

Table 5. Average Velocities and Stiffness Constants for Rocks with Hexagonal and Orthorhombic Symmetry with Standard Deviations

	Pressure (MPa)								
	20	40	60	80	100	200	400	600	1000
<i>Avg Hexagonal Slate (8 samples), Density = 2748 ± 80 kg/m³</i>									
V _p (0°)	5.092 ± 0.24	5.195 ± 0.23	5.250 ± 0.23	5.297 ± 0.23	5.333 ± 0.23	5.448 ± 0.24	5.589 ± 0.23	5.682 ± 0.22	5.802 ± 0.20
V _p (90°) _{avg}	6.144 ± 0.29	6.200 ± 0.23	6.233 ± 0.21	6.258 ± 0.19	6.281 ± 0.19	6.353 ± 0.16	6.440 ± 0.14	6.499 ± 0.12	6.582 ± 0.10
V _p (45°)	5.158 ± 0.17	5.274 ± 0.16	5.345 ± 0.17	5.402 ± 0.18	5.462 ± 0.19	5.615 ± 0.20	5.756 ± 0.21	5.832 ± 0.21	5.927 ± 0.20
V _{SH} (90°)	3.742 ± 0.16	3.782 ± 0.14	3.802 ± 0.13	3.816 ± 0.13	3.827 ± 0.12	3.864 ± 0.12	3.906 ± 0.12	3.932 ± 0.12	3.965 ± 0.12
V _{SVavg}	2.861 ± 0.25	2.922 ± 0.25	2.958 ± 0.26	2.985 ± 0.26	3.007 ± 0.26	3.082 ± 0.27	3.163 ± 0.27	3.215 ± 0.26	3.280 ± 0.25
C ₁₁	103.73 ± 11.49	105.63 ± 9.94	106.77 ± 9.16	107.62 ± 8.67	108.43 ± 8.46	110.91 ± 7.56	113.97 ± 6.72	116.07 ± 6.16	119.05 ± 5.33
C ₁₂	26.75 ± 5.50	27.02 ± 5.27	27.30 ± 5.09	27.57 ± 4.98	27.92 ± 4.94	28.87 ± 4.68	30.13 ± 4.47	31.10 ± 4.36	32.63 ± 4.18
C ₃₃	71.27 ± 7.72	74.15 ± 6.88	75.74 ± 6.79	77.10 ± 6.63	78.16 ± 6.57	81.57 ± 6.74	85.83 ± 6.60	88.72 ± 6.28	92.50 ± 5.74
C ₄₄	22.49 ± 3.90	23.47 ± 3.85	24.05 ± 3.88	24.49 ± 3.93	24.85 ± 3.99	26.10 ± 4.15	27.49 ± 4.19	28.40 ± 4.14	29.56 ± 3.96
C ₁₃	9.88 ± 10.21	12.78 ± 9.35	14.67 ± 9.63	16.26 ± 8.69	18.40 ± 8.18	22.66 ± 7.82	25.38 ± 8.71	26.06 ± 9.29	26.65 ± 10.54
<i>Avg Hexagonal Phyllite (17 samples), Density = 2739 ± 80 kg/m³</i>									
V _p (0°)	4.704 ± 0.92	4.993 ± 0.74	5.181 ± 0.62	5.313 ± 0.54	5.408 ± 0.47	5.667 ± 0.33	5.853 ± 0.26	5.934 ± 0.25	6.051 ± 0.25
V _p (90°) _{avg}	5.962 ± 0.62	6.122 ± 0.52	6.225 ± 0.44	6.300 ± 0.39	6.357 ± 0.35	6.513 ± 0.26	6.626 ± 0.21	6.679 ± 0.20	6.758 ± 0.20
V _p (45°)	5.111 ± 0.64	5.321 ± 0.51	5.468 ± 0.43	5.581 ± 0.37	5.657 ± 0.33	5.895 ± 0.21	6.069 ± 0.17	6.136 ± 0.16	6.217 ± 0.15
