.092	1.100	1.087
γ_{HT}	1.407	1.614	******	******	1.400	1.608	1.293	1.281	1.310	1.305	1.241	1.229
δ_S	3.740	3.740	******	******	3.041	3.041	5.571	5.571	4.434	4.434	3.927	3.927
δ_T	6.126	6.126	******	******	5.493	5.493	7.694	7.694	6.626	6.626	5.438	5.438
θ_D	937.2	927.4	940.7	930.4	941.3	930.9	645.9	645.9	674.9	674.9	673.1	673.0
$(\partial K_S/\partial T)_V$	-0.037	-0.037	******	******	-0.006	-0.006	-0.050	-0.050	0.045	0.045	0.021	0.021
$(\partial K_T/\partial T)_V$	-0.113	-0.113	******	******	-0.080	-0.080	-0.114	-0.114	-0.026	-0.026	-0.019	-0.019
$(\partial \alpha/\partial T)_P$	6.00	6.00	6.60	6.60	6.60	6.60	4.20	4.20	4.20	4.20	2.01	2.01
V_S/V_P	0.622	0.619	0.622	0.619	0.623	0.619	0.597	0.597	0.605	0.605	0.606	0.606
V_H	6.629	6.559	6.656	6.583	6.656	6.582	5.245	5.245	5.452	5.452	5.438	5.437
REF. E.C.	261(279)		282		284(279)		244(227)		208+278		227	
REF. α, Cp	205; 613		540; 613		540; 613		536; 602		536; 602		227; 602	

V_H	6.629	6.559	6.656	6.583	6.656	6.582	5.245	5.245	5.452	5.452	5.438	5.437
REF. E.C.	261(279)		282		284(279)		244(227)		208+278		227	
REF. α, Cp	205; 613		540; 613		540; 613		536; 602		536; 602		227; 602	

	CaO Rock salt (Cubic) *PULS (1977) 298 K		MnO Rock salt (Cubic) PULS (1969) 298 K		MnO Rock salt (Cubic) PULS (1971) 296 K		MnO Rock salt (Cubic) PULS (1977) 280 K		MnO Rock salt (Cubic) RESO (1980) 303 K		$Fe_{0.92}O$ Rock salt (Cubic) RESO (1980) 298 K	
ρ_X	3.342		5.790		5.365		5.364		5.365		5.680	
ρ_B	3.340		5.730		******		******		5.372		5.681	
M	28.04		35.47		35.47		35.47		35.47		35.09	
α	37.98		34.50		34.50		34.50		34.50		36.40	
C_P	7.717		6.322		6.322		6.322		6.322		7.154	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1170.0	1170.0	1543.0	1543.0	1472.7	1472.7	1516.0	1516.0	1586.0	1586.0	1814.0	1814.0
K_T	1147.5	1147.5	1518.6	1518.6	1450.2	1450.2	1492.2	1492.2	1560.0	1560.0	1782.4	1782.4
μ	811.2	811.2	666.0	651.0	684.9	675.7	690.0	683.0	689.0	679.0	461.0	460.0
σ	0.218	0.218	0.311	0.315	0.299	0.301	0.302	0.304	0.310	0.313	0.383	0.383
V_P	8.211	8.211	6.691	6.663	6.669	6.652	6.739	6.726	6.828	6.810	6.538	6.537
V_S	4.928	4.928	3.502	3.463	3.573	3.549	3.587	3.568	3.581	3.555	2.849	2.846
V_ϕ	5.919	5.919	5.331	5.331	5.239	5.239	5.316	5.316	5.434	5.434	5.651	5.651
$(\partial K_S/\partial P)_T$	5.90	5.90	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	5.82	5.82	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	2.11	2.10	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	0.558	0.561	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	12.31	12.28	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	4.26	4.23	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	12.34	12.34	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	0.023	0.023	******	******	******	******	-0.176	-0.176	-0.214	-0.214	-0.200	-0.200
$(\partial K_T/\partial T)_P$	-0.076	-0.076	******	******	******	******	-0.274	-0.274	-0.320	-0.320	-0.312	-0.312
$(\partial \mu/\partial T)_P$	-0.306	-0.306	******	******	******	******	-0.120	-0.153	-0.146	-0.182	0.124	0.127
$(\partial \sigma/\partial T)_P$	9.08	9.08	******	******	******	******	0.99	1.84	1.28	2.18	-4.10	-4.16
$(\partial V_P/\partial T)_P$	-0.546	-0.546	******	******	******	******	-0.349	-0.411	-0.439	-0.507	0.072	0.078
$(\partial V_S/\partial T)_P$	-0.836	-0.836	******	******	******	******	-0.250	-0.338	-0.318	-0.415	0.435	0.445
$(\partial V_\phi/\partial T)_P$	0.171	0.171	******	******	******	******	-0.217	-0.217	-0.273	-0.273	-0.209	-0.209
$(\partial P/\partial T)_{V_P}$	4.436	4.445	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	19.61	19.75	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	-1.382	-1.382	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	4.358	4.358	5.239	5.239	5.003	5.003	5.148	5.148	5.382	5.382	6.488	6.488
γ_{th}	1.724	1.724	1.551	1.551	1.498	1.498	1.542	1.542	1.611	1.611	1.625	1.625
γ_P	2.054	2.050	******	******	******	******	******	******	******	******	******	******
γ_S	1.326	1.319	******	******	******	******	******	******	******	******	******	******
γ_{LT}	1.397	1.390	******	******	******	******	******	******	******	******	******	******
γ_{HT}	1.568	1.562	******	******	******	******	******	******	******	******	******	******
δ_S	-0.518	-0.518	******	******	******	******	3.365	3.365	3.911	3.911	3.029	3.029
δ_T	1.734	1.734	******	******	******	******	5.319	5.319	5.950	5.950	4.809	4.809
θ_D	674.4	674.4	526.9	521.2	534.5	531.1	536.8	534.2	536.8	533.1	440.8	440.4
$(\partial K_S/\partial T)_V$	0.257	0.257	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	0.178	0.178	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	4.20	4.20	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	1.40	1.40
V_S/V_P	0.600	0.600	0.523	0.520	0.536	0.534	0.532	0.531	0.524	0.522	0.436	0.435
V_m	5.452	5.452	3.918	3.875	3.990	3.965	4.007	3.988	4.005	3.978	3.217	3.214
REF. E.C.	233		267		289		243		283		283	
REF. α, Cp	536; 602		542, 602		542; 602		542, 602		542; 602		509; 613	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	CoO Rock salt (Cubic) PULS (1968) 303 K		CoO Rock salt (Cubic) PULS (1972) 295 K		CoO Rock salt (Cubic) RESO (1980) 300 K		NiO —— (Trigonal) PULS (1971) 300 K		NiO —— (Trigonal) PULS (1972) 296 K		ZnO Wurtzite (Hexa.) PULS (1962) 293 K	
ρ_x	6.440		6.394		6.433		6.853		6.790		5.676	
ρ_B	******		******		6.442		******		******		******	
M	37.47		37.47		37.47		37.35		37.35		40.65	
a	53.60		53.60		53.60		32.39		32.39		15.84	
C_P	7.036		7.036		7.036		5.943		5.943		4.970	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1839.0	1839.0	1809.3	1809.3	1856.0	1856.0	1356.0	1356.0	1733.0	1733.0	1435.8	1435.1
K_T	1776.8	1776.8	1748.7	1748.7	1792.7	1792.7	1341.9	1341.9	1709.9	1709.9	1430.3	1429.6
μ	721.8	710.9	695.0	684.2	720.0	708.0	895.0	866.0	905.0	890.0	455.5	453.2
σ	0.326	0.329	0.330	0.332	0.328	0.331	0.229	0.237	0.278	0.281	0.357	0.357
V_P	6.595	6.578	6.541	6.524	6.612	6.593	6.099	6.053	6.580	6.557	6.000	5.994
V_S	3.348	3.322	3.297	3.271	3.343	3.315	3.614	3.555	3.651	3.620	2.833	2.826
V_ϕ	5.344	5.344	5.319	5.319	5.368	5.368	4.448	4.448	5.052	5.052	5.030	5.028
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	******	******	******	******	0.200	0.200	-0.820	-0.820	******	******	******	******
$(\partial K_T/\partial T)_P$	******	******	******	******	1.046	1.046	-0.899	-0.899	******	******	******	******
$(\partial \mu/\partial T)_P$	******	******	******	******	1.120	1.230	1.470	1.850	******	******	******	******
$(\partial \sigma/\partial T)_P$	******	******	******	******	-22.02	-24.46	-49.82	-59.50	******	******	******	******
$(\partial V_P/\partial T)_P$	******	******	******	******	2.165	2.343	1.462	2.083	******	******	******	******
$(\partial V_S/\partial T)_P$	******	******	******	******	2.690	2.969	3.026	3.855	******	******	******	******
$(\partial V_\phi/\partial T)_P$	******	******	******	******	0.433	0.433	-1.273	-1.273	******	******	******	******
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_P$	9.524	9.524	9.373	9.373	9.609	9.609	4.347	4.347	5.538	5.538	2.266	2.265
γ_{th}	2.175	2.175	2.156	2.156	2.195	2.195	1.078	1.078	1.391	1.391	0.806	0.806
γ_P	******	******	******	******	******	******	******	******	******	******	******	******
γ_S	******	******	******	******	******	******	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	******	******	******	******	******	******
δ_S	******	******	******	******	-2.010	-2.010	18.670	18.670	******	******	******	******
δ_T	******	******	******	******	******	******	20.681	20.681	******	******	******	******
θ_D	524.5	520.7	515.5	511.7	524.0	519.7	571.8	563.0	579.2	574.6	415.8	414.8
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	-92.70	-92.70	-92.70	-92.70	-92.70	-92.70	9.55	9.55	9.55	9.55	0.70	0.70
V_S/V_P	0.508	0.505	0.504	0.501	0.506	0.503	0.593	0.587	0.555	0.552	0.472	0.471
V_m	3.752	3.725	3.697	3.669	3.748	3.718	4.003	3.940	4.067	4.034	3.188	3.180
REF. E;C.	201		289		283		270		289		210	
REF: a; Cp	509; 602		509; 602		509; 602		509; 602		509; 602		516; 602	

	ZnO Wurtzite (Hexa.)	SrO Rock salt (Cubic)	SrO Rock salt (Cubic)	SrO Rock salt (Cubic)	SrO Rock salt (Cubic)	BaO Rock salt (Cubic)

REF. E.C.	201	289	283	270	289	210
REF: α; Cp	509; 602	509; 602	509; 602	509; 602	509; 602	516; 602

	ZnO Wurtzite(Hexa.) PULS (1975) ROOM		SrO Rock salt (Cubic) PULS (1969) 300 K		SrO Rock salt (Cubic) PULS (1972). ROOM		SrO Rock salt (Cubic) PULS (1976) 296 K		SrO Rock salt (Cubic) *PULS (1977) 298 K		BaO Rock salt (Cubic) PULS (1972) ROOM	
ρ_x	5.674		4.990		5.009		5.009		5.009		5.992	
ρ_B	******		******		******		******		******		******	
M	40.65		51.81		51.81		51.81		51.81		76.65	
α	15.84		27.60		42.00		41.70		41.70		38.40	
C_P	4.970		4.357		4.357		4.357		4.357		2.962	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_s	1425.6	1425.2	823.7	823.7	880.0	880.0	907.2	907.2	912.1	912.1	610.0	610.0
K_T	1420.2	1419.8	816.6	816.6	861.6	861.6	887.9	887.9	892.6	892.6	600.9	600.9
μ	463.0	461.9	587.2	587.2	591.0	589.0	589.1	587.8	586.9	585.9	355.5	355.0
σ	0.353	0.354	0.212	0.212	0.226	0.226	0.233	0.234	0.235	0.235	0.256	0.256
V_P	6.000	5.998	5.674	5.674	5.771	5.766	5.813	5.810	5.817	5.814	4.253	4.252
V_S	2.857	2.853	3.430	3.430	3.435	3.429	3.429	3.426	3.423	3.420	2.436	2.434
V_ϕ	5.012	5.012	4.063	4.063	4.191	4.191	4.256	4.256	4.267	4.267	3.191	3.191
$(\partial K_s/\partial P)_T$	******	******	(5.18)	(5.18)	6.00	6.00	******	******	5.18	5.18	(5.52)	(5.52)
$(\partial K_T/\partial P)_T$	******	******	5.22	5.22	5.96	5.96	******	******	5.22	5.22	5.51	5.51
$(\partial \mu/\partial P)_T$	******	******	(1.48)	(1.35)	1.35	1.22	******	******	1.48	1.35	(1.01)	(0.89)
$(\partial \sigma/\partial P)_T$	******	******	0.877	0.927	1.016	1.062	******	******	0.689	0.734	1.271	1.333
$(\partial V_P/\partial P)_T$	******	******	9.16	8.86	10.14	9.86	******	******	9.02	8.73	9.92	9.63
$(\partial V_S/\partial P)_T$	******	******	2.22	1.85	1.93	1.56	******	******	2.40	2.03	1.42	1.04
$(\partial V_\phi/\partial P)_T$	******	******	10.29	10.29	11.86	11.86	******	******	9.73	9.73	11.78	11.78
$(\partial K_s/\partial T)_P$	******	******	-0.190	-0.190	-0.071	-0.071	******	******	-0.178	-0.178	-0.070	-0.070
$(\partial K_T/\partial T)_P$	******	******	-0.224	-0.224	-0.151	-0.151	******	******	-0.260	-0.260	-0.111	-0.111
$(\partial \mu/\partial T)_P$	******	******	-0.174	-0.174	-0.114	-0.109	******	******	-0.122	-0.117	-0.172	-0.171
$(\partial \sigma/\partial T)_P$	******	******	1.53	1.53	2.52	2.35	******	******	0.27	0.11	7.54	7.49
$(\partial V_P/\partial T)_P$	******	******	-0.667	-0.667	-0.265	-0.255	******	******	-0.462	-0.452	-0.506	-0.503
$(\partial V_S/\partial T)_P$	******	******	-0.461	-0.461	-0.259	-0.247	******	******	-0.283	-0.271	-0.542	-0.539
$(\partial V_\phi/\partial T)_P$	******	******	-0.413	-0.413	-0.081	-0.081	******	******	-0.327	-0.327	-0.122	-0.122
$(\partial P/\partial T)_{V_P}$	******	******	7.282	7.528	2.610	2.583	******	******	5.120	5.177	5.097	5.223
$(\partial P/\partial T)_{V_S}$	******	******	20.74	24.89	13.44	15.80	******	******	11.80	13.32	38.31	51.90
$(\partial P/\partial T)_{V_\phi}$	******	******	4.010	4.010	0.684	0.684	******	******	3.359	3.359	1.034	1.034
$(\partial P/\partial T)_\rho$	2.250	2.249	2.254	2.254	3.619	3.619	3.703	3.703	3.722	3.722	2.307	2.307
γ_{th}	0.801	0.801	1.046	1.046	1.694	1.694	1.733	1.733	1.743	1.743	1.320	1.320
γ_P	******	******	1.651	1.608	1.848	1.806	******	******	1.717	1.674	1.735	1.695
γ_S	******	******	0.862	0.774	0.817	0.726	******	******	0.959	0.864	0.683	0.590
γ_{LT}	******	******	0.941	0.857	0.916	0.829	******	******	1.029	0.939	0.773	0.685
γ_{HT}	******	******	1.125	1.052	1.161	1.086	******	******	1.212	1.134	1.033	0.958
δ_S	******	******	8.357	8.357	1.921	1.921	******	******	4.672	4.672	2.988	2.988
δ_T	******	******	9.958	9.958	4.171	4.171	******	******	6.991	6.991	4.796	4.796
θ_D	419.1	418.6	437.0	437.0	438.8	438.1	438.5	438.0	437.8	437.4	290.9	290.7
$(\partial K_S/\partial T)_V$	******	******	-0.084	-0.084	0.127	0.127	******	******	-0.003	-0.003	0.047	0.047
$(\partial K_P/\partial T)_V$	******	******	-0.107	-0.107	0.065	0.065	******	******	-0.066	-0.066	0.016	0.016
$(\partial \alpha/\partial T)_P$	0.70	0.70	(5.00)†	(5.00)†	(5.00)†	(5.00)†	(5.00)†	(5.00)†	(5.00)†	(5.00)†	(5.00)†	(5.00)†
V_S/V_P	0.476	0.476	0.605	0.605	0.595	0.595	0.590	0.590	0.589	0.588	0.573	0.572
V_m	3.213	3.209	3.792	3.792	3.803	3.797	3.800	3.796	3.794	3.791	2.706	2.704
REF. E.C.	286		247(227)		208+278		268		227		291(227)	
REF: α, Cp	516; 602		247; 603		278; 603		227; 603		227; 603		291; 602	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	BaO Rock salt (Cubic) PULS (1975) 296 K		BaO Rock salt (Cubic) PULS (1977) 280 K		BaO Rock salt (Cubic) *PULS (1977) 298 K		Al_2O_3, α-Al_2O_3 (Trigonal) RESO (1960) 298 K		Al_2O_3, α-Al_2O_3 (Trigonal) PULS (1961) 300 K		Al_2O_3, α-Al_2O_3 (Trigonal) PULS (1963) 300 K	
ρ_X	6.001		6.001		5.992		3.986		3.986		3.986	
ρ_B	******		******		******		******		******		******	
M	76.65		76.65		76.65		20.39		20.39		20.39	
α	38.40		38.40		38.40		15.70		15.70		15.70	
C_P	2.962		2.962		2.962		7.791		7.791		7.791	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	739.7	739.7	720.0	720.0	754.0	754.0	2511.5	2509.1	2480.0	2480.0	2501.2	2498.7
K_T	726.3	726.3	707.3	707.3	740.1	740.1	2496.6	2494.2	2465.4	2465.4	2486.4	2483.9
μ	367.9	367.5	367.0	366.1	353.7	353.1	1633.6	1606.8	1645.0	1616.0	1600.2	1574.5
σ	0.287	0.287	0.282	0.283	0.297	0.297	0.233	0.236	0.228	0.232	0.236	0.240
V_P	4.528	4.527	4.489	4.487	4.523	4.521	10.847	10.803	10.828	10.783	10.783	10.740
V_S	2.476	2.475	2.473	2.470	2.430	2.427	6.402	6.349	6.424	6.367	6.336	6.285
V_ϕ	3.511	3.511	3.464	3.464	3.547	3.547	7.938	7.934	7.888	7.888	7.921	7.918
$(\partial K_S/\partial P)_T$	******	******	(5.52)	(5.52)	5.52	5.52	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	5.59	5.59	5.61	5.61	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	(1.01)	(0.89)	1.01	0.89	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	0.918	0.971	0.786	0.839	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	9.56	9.29	9.60	9.33	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	1.64	1.27	1.81	1.43	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	10.83	10.83	10.59	10.59	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	******	******	-0.203	-0.203	-0.239	-0.239	******	******	******	******	******	******
$(\partial K_T/\partial T)_P$	******	******	-0.257	-0.257	-0.298	-0.298	******	******	******	******	******	******
$(\partial \mu/\partial T)_P$	******	******	-0.111	-0.104	-0.115	-0.110	******	******	******	******	******	******
$(\partial \sigma/\partial T)_P$	******	******	0.38	0.04	0.13	-0.10	******	******	******	******	******	******
$(\partial V_P/\partial T)_P$	******	******	-0.565	-0.548	-0.637	-0.626	******	******	******	******	******	******
$(\partial V_S/\partial T)_P$	******	******	-0.326	-0.303	-0.348	-0.332	******	******	******	******	******	******
$(\partial V_\phi/\partial T)_P$	******	******	-0.422	-0.422	-0.495	-0.495	******	******	******	******	******	******
$(\partial P/\partial T)_{V_P}$	******	******	5.913	5.901	6.638	6.705	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	19.93	23.89	19.22	23.15	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	3.895	3.895	4.673	4.673	******	******	******	******	******	******
$(\partial P/\partial T)_P$	2.789	2.789	2.716	2.716	2.842	2.842	3.920	3.916	3.871	3.871	3.904	3.900
γ_{th}	1.598	1.598	1.555	1.555	1.631	1.631	1.270	1.268	1.254	1.254	1.264	1.263
γ_P	******	******	1.840	1.798	1.905	1.861	******	******	******	******	******	******
γ_S	******	******	0.802	0.697	0.885	0.770	******	******	******	******	******	******
γ_{LT}	******	******	0.882	0.782	0.958	0.849	******	******	******	******	******	******
γ_{HT}	******	******	1.148	1.064	1.225	1.134	******	******	******	******	******	******
δ_S	******	******	7.342	7.342	8.265	8.265	******	******	******	******	******	******
δ_T	******	******	9.467	9.467	10.492	10.492	******	******	******	******	******	******
θ_D	297.0	296.8	296.4	296.1	291.6	291.4	1035.0	1026.9	1038.1	1029.4	1024.8	1016.9
$(\partial K_S/\partial T)_V$	******	******	-0.065	-0.065	-0.095	-0.095	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	-0.105	-0.105	-0.139	-0.139	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	(5.00)†	(5.00)†	(5.00)†	(5.00)†	(5.00)†	(5.00)†	5.25	5.25	5.25	5.25	5.25	5.25
V_S/V_P	0.547	0.547	0.551	0.550	0.537	0.537	0.590	0.588	0.593	0.590	0.588	0.585
V_m	2.761	2.760	2.756	2.753	2.713	2.710	7.093	7.037	7.114	7.054	7.023	6.969
REF: E.C.	250		250(227)		227		292		262		218	
REF: α, Cp	227, 602		227, 602		227, 602		545, 613		545, 613		545, 613	

Al_2O_3 Al_2O_3 Al_2O_3 Al_2O_3 Ti_2O_3 Ti_2O_3

V_m	2.761	2.760	2.756	2.753	2.713	2.710	7.093	7.037	7.114	7.054	7.023	6.969
REF: E.C.	250		250(227)		227		292		262		218	
REF: α, Cp	227, 602		227, 602		227, 602		545, 613		545; 613		545, 613	