V _{SH} (90°)	3.617 ± 0.39	3.689 ± 0.32	3.738 ± 0.28	3.774 ± 0.25	3.801 ± 0.23	3.872 ± 0.19	3.916 ± 0.17	3.938 ± 0.16	3.970 ± 0.16
V _{SVavg}	2.876 ± 0.36	2.983 ± 0.30	3.050 ± 0.27	3.104 ± 0.25	3.148 ± 0.23	3.249 ± 0.21	3.329 ± 0.20	3.357 ± 0.20	3.397 ± 0.20
C ₁₁	97.37 ± 18.96	102.66 ± 16.47	106.15 ± 14.65	108.73 ± 13.3	110.69 ± 12.34	116.2 ± 10.01	120.25 ± 9.06	122.35 ± 8.81	125.24 ± 8.75
C ₁₂	25.72 ± 7.37	28.12 ± 7.00	29.59 ± 6.76	30.69 ± 6.61	31.56 ± 6.45	34.08 ± 6.02	36.23 ± 5.64	37.22 ± 5.47	38.74 ± 5.44
C ₃₃	60.62 ± 22.32	68.30 ± 19.12	73.52 ± 16.81	77.33 ± 15.12	80.11 ± 13.80	87.97 ± 10.41	93.83 ± 8.51	96.62 ± 8.28	100.46 ± 8.4
C ₄₄	22.66 ± 5.38	24.38 ± 4.69	25.47 ± 4.36	26.39 ± 4.09	27.14 ± 3.93	28.91 ± 3.71	30.35 ± 3.58	30.97 ± 3.64	31.71 ± 3.72
C ₁₃	14.49 ± 11.71	17.49 ± 11.86	20.19 ± 10.88	22.37 ± 9.92	23.40 ± 9.38	28.77 ± 7.44	32.65 ± 7.30	33.24 ± 7.15	33.95 ± 6.91
<i>Avg Hexagonal Quartz Mica Schist (20 samples), Density = 2718 ± 60 kg/m³</i>									
V _p (0°)	4.643 ± 0.90	4.950 ± 0.67	5.136 ± 0.53	5.262 ± 0.44	5.352 ± 0.38	5.574 ± 0.27	5.735 ± 0.22	5.820 ± 0.19	5.942 ± 0.19
V _p (90°) _{avg}	5.646 ± 0.51	5.832 ± 0.36	5.948 ± 0.28	6.038 ± 0.23	6.099 ± 0.20	6.253 ± 0.18	6.363 ± 0.18	6.421 ± 0.18	6.508 ± 0.17
V _p (45°)	5.059 ± 0.67	5.269 ± 0.53	5.413 ± 0.45	5.518 ± 0.39	5.593 ± 0.35	5.793 ± 0.27	5.942 ± 0.22	6.020 ± 0.21	6.132 ± 0.20
V _{SH} (90°)	3.428 ± 0.27	3.531 ± 0.20	3.599 ± 0.17	3.647 ± 0.17	3.684 ± 0.17	3.767 ± 0.18	3.818 ± 0.18	3.846 ± 0.18	3.888 ± 0.18
V _{SVavg}	2.868 ± 0.39	2.977 ± 0.31	3.047 ± 0.26	3.100 ± 0.22	3.131 ± 0.20	3.223 ± 0.16	3.289 ± 0.15	3.325 ± 0.14	3.378 ± 0.14
C ₁₁	86.64 ± 15.11	92.43 ± 11.80	96.14 ± 9.68	99.07 ± 8.36	101.08 ± 7.77	106.26 ± 7.55	110.02 ± 7.75	112.04 ± 7.80	115.12 ± 7.72
C ₁₂	22.75 ± 8.14	24.66 ± 7.79	25.72 ± 7.55	26.77 ± 7.12	27.32 ± 7.05	29.12 ± 6.73	30.79 ± 6.67	31.65 ± 6.72	32.95 ± 7.09
C ₃₃	58.58 ± 21.71	66.59 ± 17.91	71.69 ± 15.05	75.24 ± 13.01	77.84 ± 11.62	84.44 ± 8.80	89.40 ± 7.38	92.06 ± 6.72	95.96 ± 6.56
C ₄₄	22.36 ± 6.02	24.08 ± 5.09	25.23 ± 4.45	26.11 ± 4.02	26.64 ± 3.75	28.23 ± 3.17	29.41 ± 2.96	30.05 ± 2.92	31.01 ± 2.93
C ₁₃	19.48 ± 14.32	21.45 ± 12.99	23.37 ± 13.03	24.71 ± 12.58	26.02 ± 12.08	29.55 ± 11.08	32.51 ± 10.52	34.07 ± 10.35	36.12 ± 10.49
<i>Avg Hexagonal Quartzofeldspathic Biotite Gneiss (11 samples), Density = 2681 ± 40 kg/m³</i>									
V _p (0°)	4.047 ± 0.64	4.484 ± 0.58	4.795 ± 0.51	4.997 ± 0.47	5.142 ± 0.44	5.480 ± 0.34	5.676 ± 0.27	5.770 ± 0.24	5.889 ± 0.21
V _p (90°) _{avg}	4.971 ± 0.59	5.312 ± 0.51	5.521 ± 0.45	5.662 ± 0.39	5.761 ± 0.35	5.998 ± 0.25	6.147 ± 0.20	6.222 ± 0.18	6.316 ± 0.16
V _p (45°)	5.022 ± 0.38	5.266 ± 0.34	5.416 ± 0.32	5.522 ± 0.31	5.603 ± 0.31	5.827 ± 0.28	5.997 ± 0.23	6.086 ± 0.20	6.192 ± 0.16
V _{SH} (90°)	3.098 ± 0.37	3.281 ± 0.33	3.396 ± 0.30	3.472 ± 0.27	3.526 ± 0.25	3.647 ± 0.20	3.714 ± 0.18	3.744 ± 0.17	3.776 ± 0.17
V _{SVavg}	2.740 ± 0.39	2.924 ± 0.35	3.041 ± 0.32	3.119 ± 0.30	3.174 ± 0.28	3.300 ± 0.24	3.375 ± 0.21	3.411 ± 0.20	3.454 ± 0.19
C ₁₁	66.26 ± 15.68	75.64 ± 14.96	81.72 ± 13.89	85.94 ± 12.74	88.98 ± 11.71	96.45 ± 8.86	101.32 ± 7.45	103.79 ± 6.91	106.96 ± 6.32
C ₁₂	14.81 ± 8.73	17.93 ± 5.89	19.87 ± 4.86	21.29 ± 4.20	22.34 ± 3.76	25.15 ± 3.05	27.35 ± 2.87	28.64 ± 2.92	30.52 ± 3.18
C ₃₃	43.91 ± 14.56	53.91 ± 14.81	61.64 ± 14.32	66.95 ± 13.82	70.88 ± 13.26	80.51 ± 11.07	86.38 ± 9.35	89.26 ± 8.55	92.97 ± 7.61
C ₄₄	19.93 ± 6.02	22.77 ± 5.93	24.67 ± 5.74	25.99 ± 5.52	26.95 ± 5.31	29.19 ± 4.68	30.54 ± 4.31	31.18 ± 4.15	31.97 ± 3.96
C ₁₃	39.22 ± 15.80	37.39 ± 12.98	35.41 ± 11.24	34.32 ± 10.22	33.85 ± 9.83	34.71 ± 10.39	37.50 ± 9.10	39.33 ± 7.41	41.32 ± 5.82

Table 5. Continued

	Pressure (MPa)								
	20	40	60	80	100	200	400	600	1000
<i>Avg Hexagonal Mylonite (15 samples), Density = 2737 ± 60 kg/m³</i>									
V _p (0°)	4.865 ± 0.61	5.199 ± 0.44	5.393 ± 0.36	5.513 ± 0.31	5.592 ± 0.29	5.763 ± 0.24	5.877 ± 0.21	5.940 ± 0.19	6.020 ± 0.17
V _p (90°) _{avg}	5.906 ± 0.42	6.085 ± 0.33	6.193 ± 0.28	6.264 ± 0.25	6.313 ± 0.23	6.427 ± 0.20	6.504 ± 0.19	6.546 ± 0.19	6.599 ± 0.19