	Al_2O_3 α-Al_2O_3 (Trigonal) RESO (1963) 300 K		Al_2O_3 α-Al_2O_3 (Trigonal) RESO (1966) 300 K		Al_2O_3 α-Al_2O_3 (Trigonal) *PULS (1968) 298 K		Al_2O_3 α-Al_2O_3 (Trigonal) PULS (1969) 298 K		Ti_2O_3 α-Al_2O_3 (Trigonal) PULS (1973) 300 K		Ti_2O_3 α-Al_2O_3 (Trigonal) PULS (1978) 296 K	
ρ_x	3.986		3.986		3.986		3.986		4.578		4.580	
ρ_B	******		******		******		******		******		******	
M	20.39		20.39		20.39		20.39		28.76		28.76	
α	15.70		15.70		15.74		15.70		17.00		17.00	
C_P	7.791		7.791		7.791		7.791		6.797		6.797	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	2529.0	2526.3	2520.6	2518.3	2543.9	2542.3	(2511.5)	(2509.1)	2072.9	2072.6	2076.3	2076.3
K_T	2513.9	2511.2	2505.6	2503.3	2528.6	2527.0	2496.6	2494.2	2061.0	2060.7	2064.4	2064.4
μ	1602.4	1577.4	1633.2	1606.4	1632.4	1607.5	(1633.6)	(1606.8)	939.2	919.3	945.1	931.0
σ	0.238	0.242	0.234	0.237	0.236	0.239	0.233	0.236	0.303	0.307	0.302	0.305
V_P	10.819	10.777	10.857	10.813	10.882	10.842	10.847	10.803	8.523	8.488	8.535	8.511
V_S	6.340	6.291	6.401	6.348	6.400	6.350	6.402	6.349	4.529	4.481	4.543	4.509
V_ϕ	7.965	7.961	7.952	7.949	7.989	7.986	7.938	7.934	6.729	6.729	6.733	6.733
$(\partial K_S/\partial P)_T$	******	******	(4.28)	(4.27)	4.28	4.27	4.37	4.36	(4.12)	(4.11)	4.12	4.11
$(\partial K_T/\partial P)_T$	******	******	4.28	4.28	4.29	4.29	4.38	4.37	4.13	4.13	4.14	4.14
$(\partial \mu/\partial P)_T$	******	******	(1.74)	(1.84)	1.74	1.84	1.77	1.88	(1.02)	(1.14)	1.02	1.14
$(\partial \sigma/\partial P)_T$	******	******	0.138	0.119	0.134	0.115	0.145	0.123	0.154	0.126	0.155	0.129
$(\partial V_P/\partial P)_T$	******	******	5.45	5.64	5.45	5.64	5.60	5.81	4.95	5.18	4.94	5.16
$(\partial V_S/\partial P)_T$	******	******	2.13	2.37	2.14	2.38	2.18	2.44	1.36	1.68	1.35	1.66
$(\partial V_\phi/\partial P)_T$	******	******	5.16	5.15	5.13	5.13	5.32	5.30	5.05	5.05	5.05	5.04
$(\partial K_S/\partial T)_P$	******	******	-0.115	-0.116	(-0.170)	(-0.171)	-0.170	-0.171	-0.187	-0.202	-0.235	-0.235
$(\partial K_T/\partial T)_P$	******	******	-0.214	-0.215	-0.271	-0.271	-0.268	-0.269	-0.225	-0.240	-0.273	-0.273
$(\partial \mu/\partial T)_P$	******	******	-0.194	-0.205	(-0.191)	(-0.204)	-0.191	-0.204	-0.453	-0.578	-0.208	-0.223
$(\partial \sigma/\partial T)_P$	******	******	1.60	1.76	1.09	1.29	1.08	1.28	6.70	8.94	1.83	2.15
$(\partial V_P/\partial T)_P$	******	******	-0.346	-0.367	-0.405	-0.427	-0.407	-0.429	-0.941	-1.179	-0.582	-0.611
$(\partial V_S/\partial T)_P$	******	******	-0.329	-0.355	-0.325	-0.353	-0.325	-0.353	-1.054	-1.371	-0.461	-0.502
$(\partial V_\phi/\partial T)_P$	******	******	-0.119	-0.121	-0.205	-0.205	-0.207	-0.208	-0.246	-0.271	-0.324	-0.323
$(\partial P/\partial T)_{V_P}$	******	******	6.346	6.498	7.433	7.574	7.262	7.391	19.007	22.757	11.789	11.837
$(\partial P/\partial T)_{V_S}$	******	******	15.45	14.96	15.15	14.82	14.91	14.46	77.58	81.63	34.17	30.32
$(\partial P/\partial T)_{V_\phi}$	******	******	2.307	2.349	3.990	4.007	3.893	3.917	4.875	5.364	6.411	6.416
$(\partial P/\partial T)_\rho$	3.947	3.943	3.934	3.930	3.970	3.967	3.920	3.916	3.504	3.503	3.509	3.509
γ_{th}	1.279	1.277	1.274	1.273	1.286	1.285	1.270	1.268	1.132	1.132	1.134	1.134
γ_P	******	******	1.592	1.640	1.600	1.647	1.623	1.674	1.531	1.592	1.528	1.584
γ_S	******	******	1.168	1.269	1.181	1.281	1.183	1.292	0.951	1.105	0.946	1.092
γ_{LT}	******	******	1.207	1.303	1.219	1.315	1.224	1.328	0.992	1.139	0.987	1.126
γ_{HT}	******	******	1.309	1.392	1.320	1.403	1.329	1.420	1.145	1.267	1.140	1.256
δ_S	******	******	2.906	2.939	4.266	4.277	4.321	4.333	5.307	5.733	6.655	6.652
δ_T	******	******	5.443	5.474	6.827	6.836	6.849	6.859	6.433	6.859	7.782	7.779
θ_D	1025.7	1018.1	1035.0	1026.9	1035.0	1027.4	1035.0	1026.9	689.6	682.6	691.7	686.7
$(\partial K_S/\partial T)_V$	******	******	0.004	0.003	-0.050	-0.051	-0.047	-0.048	-0.041	-0.056	-0.089	-0.089
$(\partial K_P/\partial T)_V$	******	******	-0.046	-0.047	-0.101	-0.101	-0.097	-0.097	-0.081	-0.096	-0.128	-0.128
$(\partial \alpha/\partial T)_P$	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	(0.0)†	(0.0)†	(0.0)†	(0.0)†
V_S/V_P	0.586	0.584	0.590	0.587	0.588	0.586	0.590	0.588	0.531	0.528	0.532	0.530
V_m	7.030	6.977	7.093	7.037	7.093	7.041	7.093	7.037	5.061	5.010	5.076	5.039
REF: E.C.	218		285(238)		238(242)		242(292)		228(274)		274	
REF: α; Cp	545; 613		545; 613		545; 613		545, 613		274, 613		274, 613	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	V_2O_3 α-Al_2O_3 (Trigonal) PULS (1974) ROOM		V_2O_3 α-Al_2O_3 (Trigonal) PULS (1976) 273 K		Cr_2O_3 α-Al_2O_3 (Trigonal) PULS (1976) 293 K		Fe_2O_3 α-Al_2O_3 (Trigonal) RESO (1968) 298 K		Y_2O_3 —— (Cubic) RESO (1969) ROOM		Y_2O_3-ThO_2 (9%) —— (Cubic) RESO (1968) 298 K	
ρ_x	4.870		4.870		5.236		5.274		5.030		5.290	
ρ_B	******		******		******		5.254		******		5.286	
M	29.98		29.98		30.40		31.94		45.16		47.56	
α	31.80		31.80		19.30		32.88		19.70		19.98	
C_p	6.913		6.913		6.894		6.527		4.569		4.338	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(POLY)		(POLY)		(POLY)	
K_s	1704.0	1644.0	1683.0	1608.3	2339.0	2339.0	2066.1	******	1357.7	******	1414.3	******
K_T	1678.2	1620.0	1657.9	1585.3	2322.2	2322.2	2026.5	******	1348.4	******	1403.9	******
μ	812.0	789.0	801.8	774.0	1232.0	1194.0	910.4	******	655.0	******	691.6	******
σ	0.294	0.293	0.294	0.293	0.276	0.282	0.308	******	0.292	******	0.290	******
V_P	7.564	7.440	7.517	7.363	8.720	8.665	7.901	******	6.660	******	6.648	******
V_S	4.083	4.025	4.058	3.987	4.851	4.775	4.163	******	3.609	******	3.617	******
V_ϕ	5.915	5.810	5.879	5.747	6.684	6.684	6.271	******	5.195	******	5.173	******
$(\partial K_s/\partial P)_T$	******	******	******	******	******	******	4.53	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	0.73	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	0.233	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	4.68	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	0.64	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	5.33	******	******	******	******	******
$(\partial K_s/\partial T)_P$	******	******	-1.501	-1.612	******	******	******	******	-0.148	******	-0.156	******
$(\partial K_T/\partial T)_P$	******	******	-1.561	-1.664	******	******	******	******	-0.182	******	-0.194	******
$(\partial \mu/\partial T)_P$	******	******	0.143	0.162	******	******	******	******	-0.079	******	-0.085	******
$(\partial \sigma/\partial T)_P$	******	******	-18.98	-21.65	******	******	******	******	0.20	******	0.21	******
$(\partial V_P/\partial T)_P$	******	******	-1.670	-1.829	******	******	******	******	-0.311	******	-0.316	******
$(\partial V_S/\partial T)_P$	******	******	0.426	0.481	******	******	******	******	-0.181	******	-0.185	******
$(\partial V_\phi/\partial T)_P$	******	******	-2.528	-2.789	******	******	******	******	-0.231	******	-0.234	******
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
ρ	5.337	5.152	5.272	5.041	4.482	4.482	6.663	******	2.656	******	2.805	******
γ_{th}	1.610	1.553	1.590	1.519	1.251	1.251	1.981	******	1.164	******	1.232	******
γ_P	******	******	******	******	******	******	1.533	******	******	******	******	******
γ_S	******	******	******	******	******	******	0.646	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	0.706	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	0.942	******	******	******	******	******
δ_S	******	******	28.046	31.519	******	******	******	******	5.522	******	5.524	******
δ_T	******	******	29.612	33.016	******	******	******	******	6.836	******	6.931	******
θ_D	625.2	616.2	621.3	610.3	755.7	744.5	641.2	******	487.1	******	487.8	******
$(\partial K_s/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	0.94	******	0.90	******	(1.00)†	******
V_S/V_P	0.540	0.541	0.540	0.541	0.556	0.551	0.527	******	0.542	******	0.544	******
V_m	4.558	4.492	4.529	4.449	5.402	5.322	4.654	******	4.027	******	4.035	******
REF. E,C.	234		206		204		252		258+259		232	
REF. α, Cp	521, 602		521, 602		204, 602		511, 613		546, 602		545+546; 602+603	

REF. E;C.	234		206		204		252		258+259		232	
REF. α, Cp	521, 602		521, 602		204, 602		511, 613		546, 602		545+546; 602+603	

	Sm_2O_3 Mn_2O_3-str.(Cubic) RESO (1974) ROOM		Dy_2O_3 Mn_2O_3-str.(Cub c) RESO (1969) ROOM		Ho_2O_3 Mn_2O_3-str.(Cubic) RESO (1969) ROOM		Er_2O_3 Mn_2O_3-str.(Cubic) RESO (1969) ROOM		Tm_2O_3 Mn_2O_3-str.(Cubic) RESO (1970) 293 K		Yb_2O_3 Mn_2O_3-str.(Cubic) RESO (1971) ROOM	
ρ_X	7.748		8.164		8.414		8.654		8.889		9.293	
ρ_B	******		******		******		******		8.534		******	
M	69.76		74.60		75.57		76.48		77.17		78.80	
α	27.80		20.40		21.40		18.30		19.90		19.50	
C_P	3.284		3.101		3.049		2.765		3.029		2.931	
	(POLY)		(POLY)		(POLY)		(POLY)		(POLY)		(POLY)	
K_S	1377.9	******	1506.2	******	1346.8	******	1407.2	******	1301.4	******	1443.7	******
K_T	1360.8	******	1495.1	******	1337.0	******	1398.9	******	1293.7	******	1435.0	******
μ	547.5	******	644.0	******	656.4	******	677.8	******	629.1	******	728.9	******
σ	0.325	******	0.313	******	0.290	******	0.292	******	0.292	******	0.284	******
V_P	5.216	******	5.382	******	5.139	******	5.168	******	5.008	******	5.098	******
V_S	2.658	******	2.809	******	2.793	******	2.799	******	2.715	******	2.801	******
V_ϕ	4.217	******	4.295	******	4.001	******	4.032	******	3.905	******	3.941	******
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.143	******	******	******	-0.162	******	-0.168	******	-0.145	******	******	******
$(\partial K_T/\partial T)_P$	-0.203	******	******	******	-0.195	******	-0.199	******	-0.172	******	******	******
$(\partial \mu/\partial T)_P$	-0.076	******	******	******	-0.074	******	-0.076	******	-0.057	******	******	******
$(\partial \sigma/\partial T)_P$	0.54	******	******	******	-0.13	******	-0.13	******	-0.38	******	******	******
$(\partial V_P/\partial T)_P$	-0.229	******	******	******	-0.246	******	-0.253	******	-0.208	******	******	******
$(\partial V_S/\partial T)_P$	-0.147	******	******	******	-0.128	******	-0.131	******	-0.095	******	******	******
$(\partial V_\phi/\partial T)_P$	-0.160	******	******	******	-0.197	******	-0.204	******	-0.178	******	******	******
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	3.783	******	3.050	******	2.888	******	2.560	******	2.574	******	2.798	******
γ_{th}	1.505	******	1.214	******	1.134	******	1.076	******	1.002	******	1.034	******
γ_P	******	******	******	******	******	******	******	******	******	******	******	******
γ_S	******	******	******	******	******	******	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	******	******	******	******	******	******
δ_S	3.728	******	******	******	5.565	******	6.516	******	5.583	******	******	******
δ_T	5.359	******	******	******	6.754	******	7.761	******	6.669	******	******	******
θ_D	360.0	******	377.9	******	376.9	******	379.8	******	365.6	******	384.9	******
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	0.90	******	1.20	******	0.40	******	1.00	******	0.60	******	0.70	******
V_S/V_P	0.510	******	0.522	******	0.544	******	0.542	******	0.542	******	0.549	******
V_m	2.979	******	3.142	******	3.116	******	3.123	******	3.030	******	3.122	******
REF. E;C.	246		258		258+259		258+259		260		271	
REF. α, Cp	546, 603		546, 603		538; 603		538, 603		538, 603		538; 603	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	Lu_2O_3 Mn_2O_3-str. (Cubic) RESO (1970) 293 K		SiO (Fused Qz) Glass (Isotropic) RESO (1962) ROOM		SiO_2 (Fused Qz) Glass (Isotropic) RESO (1962) ROOM		SiO_2 (Fused Qz) Glass (Isotropic) RESO (1962) ROOM		SiO_2 (Fused Qz) Glass (Isotropic) *PULS (1965) ROOM		SiO_2 (Fused Qz) Glass (Isotropic) *PULS (1980) ROOM	
ρ_x	9.423		******		******		******		******		******	
ρ_B	9.022		2.203		2.201		2.203		2.203		2.195	
M	79.59		20.03		20.03		20.03		20.03		20.03	
α	17.60		1.62		1.62		1.62		1.62		1.62	
C_P	2.566		7.387		7.387		7.387		7.387		7.387	
	(POLY)		(GLASS)		(GLASS)		(GLASS)		(GLASS)		(GLASS)	
K_S	1397.4	******	363.0	******	369.0	******	371.2	******	367.1	******	360.5	******
K_T	1389.6	******	363.0	******	369.0	******	371.2	******	367.1	******	360.5	******
μ	693.1	******	312.8	******	310.8	******	311.8	******	312.6	******	311.5	******
σ	0.287	******	0.165	******	0.171	******	0.172	******	0.168	******	0.165	******
V_P	5.073	******	5.951	******	5.965	******	5.977	******	5.965	******	5.945	******
V_S	2.772	******	3.768	******	3.757	******	3.762	******	3.767	******	3.767	******
V_ϕ	3.936	******	4.060	******	4.094	******	4.105	******	4.082	******	4.053	******
$(\partial K_S/\partial P)_T$	******	******	(-6.40)	******	(-6.40)	******	(-6.40)	******	-6.40	******	-5.89	******
$(\partial K_T/\partial P)_T$	******	******	-6.41	******	-6.41	******	-6.41	******	-6.41	******	-5.89	******
$(\partial \mu/\partial P)_T$	******	******	(-3.66)	******	(-3.66)	******	(-3.66)	******	-3.66	******	-3.49	******
$(\partial \sigma/\partial P)_T$	******	******	-1.547	******	-1.434	******	-1.415	******	-1.483	******	-1.337	******
$(\partial V_P/\partial P)_T$	******	******	-51.21	******	-51.02	******	-50.88	******	-51.03	******	-48.64	******
$(\partial V_S/\partial P)_T$	******	******	-27.21	******	-27.19	******	-27.13	******	-27.16	******	-26.33	******
$(\partial V_\phi/\partial P)_T$	******	******	-41.39	******	-41.06	******	-40.93	******	-41.15	******	-38.73	******
$(\partial K_S/\partial T)_P$	-0.135	******	0.113	******	0.119	******	0.107	******	(0.113)	******	(0.113)	******
$(\partial K_T/\partial T)_P$	-0.163	******	0.112	******	0.119	******	0.107	******	0.112	******	0.112	******
$(\partial \mu/\partial T)_P$	-0.072	******	0.045	******	0.047	******	0.044	******	(0.045)	******	(0.045)	******
$(\partial \sigma/\partial T)_P$	0.14	******	4.28	******	4.40	******	3.77	******	4.16	******	4.33	******
$(\partial V_P/\partial T)_P$	-0.208	******	0.665	******	0.698	******	0.633	******	0.663	******	0.668	******
$(\partial V_S/\partial T)_P$	-0.120	******	0.277	******	0.288	******	0.268	******	0.277	******	0.278	******
$(\partial V_\phi/\partial T)_P$	-0.155	******	0.632	******	0.665	******	0.594	******	0.629	******	0.636	******
$(\partial P/\partial T)_{V_P}$	******	******	1.298	******	1.368	******	1.244	******	1.300	******	1.373	******
$(\partial P/\partial T)_{V_S}$	******	******	1.02	******	1.06	******	0.99	******	1.02	******	1.05	******
$(\partial P/\partial T)_{V_\phi}$	******	******	1.528	******	1.618	******	1.451	******	1.528	******	1.641	******
$(\partial P/\partial T)_\rho$	2.446	******	0.059	******	0.060	******	0.060	******	0.059	******	0.058	******
γ_{th}	1.062	******	0.036	******	0.037	******	0.037	******	0.037	******	0.036	******
γ_P	******	******	-2.790	******	-2.822	******	-2.826	******	-2.807	******	-2.616	******
γ_S	******	******	-2.288	******	-2.337	******	-2.343	******	-2.313	******	-2.186	******
γ_{LT}	******	******	-2.345	******	-2.391	******	-2.396	******	-2.369	******	-2.235	******
γ_{HT}	******	******	-2.455	******	-2.499	******	-2.504	******	-2.478	******	-2.329	******
δ_S	5.485	******	******	******	******	******	******	******	******	******	******	******
δ_T	6.649	******	******	******	******	******	******	******	******	******	******	******
θ_D	376.1	******	499.3	******	498.1	******	498.6	******	499.3	******	498.5	******
$(\partial K_S/\partial T)_V$	******	******	0.109	******	0.115	******	0.103	******	0.109	******	0.109	******
$(\partial K_P/\partial T)_V$	******	******	0.109	******	0.115	******	0.103	******	0.109	******	0.109	******
$(\partial \alpha/\partial T)_P$	0.60	******	(0.0)†	******	(0.0)†	******	(0.0)†	******	(0.0)†	******	(0.0)†	******
V_S/V_P	0.546	******	0.633	******	0.630	******	0.629	******	0.631	******	0.634	******
V_M	3.091	******	4.145	******	4.136	******	4.141	******	4.145	******	4.144	******
REF: E,C:	260		280(220)		280(220)		280(220)		220(280)		275(280)	
REF. α, Cp	538, 603		535, 613		535, 613		535, 613		535, 613		535, 613	