V _p (45°)	5.265 ± 0.39	5.470 ± 0.31	5.624 ± 0.23	5.714 ± 0.21	5.779 ± 0.19	5.941 ± 0.18	6.063 ± 0.15	6.118 ± 0.14	6.174 ± 0.14
V _{SH} (90°)	3.610 ± 0.28	3.679 ± 0.28	3.798 ± 0.17	3.827 ± 0.15	3.847 ± 0.15	3.888 ± 0.13	3.911 ± 0.13	3.924 ± 0.13	3.939 ± 0.12
V _{SVavg}	3.096 ± 0.29	3.205 ± 0.25	3.271 ± 0.23	3.313 ± 0.21	3.342 ± 0.21	3.408 ± 0.19	3.449 ± 0.18	3.476 ± 0.17	3.506 ± 0.16
C ₁₁	95.46 ± 15.48	101.33 ± 12.98	104.96 ± 11.51	107.38 ± 10.63	109.07 ± 10.06	113.03 ± 9.08	115.77 ± 8.81	117.26 ± 8.73	119.17 ± 8.67
C ₁₂	24.15 ± 13.67	27.26 ± 13.4	26.01 ± 9.28	27.23 ± 8.98	28.07 ± 8.86	30.31 ± 8.56	32.03 ± 8.37	32.98 ± 8.33	34.24 ± 8.29
C ₃₃	64.78 ± 19.03	73.98 ± 14.99	79.59 ± 12.62	83.19 ± 11.22	85.59 ± 10.35	90.89 ± 8.74	94.54 ± 7.94	96.57 ± 7.55	99.18 ± 7.14
C ₄₄	26.23 ± 4.68	28.12 ± 4.10	29.28 ± 3.79	30.05 ± 3.62	30.57 ± 3.51	31.79 ± 3.25	32.55 ± 3.04	33.07 ± 2.98	33.64 ± 2.87
C ₁₃	16.50 ± 8.80	17.91 ± 7.83	20.71 ± 7.47	21.95 ± 7.90	23.06 ± 7.95	26.61 ± 8.09	30.07 ± 7.65	30.97 ± 7.70	31.40 ± 9.20
<i>Avg Hexagonal Greenschist (3 samples), Density = 2868 ± 120 kg/m³</i>									
V _p (0°)	4.412 ± 1.13	5.044 ± 0.80	5.406 ± 0.59	5.639 ± 0.46	5.797 ± 0.38	6.128 ± 0.28	6.302 ± 0.26	6.383 ± 0.26	6.479 ± 0.25
V _p (90°) _{avg}	5.849 ± 0.68	6.071 ± 0.43	6.316 ± 0.40	6.445 ± 0.33	6.533 ± 0.29	6.761 ± 0.23	6.895 ± 0.22	6.956 ± 0.22	7.029 ± 0.22
V _p (45°)	5.215 ± 0.62	5.503 ± 0.53	5.733 ± 0.43	5.911 ± 0.31	6.025 ± 0.27	6.335 ± 0.17	6.481 ± 0.19	6.553 ± 0.22	6.643 ± 0.27
V _{SH} (90°)	3.501 ± 0.35	3.638 ± 0.26	3.724 ± 0.21	3.779 ± 0.19	3.820 ± 0.18	3.912 ± 0.17	3.964 ± 0.17	3.987 ± 0.17	4.015 ± 0.16
V _{SVavg}	3.028 ± 0.45	3.209 ± 0.36	3.312 ± 0.32	3.383 ± 0.29	3.432 ± 0.28	3.542 ± 0.27	3.602 ± 0.27	3.637 ± 0.26	3.665 ± 0.26
C ₁₁	98.12 ± 25.49	105.71 ± 17.84	114.43 ± 18.57	119.12 ± 16.75	122.39 ± 15.80	131.11 ± 14.51	136.33 ± 14.70	138.78 ± 14.82	141.70 ± 15.04
C ₁₂	27.80 ± 9.30	29.80 ± 5.95	34.89 ± 6.93	37.19 ± 6.06	38.70 ± 5.36	43.32 ± 4.35	46.22 ± 4.78	47.60 ± 5.17	49.25 ± 5.66
C ₃₃	55.84 ± 30.46	72.98 ± 25.31	83.82 ± 21.14	91.20 ± 18.38	96.38 ± 16.74	107.71 ± 14.64	113.91 ± 14.29	116.87 ± 14.24	120.39 ± 14.34