REF. α, Cp	538, 603		535, 613		533, 613		---, ---		--- ---													
	SiO_2 (α-SiO_2) — (Trigonal) RESO (1958) 293 K		SiO_2 (α-SiO_2) — (Trigonal) RESO (1962) 293 K		SiO_2 (α-SiO_2) — (Trigonal) *PULS (1965) 298 K		SiO_2 (α-SiO_2) — (Trigonal) RESO (1975) 293 K		SiO_2 (α-SiO_2) — (Trigonal) RE-CAL (1976) 298 K		SiO_2 (α-SiO_2) — (Trigonal) RE-CAL (1979) 293 K	
ρ_X	2.649		2.650		2.649		2.649		2.649		2.650	
ρ_B	******		******		******		******		******		******	
M	20.03		20.03		20.03		20.03		20.03		20.03	
α	34.96		34.92		33.43		34.96		34.96		34.92	
C_p	7.454		7.454		7.454		7.454		7.454		7.454	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	377.0	374.5	377.6	374.8	376.5	374.1	376.5	374.2	377.1	374.3	(377.6)[A]	(374.8)[A]
K_T	374.4	371.9	375.0	372.3	374.1	371.7	373.9	371.6	374.5	371.7	374.9	372.2
μ	444.4	410.3	444.5	410.9	444.2	410.2	442.1	409.6	447.9	414.6	(444.5)[A]	(410.9)[A]
σ	0.077	0.099	0.077	0.099	0.077	0.098	0.078	0.099	0.075	0.096	0.077	0.099
V_P	6.050	5.899	6.051	5.901	6.048	5.897	6.039	5.894	6.065	5.916	6.051	5.901
V_S	4.096	3.936	4.096	3.938	4.095	3.936	4.085	3.932	4.112	3.957	4.096	3.938
V_ϕ	3.773	3.760	3.775	3.761	3.770	3.758	3.770	3.758	3.773	3.759	3.775	3.761
$(\partial K_S/\partial P)_T$	(6.42)	(6.32)	(6.42)	(6.32)	6.42	6.32	(6.42)	(6.32)	(6.42)	(6.32)	(6.42)[B]	(6.32)[B]
$(\partial K_T/\partial P)_T$	6.43	6.34	6.43	6.34	6.42	6.33	6.42	6.33	6.43	6.34	6.40	6.30
$(\partial \mu/\partial P)_T$	(0.41)	(0.51)	(0.41)	(0.51)	0.41	0.51	(0.41)	(0.51)	(0.41)	(0.51)	(0.41)[B]	(0.51)[B]
$(\partial \sigma/\partial P)_T$	4.888	4.594	4.877	4.591	4.896	4.602	4.885	4.596	4.905	4.624	4.877	4.592
$(\partial V_P/\partial P)_T$	13.66	14.50	13.66	14.48	13.67	14.50	13.71	14.51	13.59	14.40	13.66	14.48
$(\partial V_S/\partial P)_T$	-3.56	-2.83	-3.55	-2.83	-3.56	-2.83	-3.55	-2.82	-3.59	-2.87	-3.55	-2.83
$(\partial V_\phi/\partial P)_T$	27.07	26.69	27.04	26.67	27.09	26.71	27.09	26.70	27.07	26.70	27.04	26.67
$(\partial K_S/\partial T)_P$	-0.103	-0.103	-0.105	-0.105	-0.072	-0.071	-0.085	-0.085	-0.099	-0.100	-0.032	-0.032
$(\partial K_T/\partial T)_P$	-0.114	-0.114	-0.115	-0.116	-0.088	-0.087	-0.096	-0.096	-0.110	-0.110	-0.043	-0.043
$(\partial \mu/\partial T)_P$	-0.015	-0.008	-0.014	-0.008	-0.009	-0.003	-0.011	-0.004	-0.017	-0.012	0.005	0.016
$(\partial \sigma/\partial T)_P$	-7.25	-7.50	-7.44	-7.71	-5.23	-5.40	-6.13	-6.40	-6.86	-7.02	-2.98	-3.64
$(\partial V_P/\partial T)_P$	-0.280	-0.263	-0.281	-0.268	-0.160	-0.142	-0.205	-0.187	-0.274	-0.264	0.027	0.067
$(\partial V_S/\partial T)_P$	0.001	0.029	0.005	0.031	0.028	0.052	0.022	0.050	-0.007	0.013	0.096	0.144
$(\partial V_\phi/\partial T)_P$	-0.450	-0.453	-0.458	-0.464	-0.298	-0.295	-0.361	-0.362	-0.431	-0.434	-0.097	-0.095
$(\partial P/\partial T)_{V_P}$	2.049	1.816	2.060	1.850	1.174	0.977	1.498	1.288	2.016	1.832	-0.196	-0.465
$(\partial P/\partial T)_{V_S}$	0.02	1.01	0.13	1.09	0.80	1.85	0.62	1.75	-0.18	0.46	2.71	5.09
$(\partial P/\partial T)_{V_\phi}$	1.662	1.697	1.693	1.738	1.102	1.106	1.332	1.357	1.592	1.626	0.357	0.358
$(\partial P/\partial T)_\rho$	1.309	1.300	1.309	1.300	1.251	1.243	1.307	1.299	1.309	1.300	1.309	1.300
γ_{th}	0.668	0.663	0.668	0.663	0.638	0.633	0.667	0.663	0.668	0.663	0.667	0.663
γ_P	1.179	1.248	1.180	1.247	1.179	1.248	1.182	1.248	1.173	1.238	1.180	1.247
γ_S	0.008	0.066	0.008	0.066	0.008	0.066	0.008	0.067	0.006	0.064	0.008	0.066
γ_{LT}	0.165	0.219	0.165	0.219	0.165	0.219	0.166	0.219	0.164	0.217	0.165	0.219
γ_{HT}	0.398	0.460	0.399	0.460	0.398	0.460	0.400	0.460	0.395	0.455	0.399	0.460
δ_S	7.822	7.889	7.948	8.060	5.736	5.701	6.473	6.513	7.532	7.604	2.465	2.453
δ_T	8.672	8.733	8.792	8.898	7.006	6.963	7.321	7.356	8.382	8.447	3.309	3.290
θ_D	572.4	551.1	572.4	551.4	572.3	551.0	571.0	550.6	574.5	553.8	572.4	551.4
$(\partial K_S/\partial T)_V$	-0.021	-0.023	-0.022	-0.025	0.001	-0.000	-0.003	-0.005	-0.017	-0.019	0.049	0.048
$(\partial K_P/\partial T)_V$	-0.029	-0.031	-0.031	-0.033	-0.007	-0.008	-0.012	-0.013	-0.026	-0.027	0.040	0.039
$(\partial \alpha/\partial T)_P$	3.28	3.28	3.18	3.18	11.19	11.19	3.28	3.28	3.28	3.28	3.18	3.18
V_S/V_P	0.677	0.667	0.677	0.667	0.677	0.667	0.677	0.667	0.678	0.669	0.677	0.667
V_m	4.469	4.302	4.468	4.304	4.468	4.302	4.457	4.298	4.486	4.324	4.468	4.304
REF. E; C;	249(263)		212+213(263)		263		277(263)		245(263)		276(212[A],263[B])	
REF. α, Cp	249; 613		213; 613		263; 613		249; 613		249; 613		213; 613	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	SiO_2 (β-SiO_2) — (Hexa.) RESO (1948) 1000 K		SiO_2 (Coesite) — (Monoclinic) BRIL (1977) 298 K		SiO_2 (Stishovite) Rutile (Tetra.) PULS (1972) ROOM		SiO_2 (Stishovite) Rutile (Tetra.) PULS (1976) ROOM		SiO_2 (Stishovite) Rutile (Tetra.) OTHER (1976) ROOM		SiO_2 (Stishovite) Rutile (Tetra.) BRIL (1980) ROOM	
ρ_x	2.533		2.911		4.287		4.287		4.287		4.287	
ρ_B	******		******		******		******		******		******	
M	20.03		20.03		20.03		20.03		20.03		20.03	
α	-3.00		8.00		14.00		14.00		14.00		14.00	
C_p	11.480		7.593		7.196		7.196		7.196		7.196	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(POLY)		(POLY)		(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	684.2	684.0	1137.0	1091.0	3460.0	******	2490.0	******	3160.0	3010.0	2805.0	2743.0
K_T	684.2	684.0	1135.9	1090.0	3437.3	******	2478.2	******	3141.1	2992.8	2790.1	2728.7
μ	408.3	404.9	616.0	564.0	1300.0	******	2040.0	******	1195.0	1825.0	2351.0	2288.0
σ	0.251	0.253	0.271	0.280	0.333	******	0.178	******	0.332	0.248	0.172	0.174
V_P	6.964	6.951	8.202	7.957	11.006	******	11.024	******	10.530	11.268	11.771	11.625
V_S	4.015	3.998	4.600	4.402	5.507	******	6.898	******	5.280	6.525	7.405	7.306
V_ϕ	5.197	5.196	6.250	6.122	8.984	******	7.621	******	8.586	8.379	8.089	7.999
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	0.413	0.415	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial T)_P$	0.413	0.415	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial T)_P$	0.095	0.098	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial T)_P$	7.70	7.53	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial T)_P$	1.519	1.539	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial T)_P$	0.461	0.478	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial T)_P$	1.561	1.569	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	-0.205	-0.205	0.909	0.872	4.812	******	3.470	******	4.398	4.190	3.906	3.820
γ_{th}	-0.071	-0.071	0.412	0.395	1.570	******	1.130	******	1.434	1.366	1.273	1.245
γ_P	******	******	******	******	******	******	******	******	******	******	******	******
γ_S	******	******	******	******	******	******	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	******	******	******	******	******	******
δ_S	******	******	******	******	******	******	******	******	******	******	******	******
δ_T	******	******	******	******	******	******	******	******	******	******	******	******
θ_D	562.6	560.3	676.7	648.2	929.0	******	1142.7	******	890.6	1089.1	1226.0	1209.6
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	0.80	0.80	5.36	******	5.36	******	5.36	5.36	5.36	5.36
V_S/V_P	0.576	0.575	0.561	0.553	0.500	******	0.626	******	0.501	0.579	0.629	0.628
V_m	4.458	4.440	5.120	4.904	6.177	******	7.598	******	5.922	7.242	8.152	8.043
REF: E.C.	248		296		265		253		281		297	
REF. α, Cp	535, 613		535, 608		513, 608		513, 608		513, 608		513, 608	

REF. α, Cp	535, 613	535, 608	513, 608	513, 608	513, 608	513, 608
	TiO_2 Rutile (Tetra.) PULS (1960) ROOM	TiO_2 Rutile (Tetra.) RESO (1962) ROOM	TiO_2 Rutile (Tetra.) *PULS (1969) 298 K	TiO_2 Rutile (Tetra.) *PULS (1972) 298 K	TiO_2 Rutile (Tetra.) *PULS (1974) 298 K	TiO_2 Rutile (Tetra.) BRIL (1976) ROOM
ρ_x	4.264	4.250	4.260	4.260	4.245	4.249
ρ_B	******	******	******	******	******	******
M	26.63	26.63	26.63	26.63	26.63	26.63
α	23.57	23.57	23.57	23.57	23.57	23.57
C_P	6.910	6.910	6.910	6.910	6.910	6.910
	(HILL) (REUSS)	(HILL) (REUSS)	(HILL) (REUSS)	(HILL) (REUSS)	(HILL) (REUSS)	(HILL) (REUSS)
K_S	2152.0 2106.0	2064.4 2025.1	2155.1 2109.1	2155.2 2109.2	2140.4 2094.8	2137.1 2094.5
K_T	2126.1 2081.2	2040.5 2002.1	2129.1 2084.2	2129.2 2084.3	2114.7 2070.2	2111.5 2069.9
μ	1135.0 1012.0	1117.0 990.3	1124.4 995.0	1124.4 995.0	1120.4 992.8	1094.8 957.6
σ	0.276 0.293	0.271 0.290	0.278 0.296	0.278 0.296	0.277 0.295	0.281 0.302
V_P	9.271 9.002	9.144 8.872	9.262 8.981	9.262 8.981	9.253 8.974	9.200 8.907
V_S	5.159 4.872	5.127 4.827	5.138 4.833	5.137 4.833	5.137 4.836	5.076 4.747
V_ϕ	7.104 7.028	6.970 6.903	7.113 7.036	7.113 7.036	7.101 7.025	7.092 7.021
$(\partial K_S/\partial P)_T$	****** ******	****** ******	6.76 6.94	(6.76) (6.94)	6.91 7.03	****** ******
$(\partial K_T/\partial P)_T$	****** ******	****** ******	6.80 6.99	6.82 7.00	6.98 7.10	****** ******
$(\partial \mu/\partial P)_T$	****** ******	****** ******	0.77 -0.34	(0.77) (-0.34)	0.58 -0.48	****** ******
$(\partial \sigma/\partial P)_T$	****** ******	****** ******	0.463 0.639	0.463 0.639	0.513 0.679	****** ******
$(\partial V_P/\partial P)_T$	****** ******	****** ******	7.70 6.33	7.70 6.33	7.60 6.22	****** ******
$(\partial V_S/\partial P)_T$	****** ******	****** ******	0.56 -1.98	0.56 -1.98	0.13 -2.34	****** ******
$(\partial V_\phi/\partial P)_T$	****** ******	****** ******	9.48 9.89	9.48 9.89	9.78 10.09	****** ******
$(\partial K_S/\partial T)_P$	****** ******	****** ******	-0.413 -0.420	-0.491 -0.493	-0.531 -0.529	****** ******
$(\partial K_T/\partial T)_P$	****** ******	****** ******	-0.518 -0.520	-0.595 -0.592	-0.633 -0.626	****** ******
$(\partial \mu/\partial T)_P$	****** ******	****** ******	-0.273 -0.146	-0.153 -0.081	-0.221 -0.113	****** ******
$(\partial \sigma/\partial T)_P$	****** ******	****** ******	0.97 -0.93	-1.74 -2.68	-0.96 -2.46	****** ******
$(\partial V_P/\partial T)_P$	****** ******	****** ******	-0.876 -0.697	-0.772 -0.680	-0.943 -0.785	****** ******
$(\partial V_S/\partial T)_P$	****** ******	****** ******	-0.564 -0.296	-0.289 -0.140	-0.447 -0.217	****** ******
$(\partial V_\phi/\partial T)_P$	****** ******	****** ******	-0.598 -0.618	-0.726 -0.740	-0.797 -0.803	****** ******
$(\partial P/\partial T)_{V_P}$	****** ******	****** ******	11.384 10.999	10.026 10.735	12.415 12.619	****** ******
$(\partial P/\partial T)_{V_S}$	****** ******	****** ******	100.41 -14.99	51.48 -7.08	353.55 -9.28	****** ******
$(\partial P/\partial T)_{V_\phi}$	****** ******	****** ******	6.308 6.243	7.662 7.475	8.157 7.960	****** ******
$(\partial P/\partial T)_\rho$	5.011 4.905	4.809 4.719	5.018 4.912	5.019 4.913	4.984 4.879	4.977 4.879
γ_{th}	1.721 1.685	1.657 1.625	1.726 1.689	1.726 1.689	1.720 1.683	1.715 1.681
γ_P	****** ******	****** ******	2.102 1.803	2.102 1.803	2.069 1.768	****** ******
γ_S	****** ******	****** ******	0.566 -0.519	0.566 -0.519	0.385 -0.668	****** ******
γ_{LT}	****** ******	****** ******	0.687 -0.351	0.687 -0.351	0.518 -0.491	****** ******
γ_{HT}	****** ******	****** ******	1.078 0.255	1.078 0.255	0.947 0.144	****** ******
δ_S	****** ******	****** ******	8.135 8.449	9.666 9.919	10.529 10.704	****** ******
δ_T	****** ******	****** ******	10.317 10.585	11.848 12.055	12.704 12.833	****** ******
θ_D	784.4 742.3	778.1 734.4	781.0 736.4	781.0 736.4	780.1 736.0	771.3 723.2
$(\partial K_S/\partial T)_V$	****** ******	****** ******	-0.092 -0.096	-0.169 -0.168	-0.203 -0.201	****** ******
$(\partial K_P/\partial T)_V$	****** ******	****** ******	-0.176 -0.177	-0.252 -0.248	-0.286 -0.280	****** ******
$(\partial \alpha/\partial T)_P$	2.20 2.20	2.20 2.20	2.20 2.20	2.20 2.20	2.20 2.20	2.20 2.20
V_S/V_P	0.556 0.541	0.561 0.544	0.555 0.538	0.555 0.538	0.555 0.539	0.552 0.533
V_m	5.745 5.437	5.706 5.385	5.723 5.396	5.723 5.396	5.722 5.399	5.656 5.304
REF. E.C.	290+219	293	255	256(255)	236	240
REF. α, Cp	517; 613	517, 613	517; 613	517; 613	517; 613	517; 613

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	GeO_2 Rutile (Tetra.) PULS (1973) 293 K		ZrO_2-Y_2O_3 (8%) Fluorite (Cubic) *PULS (1972) 273 K		ZrO_2-Y_2O_3 (8%) Fluorite (Cubic) OPTI (1974) ROOM		ZrO_2-Y_2O_3 (8%) Fluorite (Cubic) BRIL (1977) ROOM		ZrO_2-Y_2O_3 (8%) Fluorite (Cubic) PULS (1977) ROOM		ZrO_2-Y_2O_3 (10.3%) Fluorite (Cubic) OPTI (1974) ROOM	
ρ_X	6.286		5.990		5.990		6.010		6.010		5.910	
ρ_B	6.279		******		******		******		******		******	
M	34.86		41.59		41.59		41.59		41.59		41.73	
a	13.63		24.40 (ZrO_2)		24.40 (ZrO_2)		24.40 (ZrO_2)		24.40 (ZrO_2)		24.40 (ZrO_2)	
C_p	4.818		4.568		4.568		4.568		4.568		4.568	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	2588.5	2511.0	1920.0	1920.0	1687.0	1687.0	1967.0	1967.0	2177.0	2177.0	1730.0	1730.0
K_T	2576.2	2499.4	1896.2	1896.2	1668.6	1668.6	1942.1	1942.1	2146.6	2146.6	1710.4	1710.4
μ	1509.0	1381.0	845.0	749.0	1169.0	1116.0	841.0	724.0	845.0	756.0	1118.0	1047.0
σ	0.256	0.268	0.308	0.327	0.219	0.229	0.313	0.336	0.328	0.344	0.234	0.248
V_P	8.560	8.326	7.132	6.980	7.361	7.280	7.168	6.985	7.414	7.280	7.382	7.273
V_S	4.902	4.690	3.756	3.536	4.418	4.316	3.741	3.471	3.750	3.547	4.349	4.209
V_ϕ	6.421	6.324	5.662	5.662	5.307	5.307	5.721	5.721	6.019	6.019	5.410	5.410
$(\partial K_S/\partial P)_T$	6.15	6.48	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	6.18	6.51	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	1.23	0.67	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	0.320	0.412	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	5.58	5.39	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	1.04	0.20	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	6.39	6.89	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.360	-0.380	-0.104	-0.104	******	******	******	******	******	******	******	******
$(\partial K_T/\partial T)_P$	-0.418	-0.435	-0.181	-0.181	******	******	******	******	******	******	******	******
$(\partial \mu/\partial T)_P$	-0.120	-0.080	-0.110	-0.104	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial T)_P$	-1.22	-1.83	1.28	1.28	******	******	******	******	******	******	******	******
$(\partial V_P/\partial T)_P$	-0.425	-0.409	-0.207	-0.204	******	******	******	******	******	******	******	******
$(\partial V_S/\partial T)_P$	-0.162	-0.104	-0.200	-0.201	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial T)_P$	-0.403	-0.435	-0.084	-0.084	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_P}$	7.618	7.588	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	15.55	52.08	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	6.305	6.315	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	3.511	3.407	4.627	4.627	4.071	4.071	4.739	4.739	5.238	5.238	4.173	4.173
γ_{th}	1.166	1.131	1.712	1.712	1.504	1.504	1.748	1.748	1.935	1.935	1.564	1.564
γ_P	2.014	1.950	******	******	******	******	******	******	******	******	******	******
γ_S	0.879	0.440	******	******	******	******	******	******	******	******	******	******
γ_{LT}	0.976	0.564	******	******	******	******	******	******	******	******	******	******
γ_{HT}	1.257	0.943	******	******	******	******	******	******	******	******	******	******
δ_S	10.204	11.103	2.222	2.222	******	******	******	******	******	******	******	******
δ_T	11.914	12.762	3.913	3.913	******	******	******	******	******	******	******	******
θ_D	773.3	740.8	553.5	522.4	644.0	630.0	552.2	513.9	554.6	525.7	631.6	612.3
$(\partial K_S/\partial T)_V$	-0.161	-0.175	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	-0.201	-0.213	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	2.15	2.15	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†
V_S/V_P	0.573	0.563	0.527	0.507	0.600	0.593	0.522	0.497	0.506	0.487	0.589	0.579
V_m	5.446	5.217	4.200	3.964	4.887	4.780	4.185	3.895	4.204	3.985	4.820	4.672
REF. E;C	295		235		203		229		229		203	
REF. α, Cp	529, 603		519, 602		519, 602		519, 602		519, 602		519, 602	

	ZrO_2-Y_2O_3 (12%) Fluorite (Cubic)	ZrO_2-Y_2O_3 (12%) Fluorite (Cubic)	ZrO_2-Y_2O_3 (12%) Fluorite (Cubic)	ZrO_2-Y_2O_3 (16.5%) Fluorite (Cubic)	ZrO_2-Y_2O_3 (16.5%) Fluorite (Cubic)	NbO_2 —— (Tetra.)

	ZrO_2-Y_2O_3(12%) Fluorite (Cubic) OPTI (1974) ROOM		ZrO_2-Y_2O_3(12%) Fluorite (Cubic) BRIL (1977) ROOM		ZrO_2-Y_2O_3(12%) Fluorite (Cubic) PULS (1977) ROOM		ZrO_2-Y_2O_3(16.5%) Fluorite (Cubic) BRIL (1977) ROOM		ZrO_2-Y_2O_3(16.5%) Fluorite (Cubic) PULS (1977) ROOM		NbO_2 —— (Tetra.) PULS (1976) ROOM	
ρ_x	5.890		5.890		5.890		5.810		5.810		5.951	
ρ_B	******		******		******		******		******		5.900	
M	41.83		41.83		41.83		42.09		42.09		41.64	
α	24.40(ZrO_2)		24.40(ZrO_2)		24.40(ZrO_2)		24.40(ZrO_2)		24.40(ZrO_2)		14.30	
C_P	4.568		4.568		4.568		4.568		4.568		4.614	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1910.0	1910.0	2010.0	2010.0	2003.0	2003.0	1940.0	1940.0	1970.0	1970.0	2358.0	2356.0
K_T	1886.1	1886.1	1983.5	1983.5	1976.7	1976.7	1915.0	1915.0	1944.2	1944.2	2345.5	2343.6
μ	937.0	771.0	854.0	760.0	837.0	766.0	875.0	796.0	895.0	841.0	977.0	919.0
σ	0.289	0.322	0.314	0.332	0.317	0.330	0.304	0.320	0.303	0.313	0.318	0.327
V_P	7.324	7.063	7.311	7.164	7.277	7.166	7.312	7.187	7.379	7.294	7.877	7.791
V_S	3.989	3.618	3.808	3.592	3.770	3.606	3.881	3.701	3.925	3.805	4.069	3.947
V_ϕ	5.695	5.695	5.842	5.842	5.832	5.832	5.778	5.778	5.823	5.823	6.322	6.319
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_P$	4.602	4.602	4.840	4.840	4.823	4.823	4.673	4.673	4.744	4.744	3.354	3.351
γ_{th}	1.732	1.732	1.823	1.823	1.816	1.816	1.784	1.784	1.811	1.811	1.239	1.238
γ_P	******	******	******	******	******	******	******	******	******	******	******	******
γ_S	******	******	******	******	******	******	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	******	******	******	******	******	******
δ_S	******	******	******	******	******	******	******	******	******	******	******	******
δ_T	******	******	******	******	******	******	******	******	******	******	******	******
θ_D	581.9	530.1	557.3	527.0	551.9	529.0	563.5	538.6	569.8	553.1	597.1	579.9
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†
V_S/V_P	0.545	0.512	0.521	0.501	0.518	0.503	0.531	0.515	0.532	0.522	0.517	0.507
V_m	4.449	4.053	4.261	4.029	4.220	4.044	4.337	4.145	4.385	4.257	4.556	4.424
REF. E.C.	203		229		229		229		229		215	
REF. α, Cp	519; 602		519; 602		519, 602		519, 602		519; 602		273; 602	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	NbO_2 —— (Tetra.) PULS (1978) 296 K		SnO_2 Rutile (Tetra.) *PULS (1975) 298 K		TeO_2 —— (Tetra.) PULS (1968) ROOM		TeO_2 —— (Tetra.) PULS (1969) ROOM		TeO_2 —— (Tetra.) *PULS (1970) 293 K		HfO_2-Y_2O_3 (10%) Fluorite (Cubic) OPTI (1973) ROOM	
ρ_X	5.951		6.990		6.018		5.990		5.990		9.650	
ρ_B	******		******		******		******		******		******	
M	41.64		50.23		53.20		53.20		53.20		66.26	
a	14.30		10.30		46.60		46.60		46.60		21.00 (HfO_2)	
C_P	4.614		3.513		4.010		4.010		4.010		3.053	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	2354.2	2351.5	2123.1	2080.2	473.5	470.3	437.3	433.6	449.9	447.9	1993.0	1993.0
K_T	2341.9	2339.2	2117.3	2074.6	467.5	464.4	432.2	428.6	444.5	442.5	1975.3	1975.3
μ	971.9	912.0	1016.7	883.1	201.5	87.3	189.9	89.1	204.2	89.1	841.0	774.0
σ	0.319	0.328	0.294	0.314	0.314	0.413	0.310	0.404	0.303	0.407	0.315	0.328
V_P	7.832	7.743	7.062	6.834	3.512	3.122	3.395	3.037	3.472	3.076	5.681	5.599
V_S	4.041	3.915	3.818	3.558	1.830	1.204	1.781	1.220	1.846	1.220	2.952	2.832
V_ϕ	6.290	6.286	5.517	5.461	2.805	2.796	2.702	2.690	2.741	2.734	4.545	4.545
$(\partial K_S/\partial P)_T$	4.89	4.80	5.51	5.60	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	4.93	4.84	5.52	5.61	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	0.26	-0.18	0.44	-0.15	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	0.289	0.340	0.385	0.467	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	3.95	3.29	4.51	4.01	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	-0.32	-1.22	-0.06	-1.17	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	5.19	5.07	5.85	6.04	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.350	-0.351	-0.189	-0.188	******	******	******	******	-0.110	-0.111	******	******
$(\partial K_T/\partial T)_P$	-0.389	-0.390	-0.216	-0.214	******	******	******	******	-0.132	-0.133	******	******
$(\partial \mu/\partial T)_P$	-0.090	-0.079	-0.065	-0.035	******	******	******	******	-0.035	0.023	******	******
$(\partial \sigma/\partial T)_P$	-0.89	-0.95	-0.46	-0.83	******	******	******	******	-1.29	-4.46	******	******
$(\partial V_P/\partial T)_P$	-0.448	-0.440	-0.243	-0.210	******	******	******	******	-0.294	-0.145	******	******
$(\partial V_S/\partial T)_P$	-0.158	-0.142	-0.102	-0.051	******	******	******	******	-0.113	0.189	******	******
$(\partial V_\phi/\partial T)_P$	-0.423	-0.424	-0.218	-0.218	******	******	******	******	-0.271	-0.275	******	******
$(\partial P/\partial T)_{V_P}$	11.359	13.355	5.391	5.235	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	-49.10	-11.57	******	-4.39	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	8.143	8.363	3.719	3.614	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	3.349	3.345	2.181	2.137	2.179	2.164	2.014	1.997	2.071	2.062	4.148	4.148
γ_{th}	1.226	1.225	0.892	0.874	0.914	0.908	0.848	0.841	0.873	0.869	1.421	1.421
γ_P	1.513	1.328	1.686	1.552	******	******	******	******	******	******	******	******
γ_S	0.147	-0.398	0.288	-0.349	******	******	******	******	******	******	******	******
γ_{LT}	0.234	-0.293	0.391	-0.223	******	******	******	******	******	******	******	******
γ_{HT}	0.602	0.178	0.754	0.285	******	******	******	******	******	******	******	******
δ_S	10.397	10.438	8.656	8.760	******	******	******	******	5.247	5.313	******	******
δ_T	11.616	11.656	9.922	10.001	******	******	******	******	6.387	6.448	******	******
θ_D	594.8	576.9	554.8	518.4	249.0	166.1	241.8	167.7	250.5	167.8	437.0	420.0
$(\partial K_S/\partial T)_V$	-0.184	-0.188	-0.077	-0.075	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	-0.224	-0.228	-0.096	-0.094	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	1.45	1.45	5.00	5.00	5.00	5.00	5.00	5.00	(0.0)†	(0.0)†
V_B/V_P	0.516	0.506	0.541	0.521	0.521	0.386	0.524	0.402	0.532	0.397	0.520	0.506
V_M	4.525	4.389	4.261	3.982	2.047	1.366	1.991	1.381	2.063	1.382	3.304	3.175
REF. E.C.	216+273		226		207		288		265		202	
REF. α, Cp	273, 602		528, 602		526, 603		526, 603		526, 603		519, 602	