C ₄₄	26.30 ± 9.28	29.54 ± 8.13	31.46 ± 7.59	32.82 ± 7.32	33.79 ± 7.20	35.98 ± 7.13	37.22 ± 7.12	37.93 ± 6.98	38.53 ± 7.19
C ₁₃	22.02 ± 17.32	22.81 ± 15.50	24.43 ± 14.26	28.06 ± 11.10	29.97 ± 9.60	37.88 ± 6.65	40.55 ± 5.27	41.90 ± 2.99	44.32 ± 3.01
<i>Avg Hexagonal Amphibolite (9 samples), Density = 2998 ± 90 kg/m³</i>									
V _p (0°)	4.570 ± 0.69	5.098 ± 0.55	5.435 ± 0.47	5.662 ± 0.42	5.821 ± 0.38	6.175 ± 0.31	6.370 ± 0.27	6.461 ± 0.26	6.573 ± 0.26
V _p (90°) _{avg}	5.616 ± 0.85	6.021 ± 0.70	6.297 ± 0.60	6.489 ± 0.53	6.630 ± 0.49	6.960 ± 0.38	7.136 ± 0.34	7.208 ± 0.33	7.293 ± 0.31
V _p (45°)	5.293 ± 0.71	5.691 ± 0.48	5.912 ± 0.39	6.105 ± 0.34	6.243 ± 0.32	6.583 ± 0.34	6.781 ± 0.33	6.873 ± 0.34	6.954 ± 0.35
V _{SH} (90°)	3.320 ± 0.57	3.562 ± 0.45	3.718 ± 0.38	3.828 ± 0.33	3.903 ± 0.30	4.068 ± 0.25	4.146 ± 0.23	4.177 ± 0.22	4.219 ± 0.20
V _{SVavg}	2.930 ± 0.43	3.178 ± 0.34	3.334 ± 0.29	3.439 ± 0.26	3.513 ± 0.24	3.672 ± 0.22	3.755 ± 0.22	3.793 ± 0.21	3.842 ± 0.21
C ₁₁	94.55 ± 29.09	108.69 ± 25.93	118.86 ± 23.69	126.26 ± 22.06	131.79 ± 20.88	145.23 ± 18.60	152.67 ± 17.61	155.77 ± 17.21	159.45 ± 16.77
C ₁₂	28.44 ± 9.78	32.61 ± 8.36	35.99 ± 7.91	38.40 ± 7.60	40.47 ± 7.37	46.00 ± 6.88	49.61 ± 6.47	51.16 ± 6.25	52.72 ± 6.10
C ₃₃	62.62 ± 16.86	77.93 ± 16.20	88.56 ± 15.78	96.13 ± 15.39	101.60 ± 14.99	114.34 ± 13.60	121.65 ± 12.84	125.16 ± 12.66	129.53 ± 12.62
C ₄₄	25.75 ± 7.37	30.27 ± 6.63	33.32 ± 6.06	35.45 ± 5.67	37.00 ± 5.46	40.42 ± 5.36	42.28 ± 5.40	43.14 ± 5.39	44.26 ± 5.41
C ₁₃	35.86 ± 16.82	38.67 ± 12.61	37.61 ± 12.99	39.87 ± 12.28	41.60 ± 12.69	47.86 ± 14.63	52.78 ± 14.69	55.33 ± 16.22	55.87 ± 17.61
<i>Avg Orthorhombic Quartz Mica Schist (8 samples), Density = 2791 ± 100 kg/m³</i>									
V _{Px}	5.99 ± 0.68	6.25 ± 0.53	6.39 ± 0.47	6.48 ± 0.43	6.54 ± 0.41	6.7 ± 0.37	6.82 ± 0.34	6.88 ± 0.33	6.96 ± 0.33
V _{Py}	5.67 ± 0.57	5.9 ± 0.47	6.03 ± 0.4	6.12 ± 0.36	6.18 ± 0.34	6.35 ± 0.31	6.48 ± 0.29	6.54 ± 0.28	6.63 ± 0.26
V _{Pz}	4.6 ± 0.85	4.99 ± 0.58	5.2 ± 0.42	5.34 ± 0.33	5.43 ± 0.28	5.66 ± 0.2	5.83 ± 0.18	5.91 ± 0.18	6.02 ± 0.18
V _{Pxz}	5.37 ± 0.37	5.6 ± 0.23	5.72 ± 0.18	5.81 ± 0.17	5.87 ± 0.15	6.04 ± 0.17	6.19 ± 0.17	6.26 ± 0.17	6.34 ± 0.17
V _{Pyz}	5.27 ± 0.42	5.49 ± 0.27	5.48 ± 0.53	5.68 ± 0.16	5.75 ± 0.12	5.92 ± 0.1	6.06 ± 0.11	6.14 ± 0.13	6.22 ± 0.14
V _{Pxy}	5.82 ± 0.36	5.6 ± 1.09	6.06 ± 0.35	6.13 ± 0.35	6.18 ± 0.35	6.34 ± 0.36	6.47 ± 0.36	6.53 ± 0.36	6.6 ± 0.35
V _{Szy}	2.83 ± 0.33	3.02 ± 0.17	3.11 ± 0.14	3.16 ± 0.14	3.19 ± 0.14	3.29 ± 0.13	3.36 ± 0.13	3.41 ± 0.12	3.46 ± 0.12
V _{Sxz}	2.98 ± 0.38	3.13 ± 0.28	3.22 ± 0.23	3.27 ± 0.2	3.31 ± 0.19	3.41 ± 0.17	3.48 ± 0.17	3.51 ± 0.17	3.56 ± 0.16
V _{Syx}	3.53 ± 0.34	3.67 ± 0.25	3.74 ± 0.2	3.79 ± 0.18	3.82 ± 0.16	3.9 ± 0.14	3.96 ± 0.12	3.99 ± 0.12	4.03 ± 0.13
C ₁₁	100.12 ± 23.81	109 ± 20.23	113.94 ± 18.31	117.17 ± 17.31	119.35 ± 16.8	125.27 ± 15.78	129.79 ± 15.46	132.09 ± 15.64	135.18 ± 16.09
C ₁₂	24.35 ± 26.92	-3.74 ± 20.48	18.85 ± 22.12	18.36 ± 20.76	18.4 ± 19.63	20.23 ± 18.29	22.32 ± 19.5	23.11 ± 20.17	23.26 ± 21.85
C ₁₃	27.93 ± 24.77	27.66 ± 18.95	26.81 ± 16.39	27.33 ± 15.44	27.45 ± 14.51	28.81 ± 16.1	31.64 ± 16.78	32.98 ± 16.37	33.37 ± 15.35
C ₂₂	89.71 ± 18.74	97.14 ± 16.57	101.47 ± 15.05	104.52 ± 13.91	106.58 ± 13.35	112.52 ± 12.3	117.17 ± 12.05	119.35 ± 11.91	122.66 ± 11.72
C ₂₃	33.87 ± 26.88	32.37 ± 21.14	23.51 ± 23.62	30.97 ± 14.66	32.09 ± 12.78	33.18 ± 10.04	35.01 ± 9.83	36.23 ± 10.02	36.39 ± 9.68
C ₃₃	59.05 ± 21.22	69.48 ± 16.51	75.46 ± 13.26	79.57 ± 11.04	82.28 ± 9.68	89.4 ± 7.47	94.85 ± 7.37	97.47 ± 7.59	101.13 ± 8.03
C ₄₄	22.35 ± 5.14	25.45 ± 2.99	26.99 ± 2.45	27.86 ± 2.31	28.4 ± 2.29	30.2 ± 2.2	31.5 ± 2.23	32.45 ± 2.22	33.41 ± 2.33
C ₅₅	24.78 ± 6.55	27.34 ± 5.43	28.93 ± 4.87	29.84 ± 4.5	30.57 ± 4.31	32.45 ± 4.08	33.79 ± 4.05	34.38 ± 4	35.37 ± 3.95
C ₆₆	34.77 ± 6.74	37.58 ± 5.24	39.03 ± 4.5	40.08 ± 4.06	40.72 ± 3.79	42.44 ± 3.36	43.76 ± 3.27	44.43 ± 3.36	45.32 ± 3.51

Avg Orthorhombic Amphibolite (5 samples), Density = 3007 ± 80 kg/m³

V _{Px}	6.61 ± 0.49	6.89 ± 0.33	7.07 ± 0.25	7.18 ± 0.21	7.25 ± 0.21	7.4 ± 0.2	7.48 ± 0.2	7.52 ± 0.21	7.56 ± 0.21