REF. E.C.	216+273	226	207	286	266	202
REF. α, Cp	273, 602	528, 602	526, 603	526; 603	526, 603	519; 602

	HfO_2-Y_2O_3 (10%) Fluorite (Cubic) PULS (1977) ROOM		ThO_2 Fluorite (Cubi) PULS (1964) 298 K		UO_2 Fluortie (Cubic) PULS (1965) ROOM		UO_2 Fluorite (Cubic) PULS (1968) ROOM		UO_2 Fluorite (Cubic) *PULS (1976) 296 K		H_2O (Ice) —— (Hexa.) PULS (1956) 257 K	
ρ_X	9.650		10.070		10.970		10.970		10.970		0.920	
ρ_B	******		******		******		******		******		******	
M	66.26		88.01		90.01		90.01		90.01		6.01	
α	21.00 (HfO_2)		22.74		24.25		24.25		24.25		131.70	
C_p	3.053		2.345		2.369		2.369		2.369		19.915	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	2263.0	2263.0	1930.0	1930.0	2127.0	2127.0	(2127.0)[A]	(2127.0)[A]	2089.0	2089.0	81.5	81.5
K_T	2240.2	2240.2	1905.8	1905.8	2096.7	2096.7	2096.7[A]	2096.7[A]	2059.8	2059.8	79.6	79.6
μ	905.0	827.0	972.0	944.0	875.0	815.0	(875.0)[A]	(815.0)[A]	834.1	768.8	36.6	36.3
σ	0.324	0.337	0.284	0.290	0.319	0.330	0.319	0.330	0.324	0.336	0.305	0.306
V_P	5.996	5.906	5.660	5.627	5.479	5.412	5.479	5.412	5.402	5.328	3.761	3.756
V_S	3.062	2.927	3.107	3.062	2.824	2.726	2.824	2.726	2.757	2.647	1.993	1.985
V_ϕ	4.843	4.843	4.378	4.378	4.403	4.403	4.403	4.403	4.364	4.364	2.975	2.975
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	(4.68)[B]	(4.68)[B]	4.68	4.68	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	4.72	4.72	4.72	4.72	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	(1.42)[B]	(1.68)[B]	1.42	1.68	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	0.091	0.022	0.083	0.009	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	4.17	4.53	4.24	4.62	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	1.62	2.15	1.68	2.24	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	3.80	3.80	3.83	3.83	******	******
$(\partial K_S/\partial T)_P$	******	******	******	******	******	******	-0.245	-0.245	(-0.245)	(-0.245)	******	******
$(\partial K_T/\partial T)_P$	******	******	******	******	******	******	-0.369	-0.369	-0.365	-0.365	******	******
$(\partial \mu/\partial T)_P$	******	******	******	******	******	******	0.053	0.085	(0.053)	(0.085)	******	******
$(\partial \sigma/\partial T)_P$	******	******	******	******	******	******	-2.79	-3.30	-2.81	-3.32	******	******
$(\partial V_P/\partial T)_P$	******	******	******	******	******	******	-0.079	-0.046	-0.082	-0.048	******	******
$(\partial V_S/\partial T)_P$	******	******	******	******	******	******	0.119	0.175	0.121	0.178	******	******
$(\partial V_\phi/\partial T)_P$	******	******	******	******	******	******	-0.200	-0.200	-0.203	-0.203	******	******
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	1.890	1.005	1.929	1.046	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	-7.35	-8.11	-7.17	-7.93	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	5.272	5.272	5.297	5.297	******	******
$(\partial P/\partial T)_\rho$	4.704	4.704	4.334	4.334	5.085	5.085	5.085	5.085	4.995	4.995	1.049	1.049
γ_{th}	1.613	1.613	1.859	1.859	1.985	1.985	1.985	1.985	1.949	1.949	0.585	0.585
γ_P	******	******	******	******	******	******	1.928	2.090	1.951	2.121	******	******
γ_S	******	******	******	******	******	******	1.539	1.989	1.592	2.079	******	******
γ_{LT}	******	******	******	******	******	******	1.564	1.995	1.614	2.081	******	******
γ_{HT}	******	******	******	******	******	******	1.669	2.023	1.711	2.093	******	******
δ_S	******	******	******	******	******	******	4.750	4.750	4.836	4.836	******	******
δ_T	******	******	******	******	******	******	7.258	7.258	7.300	7.300	******	******
θ_D	453.9	434.6	422.7	416.9	394.2	381.0	394.2	381.0	385.1	370.3	299.7	298.5
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	-0.030	-0.030	-0.033	-0.033	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	-0.129	-0.129	-0.129	-0.129	******	******
$(\partial \alpha/\partial T)_P$	(0.0)[†]	(0.0)[†]	3.36	3.36	2.28	2.28	2.28	2.28	2.28	2.28	52.70	52.70
V_S/V_P	0.511	0.496	0.549	0.544	0.515	0.504	0.515	0.504	0.510	0.497	0.530	0.529
V_m	3.431	3.286	3.463	3.416	3.162	3.056	3.162	3.056	3.089	2.971	2.227	2.219
REF. E.C.	229		294		294		223(294[A];237[B])		237		239	
REF. α, Cp	519; 602		545; 603		547, 602		547, 602		547, 602		506, 615	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	H_2O (Ice) — (Hexa.) RESO (1957) 257 K		H_2O (Ice) — (Hexa.) PULS (1964) 258 K		H_2O (Ice) — (Hexa.) PULS (1964) 257 K		H_2O (Ice) — (Hexa.) PULS (1966) 200 K		H_2O (Ice) — (Hexa.) PULS (1968) 250 K		D_2O (Ice) — (Hexa.) PULS (1971) 200 K	
ρ_x	0.920		0.920		0.920		0.927		0.921		1.051	
ρ_B	******		******		******		******		******		******	
M	6.01		6.01		6.01		6.01		6.01		6.68	
α	131.70		131.70		131.70		108.40		126.30		109.77	
C_P	19.915		19.915		19.915		15.423		19.364		13.871	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	80.0	80.0	97.1	96.1	84.7	84.7	96.0	96.0	87.0	87.0	91.9	91.9
K_T	78.3	78.2	94.5	93.6	82.7	82.7	93.7	93.7	85.0	85.0	89.8	89.8
μ	35.6	35.1	34.1	33.9	35.3	34.7	37.2	36.7	33.0	32.7	41.9	40.9
σ	0.306	0.309	0.343	0.342	0.317	0.320	0.328	0.330	0.331	0.333	0.302	0.306
V_P	3.722	3.711	3.935	3.920	3.884	3.773	3.962	3.954	3.772	3.766	3.749	3.733
V_S	1.967	1.952	1.924	1.921	1.958	1.943	2.003	1.991	1.894	1.885	1.997	1.974
V_ϕ	2.949	2.948	3.248	3.232	3.034	3.034	3.217	3.217	3.073	3.073	2.957	2.957
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.170	-0.171	-1.383	-1.379	-0.088	-0.087	-0.090	-0.090	-0.126	-0.126	-0.100	-0.100
$(\partial K_T/\partial T)_P$	-0.179	-0.180	-1.364	-1.361	-0.100	-0.100	-0.106	-0.106	-0.138	-0.138	-0.114	-0.114
$(\partial \mu/\partial T)_P$	-0.067	-0.068	-0.750	-0.779	-0.064	-0.063	-0.039	-0.039	-0.032	-0.032	-0.038	-0.039
$(\partial \sigma/\partial T)_P$	-4.19	-3.41	109.35	121.57	12.48	12.45	1.67	1.65	-7.47	-7.16	-2.88	-2.37
$(\partial V_P/\partial T)_P$	-3.541	-3.573	******	******	-2.232	-2.221	-1.725	-1.719	-2.185	-2.191	-1.712	-1.728
$(\partial V_S/\partial T)_P$	-1.718	-1.753	******	******	-1.644	-1.637	-0.944	-0.938	-0.783	-0.794	-0.808	-0.827
$(\partial V_\phi/\partial T)_P$	-2.942	-2.950	******	******	-1.369	-1.365	-1.341	-1.339	-2.038	-2.036	-1.444	-1.445
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	1.031	1.030	1.245	1.233	1.090	1.090	1.016	1.016	1.073	1.073	0.986	0.986
γ_{th}	0.575	0.575	0.698	0.691	0.609	0.609	0.727	0.727	0.616	0.616	0.692	0.692
γ_P	******	******	******	******	******	******	******	******	******	******	******	******
γ_S	******	******	******	******	******	******	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	******	******	******	******	******	******
δ_S	16.148	16.192	******	******	7.851	7.833	8.691	8.681	11.500	11.490	9.897	9.907
δ_T	17.385	17.429	******	******	9.159	9.141	10.438	10.428	12.855	12.846	11.579	11.589
θ_D	295.9	293.7	290.7	290.2	294.9	292.7	302.8	301.1	285.9	284.5	302.8	299.5
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	52.70	52.70	52.70	52.70	52.70	52.70	52.70	52.70	52.70	52.70	54.40	54.40
V_S/V_P	0.529	0.526	0.489	0.490	0.517	0.515	0.505	0.503	0.502	0.501	0.533	0.529
V_m	2.199	2.183	2.161	2.157	2.191	2.176	2.245	2.232	2.124	2.114	2.231	2.207
REF. B.C.	209		221		224		272		231		264	
REF. α, Cp	506; 615		506; 615		506; 615		506; 615		506; 615		506; 615	

	Cu_2O	Cu_2O	ReO_3	ReO_3	ReO_3	U_4O_9
	Cu_2O-str.(Cubic)	Cu_2O-str.(Cubic)	——— (Cubic)	——— (Cubic)	——— (Cubic)	——— (Cubic)
	PULS (1970)	*PULS (1974)	RESO (1976)	PULS (1976)	BRIL (1977)	PULS (1966)
	293 K	298 K	293 K	300 K	354 K	ROOM
ρ_X	6.100	6.100	7.424	7.424	7.424	11.351
ρ_B	6.070	******	******	6.920	6.920	******
M	47.70	47.70	58.55	58.55	58.55	84.32
α	5.70	5.70	5.10	5.10	5.10	24.30 (UO_2)
C_P	4.455	4.455	4.647	4.647	4.647	2.675
	(HILL) (REUSS)	(HILL) (REUSS)	(HILL) (REUSS)	(HILL) (REUSS)	(HILL) (REUSS)	(HILL) (REUSS)
K_S	1057.0 1057.0	1119.6 1119.6	1953.0 1953.0	1550.0 1550.0	3077.0 3077.0	1870.0 1870.0
K_T	1056.6 1056.6	1119.2 1119.2	1952.1 1952.1	1549.4 1549.4	3074.7 3074.7	1849.8 1849.8
μ	103.0 101.0	103.5 101.6	1257.6 977.3	1104.0 871.0	1341.0 1027.0	589.0 535.0
σ	0.453 0.454	0.455 0.456	0.235 0.286	0.212 0.263	0.310 0.350	0.357 0.369
V_P	4.436 4.431	4.540 4.536	6.992 6.623	6.608 6.259	8.385 8.016	4.837 4.771
V_S	1.303 1.290	1.302 1.291	4.116 3.628	3.994 3.548	4.402 3.852	2.278 2.171
V_ϕ	4.173 4.173	4.284 4.284	5.129 5.129	4.733 4.733	6.668 6.668	4.059 4.059
$(\partial K_S/\partial P)_T$	(4.46) (4.46)	4.46 4.46	****** ******	****** ******	****** ******	****** ******
$(\partial K_T/\partial P)_T$	4.47 4.47	4.47 4.47	****** ******	****** ******	****** ******	****** ******
$(\partial \mu/\partial P)_T$	(-0.67) (-0.68)	-0.67 -0.68	****** ******	****** ******	****** ******	****** ******
$(\partial \sigma/\partial P)_T$	0.491 0.491	0.456 0.456	****** ******	****** ******	****** ******	****** ******
$(\partial V_P/\partial P)_T$	4.52 4.51	4.40 4.39	****** ******	****** ******	****** ******	****** ******
$(\partial V_S/\partial P)_T$	-4.87 -4.95	-4.82 -4.90	****** ******	****** ******	****** ******	****** ******
$(\partial V_\phi/\partial P)_T$	6.83 6.83	6.62 6.62	****** ******	****** ******	****** ******	****** ******
$(\partial K_S/\partial T)_P$	-0.192 -0.192	(-0.192) (-0.192)	-0.760 -0.760	****** ******	****** ******	****** ******
$(\partial K_T/\partial T)_P$	-0.195 -0.195	-0.196 -0.196	-0.763 -0.763	****** ******	****** ******	****** ******
$(\partial \mu/\partial T)_P$	0.028 0.025	(0.028) (0.025)	-0.259 -0.136	****** ******	****** ******	****** ******
$(\partial \sigma/\partial T)_P$	-2.09 -1.94	-1.94 -1.80	-4.00 -4.60	****** ******	****** ******	****** ******
$(\partial V_P/\partial T)_P$	-0.275 -0.283	-0.266 -0.274	-1.047 -0.940	****** ******	****** ******	****** ******
$(\partial V_S/\partial T)_P$	0.183 0.165	0.182 0.164	-0.413 -0.242	****** ******	****** ******	****** ******
$(\partial V_\phi/\partial T)_P$	-0.368 -0.368	-0.356 -0.356	-0.985 -0.985	****** ******	****** ******	****** ******
$(\partial P/\partial T)_{V_P}$	6.078 6.266	6.046 6.234	****** ******	****** ******	****** ******	****** ******
$(\partial P/\partial T)_{V_S}$	3.76 3.34	3.79 3.36	****** ******	****** ******	****** ******	****** ******
$(\partial P/\partial T)_{V_\phi}$	5.390 5.390	5.380 5.380	****** ******	****** ******	****** ******	****** ******
$(\partial P/\partial T)_\rho$	0.602 0.602	0.638 0.638	0.996 0.996	0.790 0.790	1.568 1.568	4.495 4.495
γ_{th}	0.223 0.223	0.235 0.235	0.289 0.289	0.246 0.246	0.488 0.488	1.497 1.497
γ_P	1.409 1.409	1.419 1.418	****** ******	****** ******	****** ******	****** ******
γ_S	-3.619 -3.724	-3.806 -3.912	****** ******	****** ******	****** ******	****** ******
γ_{LT}	-3.556 -3.661	-3.745 -3.851	****** ******	****** ******	****** ******	****** ******
γ_{HT}	-1.943 -2.013	-2.064 -2.135	****** ******	****** ******	****** ******	****** ******
δ_S	31.951 31.951	30.164 30.164	76.303 76.303	****** ******	****** ******	****** ******
δ_T	32.420 32.420	30.658 30.658	76.591 76.591	****** ******	****** ******	****** ******
θ_D	187.8 186.0	188.1 186.4	576.1 511.0	544.8 486.7	607.4 534.4	330.3 315.4
$(\partial K_S/\partial T)_V$	-0.167 -0.167	-0.166 -0.166	****** ******	****** ******	****** ******	****** ******
$(\partial K_P/\partial T)_V$	-0.168 -0.168	-0.167 -0.167	****** ******	****** ******	****** ******	****** ******
$(\partial \alpha/\partial T)_P$	2.10 2.10	2.10 2.10	(0.0)† (0.0)†	(0.0)† (0.0)†	(0.0)† (0.0)†	2.30 2.30
V_S/V_P	0.294 0.291	0.287 0.285	0.589 0.548	0.604 0.567	0.525 0.481	0.471 0.455
V_m	1.485 1.471	1.485 1.472	4.561 4.045	4.415 3.945	4.923 4.331	2.564 2.447
REF. E:C:	241(257)	257(241)	287	269	214	211
REF. α, Cp	257; 613	257; 613	287; 603	287; 603	287; 603	547; 602

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

C. Silicate Minerals Series

	$MgSiO_3$ (Ortho.) BRIL (1978) ROOM		$(Mg_{.845}Fe_{.152})SiO_3$ (Ortho.) *PULS (1969) ROOM		$(Mg_{.8}Fe_{.2})SiO_3$ (Ortho.) *PULS (1972) 298 K		$(Ca_{.5}Mg_{.5})SiO_3$ Diopside (Mono.) BRIL (1979) ROOM		Mg_2SiO_4 Olivine (Ortho.) *PULS (1969) 298 K		Mg_2SiO_4 Olivine (Ortho.) *PULS (1969) 298 K	
ρ_X	3.198		*** **		******		3.277		3.214		3.214	
ρ_B	******		3.335		3.354		******		3.222		3.224	
M	20.08		21.05		21.34		21.65		20.10		20.12	
α	22.50		33.60		47.70		18.80		24.65		24.65	
C_P	8.194		7.924		7.851		7.213		8.472		8.472	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1077.9	1072.9	1049.8	1038.4	1034.6	1021.3	1129.3	1081.9	1290.5	1268.9	1286.0	1265.0
K_T	1071.2	1066.3	1035.9	1024.6	1007.6	995.0	1123.6	1076.7	1279.5	1258.2	1275.1	1254.4
μ	756.7	751.8	752.0	745.4	747.0	739.0	670.9	651.9	816.4	800.9	810.8	794.4
σ	0.216	0.216	0.211	0.210	0.209	0.209	0.252	0.249	0.239	0.239	0.240	0.240
V_P	8.078	8.056	7.845	7.806	7.781	7.735	7.859	7.716	8.593	8.517	8.569	8.491
V_S	4.864	4.849	4.749	4.728	4.719	4.694	4.525	4.460	5.034	4.986	5.015	4.964
V_ϕ	5.806	5.792	5.611	5.580	5.554	5.518	5.870	5.746	6.329	6.276	6.316	6.264
$(\partial K_S/\partial P)_T$	******	******	******	******	9.51	9.44	******	******	4.88	4.80	5.37	5.31
$(\partial K_T/\partial P)_T$	******	******	******	******	9.45	9.38	******	******	4.90	4.82	5.38	5.32
$(\partial \mu/\partial P)_T$	******	******	******	******	2.36	2.33	******	******	1.81	1.84	1.80	1.85
$(\partial \sigma/\partial P)_T$	******	******	******	******	1.413	1.430	******	******	0.337	0.320	0.421	0.401
$(\partial V_P/\partial P)_T$	******	******	******	******	20.40	20.28	******	******	9.80	9.83	10.70	10.82
$(\partial V_S/\partial P)_T$	******	******	******	******	5.13	5.03	******	******	3.61	3.75	3.60	3.80
$(\partial V_\phi/\partial P)_T$	******	******	******	******	22.76	22.72	******	******	9.48	9.37	10.71	10.65
$(\partial K_S/\partial T)_P$	******	******	******	******	-0.268	-0.262	******	******	-0.173	-0.173	-0.150	-0.149
$(\partial K_T/\partial T)_P$	******	******	******	******	-0.349	-0.340	******	******	-0.229	-0.227	-0.206	-0.203
$(\partial \mu/\partial T)_P$	******	******	******	******	-0.119	-0.119	******	******	-0.133	-0.135	-0.130	-0.132
$(\partial \sigma/\partial T)_P$	******	******	******	******	-2.33	-2.23	******	******	0.63	0.68	0.94	1.04
$(\partial V_P/\partial T)_P$	******	******	******	******	-0.633	-0.626	******	******	-0.528	-0.537	-0.480	-0.489
$(\partial V_S/\partial T)_P$	******	******	******	******	-0.265	-0.266	******	******	-0.349	-0.357	-0.340	-0.351
$(\partial V_\phi/\partial T)_P$	******	******	******	******	-0.587	-0.575	******	******	-0.347	-0.351	-0.290	-0.292
$(\partial P/\partial T)_{V_P}$	******	******	******	******	3.105	3.064	******	******	5.389	5.468	4.481	4.519
$(\partial P/\partial T)_{V_S}$	******	******	******	******	5.17	5.28	******	******	9.67	9.54	9.45	9.24
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	2.579	2.532	******	******	3.659	3.745	2.712	2.739
$(\partial P/\partial T)_\rho$	2.410	2.399	3.481	3.443	4.806	4.746	2.112	2.024	3.154	3.102	3.143	3.092
γ_{th}	0.926	0.921	1.335	1.320	1.874	1.850	0.898	0.861	1.165	1.146	1.161	1.142
γ_P	******	******	******	******	2.975	2.942	******	******	1.793	1.786	1.926	1.932
γ_S	******	******	******	******	1.428	1.400	******	******	1.251	1.279	1.249	1.294
γ_{LT}	******	******	******	******	1.584	1.555	******	******	1.300	1.325	1.310	1.352
γ_{HT}	******	******	******	******	1.944	1.914	******	******	1.432	1.448	1.474	1.507
δ_S	******	******	******	******	5.433	5.370	******	******	5.448	5.537	4.732	4.778
δ_T	******	******	******	******	7.258	7.172	******	******	7.264	7.324	6.541	6.558
θ_D	733.1	730.7	714.0	710.9	707.6	703.8	673.2	663.4	762.3	755.0	759.4	751.7
$(\partial K_S/\partial T)_V$	******	******	******	******	0.198	0.195	******	******	-0.039	-0.043	-0.000	-0.003
$(\partial K_P/\partial T)_V$	******	******	******	******	0.105	0.105	******	******	-0.075	-0.078	-0.036	-0.038
$(\partial \alpha/\partial T)_P$	4.50	4.50	(0.0)†	(0.0)†	(0.0)†	(0.0)†	7.30	7.30	4.70	4.70	4.70	4.70
V_S/V_P	0.602	0.602	0.605	0.606	0.607	0.607	0.576	0.578	0.586	0.585	0.585	0.585
V_m	5.379	5.362	5.248	5.225	5.215	5.187	5.024	4.951	5.581	5.528	5.561	5.505
REF. E.C.	328		311		305		314		307		312	
REF. α, Cp	535, 613		539, 602+613		510, 602+613		535, 603		312; 613		312; 613	

	Mg_2SiO_4 Olivine (Ortho.)	$(Mg_{.927}Fe_{.072})_2SiO_4$	$(Mg_{.920}Fe_{.075})_2SiO_4$	$(Mg_{.917}Fe_{.083})_2SiO_4$	$(Mg_{.913}Fe_{.081})_2SiO_4$	Mn_2SiO_4 Olivine (Ortho.) RESO (1979)

	Mg_2SiO_4 Olivine (Ortho.) RESO (1977) 298 K		$(Mg_{.927}Fe_{.072})_2SiO_4$ Olivine (Ortho.) *PJLS(1969), 298K		$(Mg_{.920}Fe_{.075})_2SiO_4$ Olivine (Ortho.) RESO(1976), ROOM		$(Mg_{.917}Fe_{.083})_2SiO_4$ Olivine (Ortho.) PULS(1960), ROOM		$(Mg_{.913}Fe_{.081})_2SiO_4$ Olivine (Ortho.) RESO(1976), ROOM		Mn_2SiO_4 Olivine (Ortho.) RESO (1979) 298 K	
ρ_X	3.215		******		******		******		******		4.128	
ρ_B	3.225		3.311		3.299		3.324		3.316		4.129	
M	20.10		20.79		20.82		20.85		20.88		28.85	
α	26.50		24.65		26.50		26.50		26.50		22.60	
C_P	8.472		8.275		8.257		8.249		8.239		6.654	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1292.0	1271.0	1294.0	1272.0	1267.2	1242.3	1312.6	1288.9	1280.9	1255.5	1288.0	1266.0
K_T	1279.3	1258.7	1283.0	1261.3	1254.9	1230.5	1299.7	1276.3	1268.4	1243.5	1278.8	1257.1
μ	812.0	797.0	790.8	775.2	789.5	774.2	808.7	793.4	786.7	772.2	546.0	537.0
σ	0.240	0.241	0.246	0.247	0.242	0.242	0.244	0.245	0.245	0.245	0.314	0.314
V_P	8.581	8.507	8.422	8.345	8.386	8.303	8.481	8.402	8.382	8.301	6.988	6.928
V_S	5.018	4.971	4.887	4.839	4.892	4.844	4.932	4.886	4.871	4.826	3.636	3.606
V_ϕ	6.329	6.278	6.252	6.198	6.198	6.137	6.284	6.227	6.215	6.153	5.585	5.537
$(\partial K_S/\partial P)_T$	(4.88)	(4.80)	5.13	5.08	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	4.89	4.81	5.14	5.09	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	(1.81)	(1.84)	1.79	1.85	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	0.332	0.315	0.359	0.338	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	9.81	9.84	10.20	10.35	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	3.63	3.76	3.63	3.86	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	9.47	9.36	9.96	9.92	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.160	-0.155	-0.156	-0.155	******	******	******	******	******	******	-0.195	-0.194
$(\partial K_T/\partial T)_P$	-0.224	-0.217	-0.212	-0.209	******	******	******	******	******	******	-0.241	-0.238
$(\partial \mu/\partial T)_P$	-0.135	-0.136	-0.130	-0.132	******	******	******	******	******	******	-0.104	-0.105
$(\partial \sigma/\partial T)_P$	0.91	1.04	0.92	1.02	******	******	******	******	******	******	0.64	0.69
$(\partial V_P/\partial T)_P$	-0.501	-0.500	-0.487	-0.496	******	******	******	******	******	******	-0.499	-0.505
$(\partial V_S/\partial T)_P$	-0.351	-0.358	-0.341	-0.352	******	******	******	******	******	******	-0.305	-0.312
$(\partial V_\phi/\partial T)_P$	-0.308	-0.300	-0.300	-0.301	******	******	******	******	******	******	-0.360	-0.362
$(\partial P/\partial T)_{V_P}$	5.101	5.086	4.774	4.794	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	9.66	9.52	9.42	9.14	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	3.253	3.203	3.011	3.037	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	3.390	3.335	3.162	3.109	3.325	3.261	3.444	3.382	3.361	3.295	2.890	2.841
γ_{th}	1.253	1.233	1.164	1.144	1.233	1.209	1.269	1.246	1.242	1.218	1.059	1.041
γ_P	1.796	1.789	1.887	1.898	******	******	******	******	******	******	******	******
γ_S	1.258	1.286	1.285	1.338	******	******	******	******	******	******	******	******
γ_{LT}	1.307	1.332	1.339	1.388	******	******	******	******	******	******	******	******
γ_{HT}	1.438	1.454	1.486	1.525	******	******	******	******	******	******	******	******
δ_S	4.673	4.602	4.891	4.943	******	******	******	******	******	******	6.699	6.780
δ_T	6.616	6.514	6.705	6.727	******	******	******	******	******	******	8.337	8.391
θ_D	760.2	753.2	739.1	731.8	738.2	731.0	746.0	739.0	735.8	729.0	535.2	530.7
$(\partial K_S/\partial T)_V$	-0.017	-0.016	-0.013	-0.016	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	-0.058	-0.057	-0.049	-0.051	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	5.00	5.00	4.70	4.70	5.00	5.00	5.00	5.00	5.00	5.00	4.20	4.20
V_S/V_P	0.585	0.584	0.580	0.580	0.583	0.583	0.582	0.581	0.581	0.581	0.520	0.521
V_m	5.564	5.513	5.423	5.370	5.426	5.373	5.472	5.421	5.404	5.354	4.069	4.036
REF. E.C.	323(307)		312		315		325		315		321	
REF. α, Cp	540; 613		312; 602+613		540, 602+613		312, 602+613		540, 602+613		524; 602	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	Fe_2SiO_4 Olivine (Ortho.) RESO (1979) 298 K		Co_2SiO_4 Olivine (Ortho.) RESO (1979) 298 K		Ni_2SiO_4 Olivine (Ortho.) BRIL (1980) ROOM		Ni_2SiO_4 Spinel (Cubic) BRIL (1980) ROOM		$Mg_3Al_2Si_3O_{12}$ Garnet (Cubic) BRIL (1980) ROOM		$(Mg_{.7}Fe_{.1\,6})_3Al_2-Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM	
ρ_x	4.397		4.702		4.923		5.350		3.563		3.703	
ρ_B	4.400		4.706		******		******		******		3.704	
M	29.11		29.99		29.93		29.93		20.16		21.42	
α	26.00		22.60 (Mn_2SiO_4)		22.60 (Mn_2SiO_4)		21.30 (γ-Fe_2SiO_4)		20.30		19.50	
C_p	6.547		6.382		6.805		(5.882)**		(8.988)**		(8.512)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1379.0	1356.0	1482.0	1458.0	1653.0	1627.0	1850.0	1850.0	1766.0	1766.0	1700.0	1700.0
K_T	1365.7	1343.2	1470.9	1447.2	1640.6	1615.0	1835.3	1835.3	1754.0	1754.0	1689.6	1689.6
μ	509.0	487.0	620.0	605.0	807.0	796.0	1502.0	1499.0	896.0	896.0	926.3	926.2
σ	0.336	0.340	0.316	0.318	0.290	0.290	0.181	0.181	0.283	0.283	0.269	0.269
V_P	6.839	6.751	7.004	6.937	7.445	7.390	8.486	8.482	9.116	9.116	8.902	8.902
V_S	3.401	3.327	3.630	3.586	4.049	4.021	5.299	5.293	5.015	5.015	5.001	5.001
V_ϕ	5.598	5.551	5.612	5.566	5.795	5.749	5.880	5.880	7.040	7.040	6.775	6.775
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.205	-0.207	-0.195	-0.191	******	******	******	******	******	******	******	******
$(\partial K_T/\partial T)_P$	-0.258	-0.258	-0.251	-0.245	******	******	******	******	******	******	******	******
$(\partial \mu/\partial T)_P$	-0.108	-0.100	-0.077	-0.075	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial T)_P$	0.93	0.75	-0.12	-0.11	******	******	******	******	******	******	******	******
$(\partial V_P/\partial T)_P$	-0.491	-0.485	-0.372	-0.367	******	******	******	******	******	******	******	******
$(\partial V_S/\partial T)_P$	-0.317	-0.298	-0.184	-0.182	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial T)_P$	-0.343	-0.352	-0.306	-0.302	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	3.551	3.492	3.324	3.271	3.708	3.650	3.909	3.909	3.561	3.561	3.295	3.295
γ_{th}	1.245	1.224	1.115	1.097	1.115	1.098	1.252	1.252	1.119	1.119	1.051	1.051
γ_P	******	******	******	******	******	******	******	******	******	******	******	******
γ_S	******	******	******	******	******	******	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	******	******	******	******	******	******
δ_S	5.718	5.871	5.822	5.797	******	******	******	******	******	******	******	******
δ_T	7.263	7.391	7.546	7.493	******	******	******	******	******	******	******	******
θ_D	511.2	500.3	551.0	544.3	622.2	617.9	826.8	826.0	788.6	788.6	779.5	779.4
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	2.20	2.20	4.20	4.20	4.20	4.20	2.60	2.60	2.50	2.50	2.60	2.60
V_S/V_P	0.497	0.493	0.518	0.517	0.544	0.544	0.624	0.624	0.550	0.550	0.562	0.562
V_M	3.817	3.735	4.063	4.014	4.517	4.486	5.838	5.832	5.589	5.589	5.565	5.564
REF. E.C.	321		321		302		302		313		301	
REF. α, Cp	543, 602		524; 603		524; 603		541; (CALC)**		535; (CALC)**		535; (CALC)**	

$(Mg_{.7}Fe_{.1\,6})_3Al_2-Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM	$(Mg_{.7}Fe_{.1\,4})_3Al_2-Si_3O_{12}$ Garnet (Cubic) RESC(1978), ROOM	$(Mg_{.7\,0}Fe_{.1\,6})_3Al_2-Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM	$(Mg_{.6\,1}Fe_{.3\,6})_3Al_2-Si_3O_{12}$ Garnet (Cubic) *PULS(1977), 298K	$(Mg_{.5\,5}Fe_{.3\,7})_3Al_2-Si_3O_{12}$ Garnet (Cubic) RESO(1976), 293K	$(Mg_{.5\,0}Fe_{.4\,6})_3Al_2-Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM

REF. E.C.	321	321	302	302	313	301
REF. α, Cp	543, 602	524; 603	524; 603	541; (CAL)**	535; (CAL)**	535; (CAL)**

	$(Mg_{.73}Fe_{.16})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$(Mg_{.73}Fe_{.14})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESC(1978), ROOM		$(Mg_{.70}Fe_{.16})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$(Mg_{.61}Fe_{.36})_3Al_2Si_3O_{12}$ Garnet (Cubic) *PULS(1977), 298K		$(Mg_{.55}Fe_{.37})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1976), 293K		$(Mg_{.50}Fe_{.46})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM	
ρ_X	3.711		3.708		3.722		******		3.868		3.918	
ρ_B	3.705		3.699		3.723		3.726		3.859		3.916	
M	21.46		21.47		21.54		21.93		22.10		22.48	
α	19.20		19.60		19.50		18.70		18.50		23.70	
C_P	(8.497)**		(8.509)**		(8.494)**		(8.367)**		(8.266)**		(8.188)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1713.0	1713.0	1716.0	1716.0	1708.0	1708.0	1682.1	1682.1	1722.0	1722.0	1737.0	1737.0
K_T	1702.8	1702.8	1705.3	1705.3	1697.5	1697.5	1672.6	1672.6	1712.5	1712.5	1721.3	1721.3
μ	926.9	926.8	921.6	921.5	920.3	920.2	921.8	921.8	951.6	951.6	954.0	954.0
σ	0.271	0.271	0.272	0.272	0.272	0.272	0.268	0.268	0.267	0.267	0.268	0.268
V_P	8.921	8.921	8.922	8.922	8.879	8.879	8.839	8.839	8.804	8.804	8.766	8.766
V_S	5.002	5.001	4.991	4.991	4.972	4.972	4.974	4.974	4.966	4.966	4.936	4.936
V_ϕ	6.800	6.800	6.811	6.811	6.773	6.773	6.719	6.719	6.680	6.680	6.660	6.660
$(\partial K_S/\partial P)_T$	(4.74)	(4.74)	******	******	******	******	4.74	4.74	******	******	******	******
$(\partial K_T/\partial P)_T$	4.76	4.76	******	******	******	******	4.76	4.76	******	******	******	******
$(\partial \mu/\partial P)_T$	(1.47)	(1.47)	******	******	******	******	1.47	1.47	******	******	******	******
$(\partial \sigma/\partial P)_T$	0.229	0.229	******	******	******	******	0.240	0.239	******	******	******	******
$(\partial V_P/\partial P)_T$	7.52	7.52	******	******	******	******	7.53	7.53	******	******	******	******
$(\partial V_S/\partial P)_T$	2.50	2.50	******	******	******	******	2.48	2.48	******	******	******	******
$(\partial V_\phi/\partial P)_T$	7.41	7.41	******	******	******	******	7.46	7.46	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.225	-0.225	******	******	******	******	-0.188	-0.188	******	******	-0.227	-0.227
$(\partial K_T/\partial T)_P$	-0.258	-0.258	******	******	******	******	-0.232	-0.232	******	******	-0.277	-0.277
$(\partial \mu/\partial T)_P$	-0.087	-0.088	******	******	******	******	-0.087	-0.087	******	******	-0.107	-0.107
$(\partial \sigma/\partial T)_P$	-0.72	-0.72	******	******	******	******	-0.34	-0.34	******	******	-0.37	-0.37
$(\partial V_P/\partial T)_P$	-0.431	-0.431	******	******	******	******	-0.380	-0.380	******	******	-0.434	-0.434
$(\partial V_S/\partial T)_P$	-0.188	-0.188	******	******	******	******	-0.189	-0.189	******	******	-0.218	-0.218
$(\partial V_\phi/\partial T)_P$	-0.381	-0.381	******	******	******	******	-0.313	-0.313	******	******	-0.356	-0.356
$(\partial P/\partial T)_{V_P}$	5.735	5.739	******	******	******	******	5.046	5.047	******	******	******	******
$(\partial P/\partial T)_{V_S}$	7.52	7.53	******	******	******	******	7.62	7.63	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	5.145	5.145	******	******	******	******	4.200	4.200	******	******	******	******
$(\partial P/\partial T)_\rho$	3.269	3.269	3.342	3.342	3.310	3.310	3.128	3.128	3.168	3.168	4.079	4.079
γ_{th}	1.045	1.045	1.069	1.069	1.053	1.053	1.009	1.009	0.999	0.999	1.284	1.284
γ_P	1.768	1.768	******	******	******	******	1.758	1.758	******	******	******	******
γ_S	1.184	1.185	******	******	******	******	1.167	1.168	******	******	******	******
γ_{LT}	1.231	1.232	******	******	******	******	1.215	1.216	******	******	******	******
γ_{HT}	1.378	1.379	******	******	******	******	1.364	1.365	******	******	******	******
δ_S	6.841	6.841	******	******	******	******	5.986	5.986	******	******	5.514	5.514
δ_T	7.880	7.880	******	******	******	******	7.424	7.424	******	******	6.786	6.786
θ_D	779.3	779.3	777.3	777.3	775.0	775.0	770.6	770.6	776.3	776.3	771.1	771.1
$(\partial K_S/\partial T)_V$	-0.068	-0.068	******	******	******	******	-0.052	-0.052	******	******	******	******
$(\partial K_P/\partial T)_V$	-0.102	-0.102	******	******	******	******	-0.083	-0.083	******	******	******	******
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	2.60	2.60	2.60	2.60	2.70	2.70	2.70	2.70	(0.0)†	(0.0)†
V_S/V_P	0.561	0.561	0.559	0.559	0.560	0.560	0.563	0.563	0.564	0.564	0.563	0.563
V_H	5.567	5.566	5.556	5.556	5.534	5.534	5.534	5.534	5.524	5.524	5.491	5.491
REF. E.C.	301+322 (304)		301		301		304		306		301+322	
REF. α, Cp	322, (CAL)**		535; (CAL)**		535; (CAL)**		535, (CAL)**		535; (CAL)**		322; (CAL)**	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	$(Mg_{.41}Fe_{.58})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$(Mg_{.35}Fe_{.56})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1976), 293K		$(Mg_{.39}Fe_{.51})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$(Mg_{.39}Fe_{.54})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$(Mg_{.28}Fe_{.60})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$(Mg_{.20}Fe_{.74})_3Al_2Si_3O_{12}$ Garnet (Cubic) *PULS(1967), ROOM	
ρ_X	3.934		3.937		3.952		3.977		4.043		******	
ρ_B	3.930		3.942		3.945		3.976		4.043		4.160	
M	22.74		22.80		22.85		22.93		23.46		23.79	
α	18.00		17.70		17.90		23.70		17.40		21.60	
C_P	(8.081)**		(8.049)**		(8.045)**		(8.066)**		(7.883)**		(7.876)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1749.0	1749.0	1747.7	1747.7	1734.0	1734.0	1736.0	1736.0	1754.0	1754.0	1770.4	1770.4
K_T	1739.7	1739.7	1738.7	1738.7	1724.9	1724.9	1720.3	1720.3	1745.3	1745.3	1757.1	1757.1
μ	955.4	955.3	961.6	961.5	958.6	958.5	955.4	955.3	962.1	962.1	943.2	943.0
σ	0.269	0.269	0.268	0.268	0.267	0.267	0.267	0.268	0.268	0.268	0.274	0.274
V_P	8.770	8.770	8.767	8.767	8.738	8.738	8.701	8.700	8.667	8.667	8.531	8.531
V_S	4.931	4.930	4.939	4.939	4.929	4.929	4.902	4.902	4.878	4.878	4.762	4.761
V_ϕ	6.671	6.671	6.658	6.658	6.630	6.630	6.608	6.608	6.587	6.587	6.523	6.523
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	(5.43)	(5.43)	******	******	5.43	5.43
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	5.45	5.45	******	******	5.45	5.45
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	(1.40)	(1.40)	******	******	1.40	1.40
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	0.327	0.328	******	******	0.305	0.305
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	8.02	8.01	******	******	7.85	7.85
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	2.16	2.16	******	******	2.17	2.17
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	8.42	8.42	******	******	8.15	8.15
$(\partial K_S/\partial T)_P$	******	******	******	******	******	******	-0.227	-0.227	******	******	-0.201	-0.201
$(\partial K_T/\partial T)_P$	******	******	******	******	******	******	-0.277	-0.277	******	******	-0.268	-0.268
$(\partial \mu/\partial T)_P$	******	******	******	******	******	******	-0.109	-0.109	******	******	-0.106	-0.106
$(\partial \sigma/\partial T)_P$	******	******	******	******	******	******	-0.33	-0.32	******	******	-0.02	-0.02
$(\partial V_P/\partial T)_P$	******	******	******	******	******	******	-0.435	-0.435	******	******	-0.391	-0.391
$(\partial V_S/\partial T)_P$	******	******	******	******	******	******	-0.222	-0.222	******	******	-0.217	-0.217
$(\partial V_\phi/\partial T)_P$	******	******	******	******	******	******	-0.354	-0.354	******	******	-0.300	-0.300
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	5.426	5.433	******	******	4.983	4.983
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	10.25	10.30	******	******	9.99	10.00
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	4.201	4.201	******	******	3.685	3.685
$(\partial P/\partial T)_\rho$	3.131	3.131	3.077	3.077	3.088	3.088	4.077	4.077	3.037	3.037	3.795	3.795
γ_{th}	0.991	0.991	0.975	0.975	0.978	0.978	1.283	1.283	0.958	0.958	1.167	1.167
γ_P	******	******	******	******	******	******	1.919	1.918	******	******	1.951	1.950
γ_S	******	******	******	******	******	******	1.092	1.090	******	******	1.136	1.134
γ_{LT}	******	******	******	******	******	******	1.160	1.158	******	******	1.201	1.199
γ_{HT}	******	******	******	******	******	******	1.368	1.366	******	******	1.407	1.406
δ_S	******	******	******	******	******	******	5.517	5.517	******	******	5.264	5.264
δ_T	******	******	******	******	******	******	6.789	6.789	******	******	7.066	7.066
θ_D	768.3	768.3	769.6	769.6	767.7	767.6	764.6	764.5	759.4	759.4	745.3	745.3
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	-0.003	-0.003	******	******	-0.018	-0.018
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	-0.055	-0.055	******	******	-0.062	-0.062
$(\partial \alpha/\partial T)_P$	2.80	2.80	2.80	2.80	2.80	2.80	(0.0)†	(0.0)†	2.80	2.80	4.00	4.00
V_S/V_P	0.562	0.562	0.563	0.563	0.564	0.564	0.563	0.563	0.563	0.563	0.558	0.558
V_m	5.486	5.486	5.495	5.494	5.483	5.483	5.453	5.453	5.427	5.427	5.301	5.301
REF: B;C;	301		306		301		301+322 (320)		301		320	
REF: α, Cp	535, (CAL)**		535, (CAL)**		535, (CAL)**		322; (CAL)**		535; (CAL)**		320; (CAL)**	

ρ_m	5.486	5.486	5.495	5.494	5.483	5.483	5.453	5.453	5.427	5.427	5.301	5.301
REF: E.C.	301		306		301		301+322 (320)		301		320	
REF: α, Cp	535, (CAL)**		535, (CAL)**		535, (CAL)**		322; (CAL)**		535; (CAL)**		320; (CAL)**	

	$(Mg_{.22}Fe_{.64})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$(Mg_{.19}Fe_{.81})_3Al_2Si_3O_{12}$ Garnet (Cubic) PULS(1960), ROOM		$Mn_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$(Fe_{.19}Mn_{.75})_3Al_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$(Fe_{.44}Mn_{.55})_3Al_2Si_3O_{12}$ Garnet (Cubic) PULS(1960), ROOM		$(Fe_{.44}Mn_{.54})_3Al_2Si_3O_{12}$ Garnet(Cubic) PULS(1974), 293K	
ρ_X	4.114		******		4.190		4.175		******		4.260	
ρ_B	4.131		4.133		4.185		4.172		4.247		4.237	
M	23.81		24.13		24.75		24.60		24.77		24.90	
α	17.10		16.70		20.00		19.20		18.20		18.20	
C_P	(7.809)**		(7.748)**		(7.644)**		(7.611)**		(7.571)**		(7.547)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1768.0	1768.0	1764.7	1764.7	1718.0	1718.0	1764.0	1764.0	1755.7	1755.7	1777.0	1777.0
K_T	1759.5	1759.5	1756.7	1756.7	1707.0	1707.0	1753.2	1753.2	1746.2	1746.2	1767.2	1767.2
μ	958.9	958.8	951.4	951.3	933.5	933.3	964.4	964.4	966.2	966.1	961.1	960.9
σ	0.270	0.270	0.271	0.272	0.270	0.270	0.269	0.269	0.267	0.268	0.271	0.271
V_P	8.588	8.587	8.515	8.515	8.414	8.413	8.550	8.550	8.466	8.466	8.496	8.495
V_S	4.818	4.818	4.769	4.769	4.723	4.722	4.808	4.808	4.770	4.769	4.762	4.762
V_ϕ	6.542	6.542	6.495	6.495	6.407	6.407	6.502	6.502	6.430	6.430	6.476	6.476
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	4.95	4.95
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	4.96	4.96
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	1.44	1.44
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	0.250	0.250
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	7.13	7.14
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	2.22	2.22
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	7.19	7.19
$(\partial K_S/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	(-0.172)	(-0.172)
$(\partial K_T/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	-0.217	-0.217
$(\partial \mu/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	(-0.101)	(-0.101)
$(\partial \sigma/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	0.16	0.17
$(\partial V_P/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	-0.348	-0.348
$(\partial V_S/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	-0.207	-0.207
$(\partial V_\phi/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	-0.254	-0.254
$(\partial p/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	4.876	4.880
$(\partial p/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	9.33	9.33
$(\partial p/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	3.530	3.530
$(\partial p/\partial T)_\rho$	3.009	3.009	2.934	2.934	3.414	3.414	3.366	3.366	3.178	3.178	3.216	3.216
γ_{th}	0.937	0.937	0.909	0.909	1.074	1.074	1.067	1.067	0.994	0.994	1.011	1.011
γ_P	******	******	******	******	******	******	******	******	******	******	1.817	1.819
γ_S	******	******	******	******	******	******	******	******	******	******	1.155	1.158
γ_{LT}	******	******	******	******	******	******	******	******	******	******	1.209	1.212
γ_{HT}	******	******	******	******	******	******	******	******	******	******	1.376	1.379
δ_S	******	******	******	******	******	******	******	******	******	******	5.306	5.306
δ_T	******	******	******	******	******	******	******	******	******	******	6.759	6.759
θ_D	751.9	751.8	744.1	744.1	730.7	730.6	744.5	744.5	741.2	741.1	738.5	738.4
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	-0.026	-0.026
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	-0.058	-0.058
$(\partial \alpha/\partial T)_P$	2.90	2.90	2.90	2.90	2.50	2.50	2.60	2.60	2.70	2.70	2.70	2.70
V_S/V_P	0.561	0.561	0.560	0.560	0.561	0.561	0.562	0.562	0.563	0.563	0.561	0.561
V_m	5.362	5.361	5.308	5.308	5.256	5.255	5.350	5.350	5.306	5.306	5.300	5.300
REF: E.C.	301		325		301		301		325		327(309)	
REF. α, Cp	535, (CAL)**		535, (CAL)**		535, (CAL)**		535, (CAL)**		535, (CAL)**		535, (CAL)**	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	$(Fe_{.5}Mn_{.5})_3Al_2Si_3O_{12}$ Garnet (Cubic) *PULS(1976), 298K		$(Ca_{.5}Fe_{.5})_3Al_2Si_3O_{12}$ Garnet (Cubic) *PULS(1973), 293K		$Ca_3(Al_{.9}Fe_{.1})_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$Ca_3(Al_{.7}Fe_{.2})_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$Ca_3(Al_{.2}Fe_{.7})_2Si_3O_{12}$ Garnet (Cubic) RESO(1978), ROOM		$ZrSiO_4$ (Metamict) Zircon (Tetra.) PULS (1973) ROOM	
ρ_X	******		******		3.645		3.661		3.750		******	
ρ_B	4.240		3.617		3.659		3.667		3.775		4.531	
M	24.80		22.87		22.96		23.18		24.50		30.55	
α	17.90		16.70		17.20		17.60		20.10		11.80	
C_P	(7.581)**		(7.774)**		(7.806)**		(7.745)**		(7.664)**		5.371	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(POLY)	(POLY)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1763.3	1763.3	1714.3	1714.3	1612.0	1612.0	1624.0	1640.0	1473.0	1473.0	1654.7	1643.8
K_T	1754.1	1754.1	1705.6	1705.6	1604.0	1604.0	1615.4	1631.2	1464.0	1464.0	1650.0	1639.2
μ	956.6	956.4	1044.6	1043.7	1026.5	1025.4	1029.0	1034.0	927.0	925.0	756.4	730.4
σ	0.270	0.270	0.247	0.247	0.237	0.238	0.238	0.240	0.240	0.240	0.302	0.306
V_P	8.466	8.466	9.268	9.266	9.026	9.023	9.039	9.073	8.471	8.467	7.667	7.601
V_S	4.750	4.750	5.374	5.371	5.297	5.294	5.297	5.310	4.955	4.950	4.086	4.015
V_ϕ	6.449	6.449	6.884	6.884	6.637	6.637	6.655	6.688	6.247	6.247	6.043	6.023
$(\partial K_S/\partial P)_T$	4.59	4.59	4.25	4.25	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	4.60	4.60	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	1.39	1.39	0.57	0.58	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	0.224	0.223	0.407	0.406	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	6.56	6.57	4.77	4.77	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	2.09	2.10	-0.10	-0.09	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	6.56	6.56	6.52	6.52	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.172	-0.172	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial T)_P$	-0.216	-0.216	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial T)_P$	-0.101	-0.101	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial T)_P$	0.16	0.17	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial T)_P$	-0.351	-0.351	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial T)_P$	-0.208	-0.209	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial T)_P$	-0.256	-0.256	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_P}$	5.345	5.349	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	9.93	9.93	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	3.906	3.906	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	3.140	3.140	2.848	2.848	2.759	2.759	2.843	2.871	2.943	2.943	1.947	1.934
γ_{th}	0.982	0.982	1.018	1.018	0.971	0.971	1.006	1.016	1.023	1.023	0.802	0.797
γ_P	1.693	1.694	1.210	1.212	******	******	******	******	******	******	******	******
γ_S	1.107	1.110	0.301	0.304	******	******	******	******	******	******	******	******
γ_{LT}	1.154	1.157	0.382	0.385	******	******	******	******	******	******	******	******
γ_{HT}	1.302	1.305	0.604	0.607	******	******	******	******	******	******	******	******
δ_S	5.437	5.437	******	******	******	******	******	******	******	******	******	******
δ_T	6.872	6.872	******	******	******	******	******	******	******	******	******	******
θ_D	737.6	737.6	810.9	810.5	800.4	800.0	798.6	800.6	740.7	739.9	607.5	597.3
$(\partial K_S/\partial T)_V$	-0.041	-0.041	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	-0.071	-0.071	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	2.80	2.80	3.00	3.00	2.70	2.70	2.50	2.50	1.30	1.30	(0.0)†	(0.0)†
V_S/V_P	0.561	0.561	0.580	0.580	0.587	0.587	0.586	0.585	0.585	0.585	0.533	0.528
V_M	5.286	5.286	5.964	5.961	5.872	5.869	5.873	5.888	5.495	5.489	4.565	4.488
REF: E.C.	309		308		301		301		301		317	
REF: α, Cp	535, (CALC)**		535, (CALC)**		535, (CALC)**		535, (CALC)**		535; (CALC)**		501; 502	

	$ZrSiO_4$ Zircon (Tetra.) PULS (1974)	$ZrSiO_4$ (Metamict) Zircon (Tetra.) PULS (1976)	Al_2SiO_5 (Andalu.) —— (Ortho.) BRIL (1978)	Al_2SiO_5 (Sillima.) —— (Ortho.) BRIL (1978)	$Be_3Al_2Si_6O_{18}$ (Beryl) —— (Hexa.)	$Be_3Al_2Si_6O_{18}$ (Beryl) —— (Hexa.)

REF. E.C.	309		308		301		301		301		317	
REF. α, Cp	535, (CAL)**		535, (CAL)**		535, (CAL)**		535, (CAL)**		535; (CAL)**		501; 602	
	$ZrSiO_4$ zircon (Tetra.) PULS (1974) ROOM		$ZrSiO_4$ (Metamict) zircon (Tetra.) PULS (1976) ROOM		Al_2SiO_5 (Andalu.) —— (Ortho.) BRIL (1978) ROOM		Al_2SiO_5 (Sillima.) —— (Ortho.) BRIL (1978) ROOM		$Be_3Al_2Si_6O_{18}$ (Beryl) —— (Hexa.) *PULS(1973), 298K		$Be_3Al_2Si_6O_{18}$ (Beryl) —— (Hexa.) *PULS(1973), 298K	
ρ_X	4.668		******		3.145		3.241		2.640		2.640	
ρ_B	4.675		4.598		******		******		2.698		2.724	
M	30.55		30.55		20.25		20.25		18.53		18.53	
α	11.80		11.80		18.90		11.00		7.60		7.60	
C_P	5.371		5.371		7.585		7.541		(9.632)**		(9.656)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	2279.8	2253.0	1943.8	1923.9	1619.6	1580.2	1713.7	1670.8	1810.9	1808.3	1765.7	1763.0
K_T	2271.2	2244.6	1937.4	1917.7	1607.9	1569.1	1709.4	1666.7	1808.7	1806.1	1763.6	1761.0
μ	1089.6	982.4	922.4	863.9	990.1	976.2	928.6	891.8	791.5	782.7	787.6	778.1
σ	0.294	0.310	0.295	0.305	0.246	0.244	0.271	0.273	0.309	0.311	0.306	0.308
V_P	8.935	8.730	8.308	8.179	9.668	9.572	9.543	9.394	10.308	10.282	10.168	10.140
Vs	4.828	4.584	4.479	4.335	5.611	5.571	5.353	5.246	5.417	5.387	5.377	5.345
V_ϕ	6.983	6.942	6.502	6.469	7.176	7.088	7.272	7.180	8.193	8.187	8.051	8.045
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	3.91	3.90	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	0.01	-0.02	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	0.358	0.361	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	4.21	4.12	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	-1.47	-1.57	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	6.59	6.55	******	******
$(\partial K_S/\partial T)_P$	-0.207	-0.209	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial T)_P$	-0.235	-0.236	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial T)_P$	-0.093	-0.074	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial T)_P$	-0.09	-0.29	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial T)_P$	-0.345	-0.326	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial T)_P$	-0.178	-0.146	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial T)_P$	-0.277	-0.281	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	2.680	2.649	2.286	2.263	3.039	2.966	1.880	1.833	1.375	1.373	1.340	1.338
γ_{th}	1.071	1.059	0.929	0.919	1.283	1.252	0.771	0.752	0.530	0.529	0.510	0.509
γ_P	******	******	******	******	******	******	******	******	1.071	1.057	******	******
γ_S	******	******	******	******	******	******	******	******	-0.159	-0.192	******	******
γ_{LT}	******	******	******	******	******	******	******	******	-0.075	-0.108	******	******
γ_{HT}	******	******	******	******	******	******	******	******	0.251	0.224	******	******
δ_S	7.713	7.873	******	******	******	******	******	******	******	******	******	******
δ_T	8.781	8.928	******	******	******	******	******	******	******	******	******	******
θ_D	724.6	689.4	668.7	647.9	841.4	835.3	813.2	797.2	801.2	796.9	797.6	792.9
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	(0.0)†	(0.0)†	8.00	8.00	2.00	2.00	-6.00	-6.00	-6.00	-6.00
V_S/V_P	0.540	0.525	0.539	0.530	0.580	0.582	0.561	0.558	0.525	0.524	0.529	0.527
V_m	5.388	5.127	5.000	4.845	6.226	6.181	5.957	5.840	6.058	6.025	6.011	5.976
REF. E.C:	319+318		316		324		324		329		329	
REF. α, Cp	501, 602		501, 602		535, 602		535, 602		535; (CAL)**		535; (CAL)**	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	$(KAlSiO_4)(NaAlSi$ $-O_4)_3$ (Nepheline) — (Hexa.) *PULS (1975), 298K		Ba_2Si_2T — (Tet RES) (19 ROOM		$Pb_5(SiO_4)(VO_4)_2$ — (Hexa.) PULS (1977) ROOM	
ρ_x	******		4.450		7.020	
ρ_B	2.571		******		******	
M	20.87		38.97		67.90	
α	20.90		29.90		******	
C_p	(7.568)**		(5.855)**		******	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	493.0	488.0	569.0	547.0	484.0	478.0
K_T	491.4	486.4	565.7	543.9	******	******
μ	332.0	321.0	421.0	406.0	234.0	232.0
σ	0.225	0.230	0.203	0.202	0.292	0.291
V_P	6.033	5.969	5.040	4.945	3.367	3.349
V_S	3.594	3.533	3.076	3.021	1.826	1.818
V_ϕ	4.379	4.357	3.576	3.506	2.626	2.609
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.038	-0.025	-0.164	-0.015	******	******
$(\partial K_T/\partial T)_P$	-0.043	-0.030	-0.174	-0.025	******	******
$(\partial \mu/\partial T)_P$	0.004	0.066	-0.070	-0.059	******	******
$(\partial \sigma/\partial T)_P$	-2.00	-5.68	-2.90	2.83	******	******
$(\partial V_P/\partial T)_P$	-0.042	0.268	-0.498	-0.138	******	******
$(\partial V_S/\partial T)_P$	0.059	0.400	-0.210	-0.174	******	******
$(\partial V_\phi/\partial T)_P$	-0.123	-0.066	-0.462	0.006	******	******
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	1.027	1.017	1.691	1.626	******	******
γ_{th}	0.530	0.524	0.653	0.628	******	******
γ_P	******	******	******	******	******	******
γ_S	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******
δ_S	3.688	2.451	9.640	0.893	******	******
δ_T	4.216	2.974	10.289	1.517	******	******
θ_D	497.7	489.6	414.3	406.9	240.4	239.3
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	(0.0)†	(0.0)†	******	******
V_S/V_P	0.596	0.592	0.610	0.611	0.542	0.543
V_M	3.978	3.914	3.397	3.336	2.037	2.028
REF: K_S; C_{ij}	303		310		326	
REF: α; C_p	303; (CAL)**		310; (CAL)**		***, ***	

V_P	6.396	6.392	6.810	6.811	6.342	6.343
V_m	3.978	3.914	3.397	3.336	2.037	2.028
REF: E.C.	303		310		326	
REF: α; Cp	303; (CAL)**		310; (CAL)**		***, ***	

D. Nonsilicate Oxides Series

	$FeBO_3$ —— (Trigonal) BRIL (1976) ROOM		$CaCO_3$ Calcite (Trigonal) PULS (1968) 298 K		$CaCO_3$ Calcite (Trigonal) PULS (1972) 298 K		$CaCO_3$ Calcite (Trigonal) PULS (1972) ROOM		$CaMg(CO_3)_2$ Calcite (Trigonal) PULS (1972) ROOM		$MgCO_3$ Calcite (Trigonal) PULS (1972) ROOM	
ρ_X	4.280		2.712		2.712		2.712		2.866		3.009	
ρ_B	******		******		******		******		******		******	
M	22.93		20.02		20.02		20.02		18.44		16.86	
α	******		16.52		16.52		16.52		27.80		32.00	
C_P	******		8.183		8.183		8.183		8.458		8.963	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	2235.0	2199.0	761.2	733.0	746.8	715.5	767.9	739.9	948.0	902.3	1138.0	1099.0
K_T	******	******	759.1	731.0	744.7	713.6	765.7	737.9	939.5	894.6	1123.4	1085.4
μ	1151.0	1110.0	317.4	266.1	318.1	268.9	322.8	274.6	457.2	396.6	679.3	636.4
σ	0.280	0.284	0.317	0.338	0.314	0.333	0.316	0.335	0.292	0.308	0.251	0.257
V_P	9.385	9.271	6.609	6.333	6.571	6.293	6.647	6.386	7.372	7.066	8.241	8.045
V_S	5.186	5.093	3.421	3.132	3.425	3.149	3.450	3.182	3.994	3.720	4.751	4.599
V_ϕ	7.226	7.168	5.298	5.199	5.248	5.136	5.321	5.223	5.751	5.611	6.150	6.043
$(\partial K_S/\partial P)_T$	******	******	(5.38)	(5.37)	5.38	5.37	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	5.43	5.42	5.43	5.42	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	(-1.50)	(-1.96)	-1.50	-1.96	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	1.897	2.124	1.948	2.197	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	5.07	3.69	5.06	3.67	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	-10.35	-13.69	-10.39	-13.69	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	15.23	15.50	15.38	15.69	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	******	******	-0.285	-0.246	(-0.285)	(-0.246)	******	******	******	******	******	******
$(\partial K_T/\partial T)_P$	******	******	-0.295	-0.255	-0.295	-0.255	******	******	******	******	******	******
$(\partial \mu/\partial T)_P$	******	******	-0.097	-0.076	(-0.097)	(-0.076)	******	******	******	******	******	******
$(\partial \sigma/\partial T)_P$	******	******	-1.13	-0.74	-1.27	-0.93	******	******	******	******	******	******
$(\partial V_P/\partial T)_P$	******	******	-1.102	-0.959	-1.109	-0.966	******	******	******	******	******	******
$(\partial V_S/\partial T)_P$	******	******	-0.493	-0.420	-0.493	-0.418	******	******	******	******	******	******
$(\partial V_\phi/\partial T)_P$	******	******	-0.950	-0.831	-0.960	-0.842	******	******	******	******	******	******
$(\partial P/\partial T)_{V_P}$	******	******	21.755	25.958	21.910	26.330	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	-4.77	-3.07	-4.74	-3.05	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	6.235	5.359	6.241	5.365	******	******	******	******	******	******
$(\partial P/\partial T)_P$	******	******	1.254	1.208	1.230	1.179	1.265	1.219	2.612	2.487	3.595	3.473
γ_{th}	******	******	0.567	0.546	0.556	0.533	0.572	0.551	1.087	1.035	1.350	1.304
γ_P	******	******	0.915	0.760	0.907	0.749	******	******	******	******	******	******
γ_S	******	******	-1.964	-2.862	-1.926	-2.770	******	******	******	******	******	******
γ_{LT}	******	******	-1.777	-2.655	-1.739	-2.562	******	******	******	******	******	******
γ_{HT}	******	******	-1.004	-1.655	-0.982	-1.597	******	******	******	******	******	******
δ_S	******	******	22.704	20.340	23.141	20.837	******	******	******	******	******	******
δ_T	******	******	23.536	21.141	23.958	21.619	******	******	******	******	******	******
θ_D	830.2	815.7	494.5	454.0	494.8	456.1	498.6	461.0	602.5	562.3	746.8	723.3
$(\partial K_S/\partial T)_V$	******	******	-0.221	-0.184	-0.222	-0.185	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	-0.227	-0.190	-0.228	-0.191	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	******	******	2.60	2.60	2.60	2.60	2.60	2.60	7.50	7.50	8.30	8.30
V_S/V_P	0.553	0.549	0.518	0.495	0.521	0.500	0.519	0.498	0.542	0.526	0.577	0.572
V_m	5.778	5.677	3.830	3.516	3.832	3.532	3.861	3.570	4.457	4.160	5.276	5.110
REF: E.C.	431		413+415 (414)		414 (413+415)		429		429		429	
REF. α; Cp	***; ***		413; 603		413; 603		413; 603		519; 603		519; 603	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	$NaMgAl(C_2O_4)_3 9H_2O$ (Trigonal) PULS (1979) ROOM		Ba(— OP 293	H_2O a.) 1978)	$MgAl_2O_4$ Spinel (Cubic) PULS (1966) ROOM		$MgAl_2O_4$ Spinel (Cubic) *PULS (1973) 298 K		$MgAl_2O_4$ Spinel (Cubic) OPTI (1975) 298 K		$MgO \cdot 2.61Al_2O_3$ Spinel (Cubic) *PULS (1967) 298 K	
ρ_x	1.620		3.17)		3.581		3.582		3.582		******	
ρ_B	******		******)		******		3.578		3.578		3.619	
ρ	10.43		24.7)		20.32		20.32		20.32		20.36	
ρ	******		106.6)		20.79		20.79		20.79		20.79 ($MgAl_2O_4$)	
c_p	******		(9.961)**		8.152		8.152		8.152		(8.237)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	225.8	220.5	275.5	257.2	1950.0	1950.0	1974.3	1974.3	1969.0	1969.0	2020.0	2020.0
K_T	******	******	267.5	250.3	1933.3	1933.3	1957.1	1957.1	1951.9	1951.9	2002.4	2002.4
μ	47.8	27.4	119.6	117.5	1072.0	974.0	1084.2	985.2	1080.0	980.6	1153.5	1071.8
σ	0.401	0.440	0.310	0.302	0.268	0.286	0.268	0.286	0.268	0.286	0.260	0.275
V_P	4.228	3.983	3.699	3.608	9.714	9.525	9.776	9.586	9.760	9.569	9.915	9.762
V_S	1.718	1.301	1.939	1.922	5.471	5.215	5.504	5.247	5.494	5.235	5.645	5.442
V_ϕ	3.733	3.689	2.944	2.845	7.379	7.379	7.428	7.428	7.418	7.418	7.471	7.471
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	4.89	4.89	(4.89)	(4.89)	4.23	4.23
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	4.89	4.89	4.90	4.90	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	0.51	0.40	(0.51)	(0.40)	0.69	0.68
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	0.394	0.379	0.395	0.380	0.302	0.281
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	5.46	5.46	5.47	5.47	4.71	4.83
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	-0.12	-0.27	-0.12	-0.27	0.28	0.35
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	7.30	7.30	7.31	7.31	5.97	5.97
$(\partial K_S/\partial T)_P$	******	******	-0.172	-0.176	******	******	-0.154	-0.154	-0.157	-0.157	******	******
$(\partial K_T/\partial T)_P$	******	******	-0.193	-0.194	******	******	-0.219	-0.219	-0.222	-0.222	******	******
$(\partial \mu/\partial T)_P$	******	******	-0.189	-0.186	******	******	-0.092	-0.099	-0.094	-0.097	******	******
$(\partial \sigma/\partial T)_P$	******	******	15.78	15.50	******	******	0.14	0.41	0.14	0.35	******	******
$(\partial V_P/\partial T)_P$	******	******	-1.604	-1.657	******	******	-0.294	-0.317	-0.302	-0.318	******	******
$(\partial V_S/\partial T)_P$	******	******	-1.426	-1.421	******	******	-0.176	-0.209	-0.181	-0.204	******	******
$(\partial V_\phi/\partial T)_P$	******	******	-0.762	-0.822	******	******	-0.212	-0.212	-0.219	-0.219	******	******
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	5.377	5.796	5.528	5.811	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	-77.93	******	-76.71	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	2.905	2.905	2.990	2.990	******	******
$(\partial P/\partial T)_P$	******	******	2.852	2.668	4.019	4.019	4.069	4.069	4.058	4.058	4.163	4.163
γ_{th}	******	******	0.927	0.866	1.389	1.389	1.407	1.407	1.403	1.403	1.409	1.409
γ_P	******	******	******	******	******	******	1.426	1.449	1.427	1.450	1.284	1.324
γ_S	******	******	******	******	******	******	0.291	0.234	0.292	0.234	0.432	0.464
γ_{LT}	******	******	******	******	******	******	0.384	0.326	0.385	0.326	0.504	0.532
γ_{HT}	******	******	******	******	******	******	0.670	0.639	0.670	0.640	0.716	0.751
δ_S	******	******	5.857	6.419	******	******	3.747	3.747	3.835	3.835	******	******
δ_T	******	******	6.758	7.261	******	******	5.383	5.383	5.467	5.467	******	******
θ_D	262.8	200.0	275.2	272.5	858.0	819.7	863.0	824.5	861.4	822.6	887.1	856.6
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	0.037	0.037	0.034	0.034	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	-0.020	-0.020	-0.023	-0.023	******	******
$(\partial a/\partial T)_P$	******	******	(0.0)†	(0.0)†	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
V_B/V_P	0.406	0.326	0.524	0.533	0.563	0.548	0.563	0.547	0.563	0.547	0.569	0.557
V_M	1.945	1.480	2.169	2.148	6.087	5.815	6.124	5.851	6.112	5.837	6.275	6.059
REF. E.C.	442		425		433		408		434 (408)		435	
REF. α, Cp	***; ***		425; (CAL)**		532; 602		532; 602		532; 602		532; (CAL)**	

REF. α, Cp	442 ***; ***	429 425; (CAL)**	433 532; 602	408 532; 602	434(408) 532; 602	435 532; (CAL)**

	$MgO{\cdot}3.5Al_2O_3$ Spinel (Cubic) PULS (1960) ROOM		$Mg_{.75}Fe_{.25}Al_{1.5}O_4$ Spinel (Cubic) PULS(1972), 29.1K		$FeAl_2O_4$ Spinel (Cubic) PULS (1972) ROOM		$BeAl_2O_4$ Olivine (Orth.) PULS (1975) ROOM		$AlPO_4$ α-Quartz(Trigonal) *PULS (1976) 298 K		$KAl(SO_4)_2{\cdot}12H_2O$ (Cubic) PULS (1978) ROOM	
ρ_x	******		3.836		4.280		3.720		2.618		1.753	
ρ_B	3.630		3.826		******		******		2.620		******	
M	20.37		21.80		24.83		18.14		20.32		9.88	
α	20.79($MgAl_2O_4$)		20.20		18.40		16.50		41.50		42.30	
C_p	(8.210)**		7.796		7.363		8.352		7.629		13.747	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	2026.3	2026.3	1987.0	1987.0	2103.0	2103.0	2395.9	2391.5	293.0	289.9	150.5	150.5
K_T	2008.6	2008.6	1970.9	1970.9	2088.8	2088.8	2380.9	2376.6	290.8	287.7	150.0	150.0
μ	1164.2	1083.1	963.5	854.0	839.5	711.0	1585.8	1575.4	330.2	305.9	80.6	80.2
σ	0.259	0.273	0.291	0.312	0.324	0.348	0.229	0.230	0.090	0.110	0.273	0.274
V_P	9.929	9.778	9.247	9.039	8.677	8.443	11.011	10.989	5.290	5.161	3.836	3.832
V_S	5.663	5.462	5.018	4.725	4.429	4.076	6.529	6.508	3.550	3.417	2.144	2.139
V_ϕ	7.471	7.471	7.207	7.207	7.010	7.010	8.025	8.018	3.344	3.326	2.930	2.930
$(\partial K_S/\partial P)_T$	******	******	4.92	4.92	******	******	******	******	******	******	7.01	7.01
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	6.92	6.92
$(\partial \mu/\partial P)_T$	******	******	0.27	0.11	******	******	******	******	******	******	1.44	1.31
$(\partial \sigma/\partial P)_T$	******	******	0.395	0.386	******	******	******	******	******	******	5.523	5.808
$(\partial V_P/\partial P)_T$	******	******	5.12	5.03	******	******	******	******	******	******	53.69	52.45
$(\partial V_S/\partial P)_T$	******	******	-0.57	-0.89	******	******	******	******	******	******	12.08	10.38
$(\partial V_\phi/\partial P)_T$	******	******	7.09	7.09	******	******	******	******	******	******	58.50	58.50
$(\partial K_S/\partial T)_P$	******	******	******	******	******	******	******	******	-0.071	-0.070	0.139	0.139
$(\partial K_T/\partial T)_P$	******	******	******	******	******	******	******	******	-0.080	-0.079	0.135	0.135
$(\partial \mu/\partial T)_P$	******	******	******	******	******	******	******	******	-0.023	-0.018	-0.084	-0.084
$(\partial \sigma/\partial T)_P$	******	******	******	******	******	******	******	******	-5.14	-5.25	37.90	37.97
$(\partial V_P/\partial T)_P$	******	******	******	******	******	******	******	******	-0.256	-0.239	0.287	0.283
$(\partial V_S/\partial T)_P$	******	******	******	******	******	******	******	******	-0.049	-0.029	-1.070	-1.077
$(\partial V_\phi/\partial T)_P$	******	******	******	******	******	******	******	******	-0.335	-0.331	1.419	1.419
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	-0.534	-0.540
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	8.85	10.38
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	-2.426	-2.426
$(\partial P/\partial T)_\rho$	4.176	4.176	3.981	3.981	3.843	3.843	3.928	3.921	1.207	1.194	0.634	0.634
γ_{th}	1.414	1.414	1.346	1.346	1.228	1.228	1.272	1.270	0.608	0.602	0.264	0.264
γ_P	******	******	1.424	1.431	******	******	******	******	******	******	2.433	2.386
γ_S	******	******	0.109	-0.040	******	******	******	******	******	******	1.179	1.061
γ_{LT}	******	******	0.207	0.058	******	******	******	******	******	******	1.279	1.167
γ_{HT}	******	******	0.548	0.450	******	******	******	******	******	******	1.597	1.503
δ_S	******	******	******	******	******	******	******	******	5.831	5.793	******	******
δ_T	******	******	******	******	******	******	******	******	6.631	6.585	******	******
θ_D	890.5	860.4	788.2	744.0	694.3	641.0	1072.1	1068.7	492.5	474.9	337.1	336.5
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	0.181	0.181
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	0.179	0.179
$(\partial \alpha/\partial T)_P$	1.20	1.20	(0.0)†	(0.0)†	(0.0)†	(0.0)†	4.40	4.40	4.50	4.50	17.10	17.10
V_S/V_P	0.570	0.559	0.543	0.523	0.510	0.483	0.593	0.592	0.671	0.662	0.559	0.558
V_m	6.294	6.081	5.599	5.285	4.962	4.581	7.231	7.208	3.878	3.739	2.386	2.381
REF. E.C.	438		441		441		440		409		428+423	
REF: α, Cp	532; (CAL)**		532+535; 602+603		535; 603		519; 602		409; 603		423; 602	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	$NH_4Al(SO_4)_2 \cdot 12H_2O$ —— (Cubic) PULS(1978), ROOM		$CsAl(SO_4)_2 12H_2O$ —— (Cubic) PULS (1978) ROOM		$CH_3NH_3Al(SO_4)_2 \cdot 12H_2O$ PULS (1978) ROOM		$Cs_2S_2O_6$ —— (Hexa.) OPTI (1978) 293 K		$NaClO_3$ —— (Cubic) RESO (1974) ROOM		$NaClO_3$ —— (Cubic) *PULS (1975) 298 K	
ρ_X	1.642		1.999		1.589		3.503		2.482		2.482	
ρ_B	******		******		******		******		******		******	
M	8.72		11.84		8.50		42.59		21.29		21.29	
α	28.80		84.00		81.30		138.20		132.90		132.90	
C_P	(26.757)**		(20.148)**		(28.036)**		(5.994)**		(11.618)**		(11.601)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	156.7	156.7	206.4	206.4	214.5	214.5	149.7	-140.1	258.9	258.9	255.8	255.8
K_T	156.6	156.6	204.2	204.2	212.5	212.5	143.8	134.9	247.1	247.1	244.3	244.3
μ	77.3	77.1	81.9	81.6	59.7	59.6	76.6	75.5	135.6	133.4	138.0	135.3
σ	0.288	0.289	0.325	0.325	0.373	0.373	0.281	0.272	0.277	0.280	0.271	0.275
V_P	3.978	3.976	3.973	3.972	4.303	4.302	2.681	2.621	4.209	4.195	4.209	4.192
V_S	2.170	2.167	2.024	2.023	1.939	1.937	1.479	1.468	2.337	2.318	2.358	2.335
V_ϕ	3.089	3.089	3.213	3.213	3.674	3.674	2.067	2.000	3.230	3.230	3.210	3.210
$(\partial K_S/\partial P)_T$	1.48	1.48	5.97	5.97	6.03	6.03	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	1.47	1.47	5.99	5.99	6.05	6.05	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	0.72	0.65	0.63	0.61	0.12	0.13	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	0.028	0.189	3.285	3.316	3.037	3.025	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	5.96	5.26	33.18	33.03	35.20	35.25	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	3.15	2.19	2.85	2.63	-2.56	-2.49	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	4.72	4.72	38.63	38.63	43.02	43.02	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	0.021	0.021	-0.124	-0.124	-0.140	-0.140	-0.119	-0.102	******	******	-0.434	-0.434
$(\partial K_T/\partial T)_P$	0.020	0.020	-0.136	-0.136	-0.146	-0.146	-0.133	-0.115	******	******	-0.466	-0.466
$(\partial \mu/\partial T)_P$	-0.058	-0.058	-0.032	-0.032	-0.010	-0.010	-0.071	-0.068	******	******	-0.087	-0.083
$(\partial \sigma/\partial T)_P$	16.07	16.13	-3.19	-3.20	-5.70	-5.63	2.40	3.40	******	******	-20.66	-20.70
$(\partial V_P/\partial T)_P$	-0.370	-0.372	-0.890	-0.889	-0.946	-0.949	-0.950	-0.872	******	******	-2.352	-2.339
$(\partial V_S/\partial T)_P$	-0.780	-0.784	-0.317	-0.316	-0.080	-0.085	-0.580	-0.564	******	******	-0.587	-0.561
$(\partial V_\phi/\partial T)_P$	0.254	0.254	-0.834	-0.834	-1.051	-1.051	-0.678	-0.592	******	******	-2.510	-2.510
$(\partial P/\partial T)_{V_P}$	6.205	7.073	2.681	2.691	2.688	2.694	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	24.78	35.86	11.10	12.02	-3.13	-3.42	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	-5.388	-5.388	2.159	2.159	2.444	2.444	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	0.451	0.451	1.715	1.715	1.727	1.727	1.987	1.864	3.285	3.285	3.247	3.247
γ_{th}	0.103	0.103	0.430	0.430	0.392	0.392	0.985	0.922	1.193	1.193	1.181	1.181
γ_P	0.568	0.540	2.038	2.031	2.071	2.074	******	******	******	******	******	******
γ_S	0.560	0.491	0.621	0.598	0.052	0.060	******	******	******	******	******	******
γ_{LT}	0.561	0.495	0.709	0.687	0.141	0.148	******	******	******	******	******	******
γ_{HT}	0.563	0.508	1.094	1.076	0.725	0.731	******	******	******	******	******	******
δ_S	-4.720	-4.720	7.181	7.181	8.040	8.040	5.749	5.285	******	******	12.766	12.766
δ_T	-4.370	-4.370	7.926	7.926	8.427	8.427	6.695	6.173	******	******	14.349	14.349
θ_D	348.7	348.3	315.2	315.0	314.3	314.0	180.2	178.7	319.7	317.3	322.3	319.3
$(\partial K_S/\partial T)_V$	0.027	0.027	-0.026	-0.026	-0.035	-0.035	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	0.026	0.026	-0.033	-0.033	-0.041	-0.041	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	23.10	23.10	21.00	21.00	(0.0)†	(0.0)†	(0.0)†	(0.0)†	17.90	17.90	17.90	17.90
V_S/V_P	0.546	0.545	0.509	0.509	0.451	0.450	0.552	0.560	0.555	0.553	0.560	0.557
V_M	2.420	2.417	2.268	2.267	2.186	2.184	1.648	1.634	2.603	2.583	2.624	2.600
REF. E.C.	423+428		423+428		423+428		429		407		437	
REF. α, C_P	423; (CAL)**		423, (CAL)**		423; (CAL)**		425; (CAL)**		519; (CAL)**		519; (CAL)**	

	$LiClO_4 \cdot 3H_2O$ —— (Hexa.) OPTI (1978) 293 K		$LiClO_4 \cdot 3H_2O$ —— (Hexa.) OPTI (1978) 293 K		$SrTiO_3$ Porovskite (Cubic) PULS (1963,1971) 298 K		$Y_3Fe_5O_{12}$ Garnet (Cubic) PULS (1976) 293 K		$Nd_3Ga_5O_{12}$ Garnet (Cubic) PULS (1976) 293 K		$Sm_3Ga_5O_{12}$ Garnet (Cubic) PULS (1976) 293 K	
ρ_x	1.898		1.967		5 116		5.188		6.614		6.857	
ρ_B	******		******		***.***		******		******		******	
M	10.70		11.09		3[illegible].70		36.90		48.66		49.59	
α	186.40		185.70		2[illegible].70		24.40		20.10		19.20	
C_P	(22.729)**		(21.964)**		5.166		(5.733)**		(4.472)**		(4.389)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	184.9	176.2	183.8	175.0	1741.0	1741.0	1639.7	1639.7	1669.7	1669.7	1692.7	1692.7
K_T	176.9	169.0	176.1	168.0	1720.3	1720.3	1623.7	1623.7	1658.4	1658.4	1682.2	1682.2
μ	98.0	94.2	98.2	94.4	1167.8	1165.0	783.3	783.3	835.4	835.4	850.6	850.6
σ	0.275	0.273	0.273	0.271	0.226	0.226	0.294	0.294	0.286	0.286	0.285	0.285
V_P	4.077	3.987	4.000	3.911	8.029	8.025	7.193	7.193	6.487	6.487	6.421	6.421
V_S	2.272	2.227	2.234	2.190	4.778	4.772	3.886	3.886	3.554	3.554	3.522	3.522
V_ϕ	3.121	3.047	3.057	2.983	5.834	5.834	5.622	5.622	5.024	5.024	4.968	4.968
$(\partial K_S/\partial P)_T$	******	******	******	******	5.74	5.74	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	5.81	5.81	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	2.66	2.77	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	0.229	0.205	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	8.97	9.17	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	4.04	4.29	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	7.93	7.93	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.217	-0.205	-0.218	-0.206	-0.377	-0.377	-0.191	-0.191	-0.184	-0.184	-0.152	-0.152
$(\partial K_T/\partial T)_P$	-0.233	-0.220	-0.234	-0.220	-0.474	-0.474	-0.242	-0.242	-0.220	-0.220	-0.186	-0.186
$(\partial \mu/\partial T)_P$	-0.115	-0.109	-0.112	-0.105	-0.251	-0.259	-0.111	-0.111	-0.095	-0.095	-0.052	-0.053
$(\partial \sigma/\partial T)_P$	-0.10	-0.25	-0.85	-1.18	-0.04	0.13	0.45	0.44	0.07	0.07	-0.53	-0.52
$(\partial V_P/\partial T)_P$	-2.012	-1.941	-1.968	-1.888	-0.767	-0.781	-0.367	-0.367	-0.296	-0.297	-0.191	-0.192
$(\partial V_S/\partial T)_P$	-1.118	-1.076	-1.070	-1.019	-0.454	-0.472	-0.228	-0.227	-0.166	-0.167	-0.075	-0.076
$(\partial V_\phi/\partial T)_P$	-1.543	-1.491	-1.532	-1.478	-0.560	-0.560	-0.259	-0.259	-0.226	-0.226	-0.176	-0.176
$(\partial P/\partial T)_{V_P}$	******	******	******	******	8.554	8.517	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	11.24	10.99	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	7.060	7.060	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	3.298	3.150	3.270	3.119	4.249	4.249	3.962	3.962	3.333	3.333	3.230	3.230
γ_{th}	0.799	0.761	0.790	0.752	1.627	1.627	1.345	1.345	1.135	1.135	1.080	1.080
γ_P	******	******	******	******	2.255	2.298	******	******	******	******	******	******
γ_S	******	******	******	******	1.790	1.881	******	******	******	******	******	******
γ_{LT}	******	******	******	******	1.834	1.920	******	******	******	******	******	******
γ_{HT}	******	******	******	******	1.945	2.020	******	******	******	******	******	******
δ_S	6.307	6.252	6.398	6.335	8.767	8.767	4.781	4.781	5.471	5.471	4.692	4.692
δ_T	7.071	6.982	7.155	7.057	11.156	11.156	6.113	6.113	6.598	6.598	5.766	5.766
θ_D	357.4	350.3	351.4	344.4	689.6	688.8	567.0	567.0	512.2	512.2	510.5	510.5
$(\partial K_S/\partial T)_V$	******	******	******	******	-0.161	-0.161	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	-0.227	-0.227	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	(0.0)†	(0.0)†	4.00	4.00	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†
V_S/V_P	0.557	0.559	0.559	0.560	0.595	0.595	0.540	0.540	0.548	0.548	0.549	0.549
V_m	2.530	2.480	2.487	2.438	5.290	5.283	4.337	4.337	3.963	3.962	3.927	3.926
REF. E.C.	425		425		404+405		427		427		427	
REF: α, Cp	425; (CAL)**		425; (CAL)**		519, 602		427; (CAL)**		427; (CAL)**		427; (CAL)**	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	$Gd_3Ga_5O_{12}$ Garnet (Cubic) PULS (1970) 298 K		$Gd_3Ga_5O_{12}$ Garnet (Cubic) PULS (1972) 293 K		$Pb_5Ge_3O_{11}$ — (Trigonal) RESO (1972) ROOM		$Pb_5Ge_3O_{11}$ — (Trigonal) *PULS (1975) 298 K		$Bi_{12}GeO_{20}$ — (Cubic) RESO (1978) 295 K		$NaBrO_3$ — (Cubic) *PULS (1975) 298 K	
ρ_X	7.094		7.102		7.326		7.326		9.200		3.339	
ρ_B	7.085		******		7.330		7.390		******		******	
M	50.61		50.61		75.24		75.24		87.89		30.18	
α	10.10		10.10		23.30		23.30		40.50		117.80	
C_P	(4.274)**		(4.273)**		(3.225)**		(3.226)**		(2.763)**		(8.233)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	1719.0	1719.0	1730.2	1730.2	394.4	392.9	395.1	393.1	498.2	498.2	299.6	299.6
K_T	1716.0	1716.0	1727.2	1727.2	393.3	391.8	394.0	392.0	493.4	493.4	286.6	286.6
μ	882.5	882.1	884.1	883.8	239.1	234.0	238.2	233.9	349.5	329.1	166.8	165.6
σ	0.281	0.281	0.282	0.282	0.248	0.252	0.249	0.252	0.216	0.229	0.265	0.267
V_P	6.393	6.392	6.400	6.400	3.119	3.101	3.105	3.089	3.237	3.191	3.954	3.948
V_S	3.529	3.528	3.528	3.528	1.806	1.787	1.795	1.779	1.949	1.891	2.235	2.227
V_ϕ	4.926	4.926	4.936	4.936	2.320	2.315	2.312	2.306	2.327	2.327	2.995	2.995
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	******	******	-0.179	-0.179	******	******	-0.136	-0.133	-0.199	-0.199	-0.199	-0.199
$(\partial K_T/\partial T)_P$	******	******	-0.189	-0.189	******	******	-0.139	-0.137	-0.213	-0.213	-0.241	-0.241
$(\partial \mu/\partial T)_P$	******	******	-0.094	-0.094	******	******	-0.044	-0.042	-0.079	-0.073	-0.081	-0.079
$(\partial \sigma/\partial T)_P$	******	******	0.04	0.05	******	******	-3.31	-3.29	-3.96	-3.90	-3.59	-3.76
$(\partial V_P/\partial T)_P$	******	******	-0.302	-0.303	******	******	-0.388	-0.380	-0.446	-0.441	-0.930	-0.921
$(\partial V_S/\partial T)_P$	******	******	-0.169	-0.170	******	******	-0.146	-0.140	-0.182	-0.173	-0.410	-0.397
$(\partial V_\phi/\partial T)_P$	******	******	-0.231	-0.231	******	******	-0.370	-0.365	-0.417	-0.417	-0.820	-0.820
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_\rho$	1.733	1.733	1.744	1.744	0.916	0.913	0.918	0.913	1.998	1.998	3.376	3.376
γ_{th}	0.573	0.573	0.576	0.576	0.389	0.387	0.386	0.384	0.794	0.794	1.284	1.284
γ_P	******	******	******	******	******	******	******	******	******	******	******	******
γ_S	******	******	******	******	******	******	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	14.751	14.575	9.858	9.858	5.650	5.650
δ_S	******	******	10.255	10.255	******	******	15.137	14.959	10.644	10.644	7.128	7.128
δ_T	******	******	10.830	10.830	******	******	231.2	229.2	255.4	248.2	300.0	299.0
θ_D	513.4	513.3	513.7	513.6	231.9	229.5	******	******	******	******	******	******
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	8.00	8.00
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	0.565	0.564
V_S/V_P	0.552	0.552	0.551	0.551	0.579	0.576	0.578	0.576	0.602	0.593	2.486	2.477
V_M	3.933	3.932	3.932	3.931	2.005	1.984	1.993	1.976	2.155	2.095		
REF: E.C.	422		426		444		403		445		437	
REF: α, Cp	426, (CAL)**		426; (CAL)**		514, (CAL)**		514, (CAL)**		445; (CAL)**		519; (CAL)**	

	$NaBrO_3$ — (Cubic)	$LiNbO_3$ — (Trigonal)	$LiNbO_3$ — (Trigonal)	$K_{2.85}Li_{1.55}$ $-Nb_{5.11}O_{15}$	$KPb_2Nb_5O_{17}$ — (Ortho.)	$CaMoO_4$ — (Tetra.)

REF: E.C.	422	426	444	403	445	437
REF: α, Cp	426, (CAL)**	426; (CAL)**	514, (CAL)**	514, (CAL)**	445; (CAL)**	519; (CAL)**

	$NaBrO_3$ — (Cubic) *PULS (1975) 300 K		$LiNbO_3$ — (Trigonal) *PULS (1971) 298 K		$LiNbO_3$ — (Trigonal) RESO (1971) 293 K		$K_{2.85}Li_{1.55}Nb_{5.11}O_{15}$ — (Tetra.) RESO(1978), ROOM		$KPb_2Nb_5O_{12}$ — (Ortho.) RESO (1975) ROOM		$CaMoO_4$ — (Tetra.) PULS (1967) 298 K	
ρ_X	3.339		4.640		4.640		4.260		6.140		4.255	
ρ_B	******		******		******		******		******		******	
M	30.18		29.57		29.57		34.15		55.50		33.33	
α	117.80		38.30		38.30		******		******		26.90	
C_P	(8.229)**		(7.173)**		(7.184)**		******		******		(5.861)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	297.1	297.1	1173.8	1165.6	1149.0	1140.1	972.3	907.4	770.0	765.0	801.7	795.4
K_T	284.3	284.3	1155.9	1147.9	1131.8	1123.2	******	******	******	******	796.1	789.9
μ	166.9	165.6	668.6	659.7	662.0	654.2	628.7	607.4	443.0	419.0	400.0	368.7
σ	0.263	0.265	0.261	0.262	0.258	0.259	0.234	0.226	0.259	0.268	0.286	0.290
V_P	3.945	3.938	6.672	6.639	6.617	6.586	6.519	6.349	4.708	4.643	5.601	5.556
V_S	2.236	2.227	3.796	3.771	3.777	3.755	3.842	3.776	2.686	2.612	3.066	3.022
V_ϕ	2.983	2.983	5.030	5.012	4.976	4.957	4.777	4.615	3.541	3.530	4.341	4.324
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.192	-0.192	-0.206	-0.208	******	******	******	******	******	******	******	******
$(\partial K_T/\partial T)_P$	-0.232	-0.232	-0.263	-0.264	******	******	******	******	******	******	******	******
$(\partial \mu/\partial T)_P$	-0.111	-0.107	-0.116	-0.116	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial T)_P$	0.41	0.04	-0.05	-0.05	******	******	******	******	******	******	******	******
$(\partial V_P/\partial T)_P$	-1.056	-1.039	-0.455	-0.461	******	******	******	******	******	******	******	******
$(\partial V_S/\partial T)_P$	-0.612	-0.589	-0.256	-0.259	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial T)_P$	-0.786	-0.786	-0.346	-0.351	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_P$	3.349	3.349	4.427	4.396	4.335	4.302	******	******	******	******	2.142	2.125
γ_{th}	1.274	1.274	1.351	1.341	1.320	1.310	******	******	******	******	0.865	0.858
γ_P	******	******	******	******	******	******	******	******	******	******	******	******
γ_S	******	******	******	******	******	******	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	******	******	******	******	******	******
δ_S	5.472	5.472	4.589	4.655	******	******	******	******	******	******	******	******
δ_T	6.939	6.939	5.950	6.007	******	******	******	******	******	******	******	******
θ_D	300.0	298.9	572.2	568.5	569.2	565.9	534.8	525.2	360.3	350.8	432.8	426.8
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	8.00	8.00	0.30	0.30	0.30	0.30	******	******	******	******	5.50	5.50
V_S/V_P	0.567	0.565	0.569	0.568	0.571	0.570	0.589	0.595	0.571	0.563	0.547	0.544
V_M	2.486	2.477	4.220	4.192	4.198	4.173	4.257	4.181	2.985	2.907	3.419	3.372
REF: E.C.	437		436		410		401		443		402	
REF. α; Cp	519, (CAL)**		436, (CAL)**		436; (CAL)**		*** ; ***		*** ; ***		519; 602	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	$CaMoO_4$ — (Tetra.) REF 30 (1968) 293 K		$SrMoO_4$ — (Tetra.) PULS (1972) 298 K		$SrMoO_4$ — (Tetra.) PULS (1973) 29 K		$PbMoO_4$ — (Tetra.) PULS (1971) ROOM		$PbMoO_4$ — (Tetra.) PULS (1975) ROOM		$LiIO_3$ — (Hexa.) PULS (1970) 293 K	
ρ_X	4.255		4.540		4.540		6.950		6.950		4.490	
ρ_B	******		******		******		******		******		******	
N	32.33		41.25		41.25		61.18		61.18		36.37	
α	26.90		30.60		30.60		45.00		45.00		95.00	
C_P	5.861		4.732		4.732		3.361		3.361		(6.710)**	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_S	819.2	815.7	698.6	694.8	726.0	722.0	722.9	714.8	707.1	702.6	335.3	319.5
K_T	813.4	809.9	692.3	688.5	719.2	715.2	709.6	701.8	694.3	690.0	325.5	310.6
μ	398.4	387.3	363.7	331.9	334.0	322.0	244.5	223.9	250.5	226.9	218.4	206.0
σ	0.291	0.295	0.278	0.294	0.301	0.306	0.348	0.358	0.342	0.354	0.232	0.235
V_P	5.634	5.595	5.106	5.005	5.079	5.036	3.885	3.818	3.870	3.803	3.735	3.638
V_S	3.060	3.017	2.830	2.704	2.712	2.663	1.876	1.795	1.899	1.807	2.205	2.142
V_ϕ	4.388	4.378	3.923	3.912	3.999	3.988	3.225	3.207	3.190	3.180	2.733	2.668
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_P/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	-0.257	-0.258
$(\partial K_T/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	-0.282	-0.280
$(\partial \mu/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	-0.100	-0.043
$(\partial \sigma/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	-6.80	-13.09
$(\partial V_P/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	-0.989	-0.791
$(\partial V_S/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	-0.401	-0.121
$(\partial V_\phi/\partial T)_P$	******	******	******	******	******	******	******	******	******	******	-0.920	-0.949
$(\partial P/\partial T)_{V_P}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
ρ	2.188	2.179	2.118	2.107	2.201	2.189	3.193	3.158	3.124	3.105	3.092	2.951
γ_{th}	0.884	0.880	0.995	0.990	1.034	1.028	1.393	1.377	1.362	1.354	1.057	1.007
γ_P	******	******	******	******	******	******	******	******	******	******	******	******
γ_S	******	******	******	******	******	******	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	******	******	******	******	******	******
δ_S	******	******	******	******	******	******	******	******	******	******	8.084	8.494
δ_T	******	******	******	******	******	******	******	******	******	******	9.110	9.473
θ_D	432.2	426.4	379.9	363.6	365.1	358.7	256.7	246.0	259.6	247.5	305.9	297.2
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	5.50	5.50	4.20	4.20	4.20	4.20	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†	(0.0)†
V_S/V_P	0.543	0.539	0.554	0.540	0.534	0.529	0.483	0.470	0.491	0.475	0.590	0.589
V_H	3.414	3.368	3.153	3.018	3.030	2.977	2.108	2.020	2.132	2.033	2.444	2.374
REF: E.C.	439		411+430		418		412		419		424	
REF. α, Cp	519, 602		519, 603		519, 603		412, 602		420, 602		424, (CAL)**	

REF: E.C.	439	411+430	418	412	419	424
REF. α, Cp	519, 602	519, 603	519, 603	412, 602	420, 602	424, (CAL)**

	$LiIO_3$ — (Hexa.) PULS (1977) ROOM		$LiTaO_3$ — (Trigonal) *PULS (1971) 298 K		$CaWO_3$ — (Tetra.) PULS (1971) 293 K		$CaWO_3$ — (Tetra.) PULS (1972) 295 K		$CaWO_3$ — (Tetra.) PULS (1973) 293 K		$Na_{0.7}WO_3$ — (Cubic) BRIL (1979) 436 K	
ρ_λ	4.490		7.454		6.120		6.120		6.120		7.265	
ρ_B	******		******		******		******		******		******	
M	36.37		47.18		47.98		47.98		47.98		52.49	
α	95.00		36.30		35.20		35.20		35.20		******	
C_p	(6.720)**		(4.608)**		3.935		3.935		3.935		******	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_s	370.1	357.1	1263.6	1247.0	805.4	803.6	772.8	766.4	853.7	851.7	1390.0	1390.0
K_T	358.2	346.0	1245.5	1229.4	795.5	793.8	763.7	757.4	842.6	840.6	******	******
μ	225.3	220.2	920.2	912.2	374.1	350.5	371.8	346.7	372.3	358.3	1102.0	1085.0
σ	0.247	0.244	0.207	0.206	0.299	0.310	0.293	0.303	0.310	0.316	0.186	0.190
V_p	3.864	3.807	5.780	5.749	4.616	4.557	4.553	4.481	4.697	4.661	6.274	6.249
V_s	2.240	2.215	3.514	3.498	2.472	2.393	2.465	2.380	2.466	2.420	3.895	3.865
V_ϕ	2.871	2.820	4.117	4.090	3.628	3.624	3.554	3.539	3.735	3.731	4.374	4.374
$(\partial K_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_p/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_S/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_S/\partial T)_P$	-0.369	-0.369	-0.139	-0.145	-0.200	-0.196	-0.146	-0.143	-0.172	-0.172	******	******
$(\partial K_T/\partial T)_P$	-0.395	-0.394	-0.199	-0.203	-0.251	-0.246	-0.194	-0.190	-0.230	-0.229	******	******
$(\partial \mu/\partial T)_P$	-0.174	-0.179	-0.068	-0.077	-0.046	-0.045	-0.067	-0.054	-0.081	-0.078	******	******
$(\partial \sigma/\partial T)_P$	-4.77	-4.67	-0.85	-0.74	-2.19	-1.92	-0.18	-0.51	0.29	0.27	******	******
$(\partial V_p/\partial T)_P$	-1.546	-1.599	-0.162	-0.185	-0.381	-0.377	-0.341	-0.315	-0.405	-0.402	******	******
$(\partial V_S/\partial T)_P$	-0.756	-0.796	-0.067	-0.085	-0.108	-0.110	-0.177	-0.145	-0.226	-0.221	******	******
$(\partial V_\phi/\partial T)_P$	-1.294	-1.325	-0.152	-0.163	-0.387	-0.377	-0.274	-0.269	-0.310	-0.311	******	******
$(\partial P/\partial T)_{V_p}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_S}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial P/\partial T)_P$	3.403	3.287	4.521	4.463	2.800	2.794	2.688	2.666	2.966	2.959	******	******
γ_{th}	1.165	1.124	1.335	1.318	1.177	1.175	1.130	1.120	1.248	1.245	******	******
γ_P	******	******	******	******	******	******	******	******	******	******	******	******
γ_S	******	******	******	******	******	******	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******	******	******	******	******	******	******
γ_{HT}	******	******	******	******	******	******	******	******	******	******	******	******
θ_s	10.492	10.889	3.037	3.197	7.058	6.911	5.374	5.316	5.720	5.734	******	******
θ_T	11.620	11.978	4.397	4.539	8.964	8.813	7.204	7.130	7.739	7.748	******	******
θ_D	311.2	307.6	527.6	525.3	349.5	338.7	348.1	336.6	349.1	342.7	558.4	554.3
$(\partial K_S/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial K_P/\partial T)_V$	******	******	******	******	******	******	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	(0.0)†	(0.0)†	0.40	0.40	7.50	7.50	7.50	7.50	7.50	7.50	******	******
V_S/V_P	0.580	0.582	0.608	0.609	0.536	0.525	0.541	0.531	0.525	0.519	0.621	0.618
V_M	2.486	2.457	3.882	3.864	2.761	2.676	2.751	2.660	2.758	2.708	4.294	4.262
REF. E.C.	432		436		416		417		420		406	
REF. α, Cp	424; (CAL)**		436, (CAL)**		548; 602		548; 602		520; 602		***; ***	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

	$Na_{0.695}WO_3$ — (Cubic) BRIL (1979) 431 K		$Na_{0.628}WO_3$ — (Cubic) BRIL (1979) 508 K		$Na_{0.522}WO_3$ — (Cubic) BRIL (1979) 521 K	
ρ_x	7.255		7.241		7.218	
ρ_B	******		******		******	
M	52.77		53.21		53.91	
α	******		******		******	
C_p	******		******		******	
	(HILL)	(REUSS)	(HILL)	(REUSS)	(HILL)	(REUSS)
K_s	1700.0	1700.0	2190.0	2190.0	2083.0	2083.0
K_T	******	******	******	******	******	******
μ	821.0	816.0	1225.0	1139.0	1296.0	1195.0
σ	0.292	0.293	0.264	0.278	0.242	0.259
V_p	6.206	6.199	7.266	7.157	7.266	7.137
V_s	3.364	3.354	4.113	3.966	4.237	4.069
V_ϕ	4.841	4.841	5.499	5.499	5.372	5.372
$(\partial K_s/\partial P)_T$	******	******	******	******	******	******
$(\partial K_T/\partial P)_T$	******	******	******	******	******	******
$(\partial \mu/\partial P)_T$	******	******	******	******	******	******
$(\partial \sigma/\partial P)_T$	******	******	******	******	******	******
$(\partial V_p/\partial P)_T$	******	******	******	******	******	******
$(\partial V_s/\partial P)_T$	******	******	******	******	******	******
$(\partial V_\phi/\partial P)_T$	******	******	******	******	******	******
$(\partial K_s/\partial T)_P$	******	******	******	******	******	******
$(\partial K_T/\partial T)_P$	******	******	******	******	******	******
$(\partial \mu/\partial T)_P$	******	******	******	******	******	******
$(\partial \sigma/\partial T)_P$	******	******	******	******	******	******
$(\partial V_p/\partial T)_P$	******	******	******	******	******	******
$(\partial V_s/\partial T)_P$	******	******	******	******	******	******
$(\partial V_\phi/\partial T)_P$	******	******	******	******	******	******
$(\partial P/\partial T)_{V_p}$	******	******	******	******	******	******
$(\partial P/\partial T)_{V_s}$	******	******	******	******	******	******
$(\partial P/\partial T)_{V_\phi}$	******	******	******	******	******	******
$(\partial P/\partial T)_P$	******	******	******	******	******	******
γ_{th}	******	******	******	******	******	******
γ_P	******	******	******	******	******	******
γ_s	******	******	******	******	******	******
γ_{LT}	******	******	******	******	******	******
γ_T^{HT}	******	******	******	******	******	******
δ_s	******	******	******	******	******	******
δ_T	******	******	******	******	******	******
θ_D	487.1	485.7	591.5	571.4	604.5	581.6
$(\partial K_s/\partial T)_V$	******	******	******	******	******	******
$(\partial K_p/\partial T)_V$	******	******	******	******	******	******
$(\partial \alpha/\partial T)_P$	******	******	******	******	******	******
V_s/V_P	0.542	0.541	0.566	0.554	0.583	0.570
V_m	3.754	3.743	4.574	4.418	4.700	4.522
REF. E.C.	406		406		406	
REF. α, Cp	***, ***		***, ***		***, ***	

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

INDEX OF SUBSTANCES

Note: O: Experimental data are available. X: Experimental data are not available. 1. Chemical formula of substance ((SS)* means solid solution). 2. (S): Single crystal data. (P): Polycrystalline data. (G): Glass' data. 3. Elastic constants. 4. Their pressure coefficient. 5. Their temperature coefficient. 6. Thermal expansivity. 7. Heat capacity.

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

Substance		C	∂C/∂P	∂C/∂T	α	C_P	Page
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
KCl-KBr (ss)*	(S)	O	O	O	O	O	26
KCl-RbCl (ss)*	(S)	O	X	O	O	O	27
AgCl-AgBr (ss)*	(S)	O	O	O	O	O	30
$SrCl_2$	(S)	O	X	O	O	O	31
$PbCl_2$	(S)	O	X	X	X	O	32
Hg_2Cl_2	(S)	O	X	O	O	O	32
$CsPbCl_3$	(S)	O	X	O	O	O	32
(A3) XBr (Bromide)							
LiBr	(S)	O	X	O	O	O	33
NaBr	(S)	O	O	O	O	O	33
KBr	(S)	O	O	O	O	O	34
CuBr	(S)	O	X	X	O	O	35
RbBr	(S)	O	O	O	O	O	35
AgBr	(S)	O	O	O	O	O	36
CsBr	(S)	O	O	O	O	O	37
TlBr	(S)	O	X	X	O	O	38
KBr-KI (ss)*	(S)	O	X	O	O	O	35
Hg_2Br_2	(S)	O	X	X	X	O	38
(A4) XI (Iodide)							
LiI	(S)	O	X	O	O	O	39
NaI	(S)	O	O	O	O	O	39
KI	(S)	O	O	O	O	O	40
CuI	(S)	O	X	X	O	O	40
RbI	(S)	O	O	O	O	O	41
AgI	(S)	O	O(P)	O	O	O	42
CsI	(S)	O	O	O	O	O	42
CdI_2	(S)	O	X	X	O	O	43
HgI_2	(S)	O	X	O	O	O	43
PbI_2	(S)	O	X	X	O	O	43
Hg_2I_2	(S)	O	X	X	X	O	43
(B1) XO							
BeO	(S)	O	X	X	O	O	44
MgO	(S)	O	O	O	O	O	44
CaO	(S)	O	O	O	O	O	45
MnO	(S)	O	X	O	O	O	46
Fe_xO	(S)	O	X	O	O	O	46
CoO	(S)	O	X	O	O	O	47
NiO	(S)	O	X	O	O	O	47
ZnO	(S)	O	X	X	O	O	47
SrO	(S)	O	O	O	O	O	48
BaO	(S)	O	O	O	O	O	48
(B2) X_2O_3							
Al_2O_3	(S)	O	O	O	O	O	49
Ti_2O_3	(S)	O	O	O	O	O	50

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

Substance		C	∂C/∂P	∂C/∂T	α	C_P	Page
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
V_2O_3	(S)	O	X	O	O	O	51
Cr_2O_3	(S)	O	X	X	O	O	51
Fe_2O_3	(P)	O	X	X	O	O	51
Y_2O_3	(P)	O	X	O	O	O	51
Sm_2O_3	(P)	O	X	O	O	O	52
Dy_2O_3	(P)	O	X	X	O	O	52
Ho_2O_3	(P)	O	X	O	O	O	52
Er_2O_3	(P)	O	X	O	O	O	52
Tm_2O_3	(P)	O	X	O	O	O	52
Yb_2O_3	(P)	O	X	X	O	O	52
Lu_2O_3	(P)	O	X	O	O	O	53
Y_2O_3-ThO_2 (ss)*	(P)	O	X	O	O	O	51
(B3) XO_2							
SiO_2 (Fused-Qz)	(G)	O	O	O	O	O	53
SiO_2 (α-Qz)	(S)	O	O	O	O	O	53
SiO_2 (β-Qz)	(S)	O	X	O	O	O	55
SiO_2 (Coesite)	(S)	O	X	X	O	O	55
SiO_2 (Stishovite)	(S)	O	X	X	O	O	55
TiO_2	(S)	O	O	O	O	O	56
GeO_2	(S)	O	O	O	O	O	57
NbO_2	(S)	O	O	O	O	O	58
SnO_2	(S)	O	O	O	O	O	59
TeO_2	(S)	O	X	O	O	O	59
ThO_2	(S)	O	X	X	O	O	60
UO_2	(S)	O	O	O	O	O	60
ZrO_2-Y_2O_3 (ss)*	(S)	O	X	O	X	O	57
HfO_2-Y_2O_3 (ss)*	(S)	O	X	X	X	O	59
(B4) Others (X_2O, XO_3, X_4O_9)							
H_2O	(S)	O	X	O	O	O	61
D_2O	(S)	O	X	O	O	O	61
Cu_2O	(S)	O	O	O	O	O	62
ReO_3	(S)	O	X	O	O	O	62
U_4O_9	(S)	O	X	X	X	O	62
(C1) $XSiO_3$ (Pyroxene)							
$MgSiO_3$	(S)	O	X	X	O	O	63
$(Mg,Fe)SiO_3$ (ss)*	(S)	O	O	O	O	O	63
$CaMg(SiO_3)_2$	(S)	O	X	X	O	O	63
(C2) X_2SiO_4 (Olivine)							
Mg_2SiO_4	(S)	O	O	O	O	O	63
$(Mg,Fe)_2SiO_4$ (ss)*	(S)	O	O	O	O	O	64
Mn_2SiO_4	(S)	O	X	O	O	O	64
Fe_2SiO_4	(S)	O	X	O	O	O	65
Co_2SiO_4	(S)	O	X	O	X	O	65
Ni_2SiO_4	(S)	O	X	X	X	O	65
Ni_2SiO_4 (Spinel)	(S)	O	X	X	X	X	65

Table 2 (continued)
CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

Substance		C	∂C/∂P	∂C/∂T	α	C_P	Page
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
(C3) $X_3Al_2Si_3O_{12}$ (Garnet)							
$Mg_3Al_2Si_3O_{12}$	(S)	O	X	X	O	X	65
$(Mg,Fe)_3Al_2Si_3O_{12}$ (ss)*	(S)	O	O	O	O	X	65
$Mn_3Al_2Si_3O_{12}$	(S)	O	X	X	O	X	68
$(Fe,Mn)_3Al_2Si_3O_{12}$ (ss)*	(S)	O	O	O	O	X	68
$(Ca,Fe)_3Al_2Si_3O_{12}$ (ss)*	(S)	O	O	X	O	X	69
$Ca_3(Al,Fe)_2Si_3O_{12}$ (ss)*	(S)	O	X	X	O	X	69
(C4) Other silicates							
$ZrSiO_4$ (Metamict)	(S)	O	X	X	O	O	69
$ZrSiO_4$	(S)	O	X	O	O	O	70
Andalusite	(S)	O	X	X	O	O	70
Sillimanite	(S)	O	X	X	O	O	70
Beryl	(S)	O	O	X	O	X	70
Nepheline	(S)	O	X	O	O	X	71
$Ba_2Si_2TiO_8$	(S)	O	X	O	O	X	71
$Pb_5(SiO_4)(VO_4)_2$	(S)	O	X	X	X	X	71
(D1) XBO_3 (Borate)							
$FeBO_3$	(S)	O	X	X	X	X	72
(D2) XCO_3 (Carbonate)							
$CaCO_3$	(S)	O	O	O	O	O	72
$CaMg(CO_3)_2$	(S)	O	X	X	O	O	72
$MgCO_3$	(S)	O	X	X	O	O	72
$NaMgAl(C_2O_4)_3 9H_2O$	(S)	O	X	X	X	X	73
(D3) XNO_2 (Nitrate)							
$Ba(NO_2)_2H_2O$	(S)	O	X	O	O	X	73
(D4) XAl_2O_4 (Aluminate)							
$MgAl_2O_4$	(S)	O	O	O	O	O	73
$MgO{\cdot}nAl_2O_3$	(S)	O	O	X	X	X	73
$(Mg,Fe)Al_2O_4$	(S)	O	O	X	O	O	74
$FeAl_2O_4$	(S)	O	X	X	O	O	74
$BeAl_2O_4$	(S)	O	X	X	O	O	74
(D5) XPO_4 (Phosphate)							
$AlPO_4$	(S)	O	X	O	O	O	74
(D6) XSO_4 (Sulfate)							
$KAl(SO_4)_2 12H_2O$	(S)	O	O	O	O	O	74
$NH_4Al(SO_4)_2 12H_2O$	(S)	O	O	O	O	X	75
$CsAl(SO_4)_2 12H_2O$	(S)	O	O	O	O	X	75
$CH_3NH_3Al(SO_4)_2 12H_2O$	(S)	O	O	O	O	X	75
$Cs_2S_2O_6$	(S)	O	X	O	O	X	75

NTS

Table 2 (continued)

CALCULATED AGGREGATE PROPERTIES OF SINGLE CRYSTAL ELASTIC CONSTANTS

Substance		C	∂C/∂P	∂C/∂T	α	C_P	Page
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
(D7) $XClO_3$ (Chlorate)							
$NaClO_3$	(S)	O	X	O	O	X	75
$LiClO_4 3H_2O$	(S)	O	X	O	O	X	76
$LiClO_4 3D_2O$	(S)	O	X	O	O	X	76
(D8) $XTiO_3$ (Titanate)							
$SrTiO_3$	(S)	O	O	O	O	O	76
(D9) XFe_2O_4 (Iron oxide)							
$Y_3Fe_5O_{12}$	(S)	O	X	O	O	X	76
(D10) XGa_2O_4 (Gallium oxide)							
$Nd_3Ga_5O_{12}$	(S)	O	X	O	O	X	76
$Sm_3Ga_5O_{12}$	(S)	O	X	O	O	X	76
$Gd_3Ga_5O_{12}$	(S)	O	X	O	O	X	77
(D11) $XGeO_3$ (Germanate)							
$Pb_5Ge_3O_{11}$	(S)	O	X	O	O	X	77
$Bi_{12}GeO_{20}$	(S)	O	X	O	O	X	77
(D12) $XBrO_3$ (Bromate)							
$NaBrO_3$	(S)	O	X	O	O	X	77
(D13) $XNbO_3$ (Niobate)							
$LiNbO_3$	(S)	O	X	O	O	X	78
$K_{2.9}Li_{1.6}Nb_{5.1}O_{15}$	(S)	O	X	X	X	X	78
$KPb_2Nb_5O_{12}$	(S)	O	X	X	X	X	78
(D14) $XMoO_4$ (Molybdate)							
$CaMoO_4$	(S)	O	X	X	O	X	78
$SrMoO_4$	(S)	O	X	X	O	O	79
$PbMoO_4$	(S)	O	X	X	O	O	79
(D15)XIO_3 (Iodate)							
$LiIO_3$	(S)	O	X	O	O	X	79
(D16) $XTaO_3$ (Tantalate)							
$LiTaO_3$	(S)	O	X	O	O	X	80
(D17) XWO_3 (Tungstate)							
$CaWO_3$	(S)	O	X	O	O	O	80
Na_xWO_3	(S)	O	X	X	X	X	80

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