V _{Py}	6.22 ± 0.51	6.54 ± 0.36	6.72 ± 0.29	6.84 ± 0.26	6.91 ± 0.25	7.05 ± 0.25	7.13 ± 0.24	7.18 ± 0.24	7.23 ± 0.23
V _{Pz}	5.9 ± 0.57	6.17 ± 0.37	6.3 ± 0.29	6.37 ± 0.25	6.41 ± 0.23	6.52 ± 0.23	6.61 ± 0.25	6.67 ± 0.26	6.73 ± 0.25
V _{Pxz}	6.29 ± 0.34	6.49 ± 0.28	6.6 ± 0.26	6.67 ± 0.25	6.72 ± 0.25	6.85 ± 0.23	6.94 ± 0.22	6.99 ± 0.21	7.03 ± 0.21
V _{Pyz}	6.04 ± 0.56	6.3 ± 0.41	6.45 ± 0.36	6.54 ± 0.34	6.6 ± 0.33	6.77 ± 0.29	6.88 ± 0.27	6.93 ± 0.27	6.98 ± 0.27
V _{Pxy}	6.48 ± 0.46	6.69 ± 0.32	6.82 ± 0.26	6.91 ± 0.22	6.97 ± 0.22	7.12 ± 0.24	7.23 ± 0.24	7.28 ± 0.24	7.34 ± 0.24
V _{Szy}	3.35 ± 0.23	3.53 ± 0.14	3.63 ± 0.11	3.68 ± 0.08	3.72 ± 0.08	3.79 ± 0.08	3.84 ± 0.08	3.86 ± 0.08	3.9 ± 0.1
V _{Sxz}	3.53 ± 0.28	3.64 ± 0.21	3.73 ± 0.16	3.78 ± 0.14	3.8 ± 0.14	3.86 ± 0.13	3.91 ± 0.12	3.93 ± 0.11	3.96 ± 0.1
V _{Syx}	3.76 ± 0.19	3.9 ± 0.14	3.98 ± 0.11	4.03 ± 0.1	4.06 ± 0.09	4.12 ± 0.08	4.15 ± 0.08	4.16 ± 0.09	4.18 ± 0.1
C ₁₁	131.4 ± 22.64	142.77 ± 17.18	150.32 ± 14.26	155.04 ± 12.99	158.08 ± 12.6	164.69 ± 12.1	168.27 ± 12.41	170.07 ± 12.64	171.88 ± 12.98
C ₁₂	43.32 ± 17.58	41.73 ± 14.5	41.12 ± 14.12	41.35 ± 14.03	41.94 ± 13.42	45.44 ± 13.41	49.95 ± 12.41	51.86 ± 11.59	54.16 ± 10.99
C ₁₃	43.89 ± 12.88	43.84 ± 12.18	42.06 ± 12.85	41.52 ± 13.55	42.22 ± 13.71	44.47 ± 13.15	46.08 ± 12.4	47.31 ± 11.58	47.22 ± 12.04
C ₂₂	116.35 ± 21.84	128.63 ± 17.39	135.81 ± 15.26	140.7 ± 14.32	143.6 ± 14	149.48 ± 14.03	152.89 ± 14.05	155.04 ± 14.19	157.21 ± 14.05
C ₂₃	41.18 ± 30.22	41.9 ± 22.06	42.98 ± 18.98	43.93 ± 17.94	44.61 ± 17.32	49.99 ± 13.96	53.28 ± 12.15	54.26 ± 11.59	54.3 ± 11.22
C ₃₃	104.69 ± 23.13	114.49 ± 17.15	119.36 ± 14.62	122.03 ± 13.4	123.57 ± 12.99	127.85 ± 13.2	131.4 ± 14.26	133.8 ± 14.72	136.21 ± 14.63
C ₄₄	33.75 ± 4.95	37.47 ± 3.51	39.63 ± 3.01	40.73 ± 2.73	41.62 ± 2.76	43.2 ± 3.2	44.35 ± 3.37	44.81 ± 3.45	45.74 ± 3.86
C ₅₅	37.47 ± 6.61	39.85 ± 5.71	41.84 ± 4.51	42.97 ± 4.31	43.43 ± 4.28	44.81 ± 4.29	45.98 ± 4.15	46.45 ± 4.06	47.16 ± 3.83
C ₆₆	42.52 ± 5.06	45.74 ± 4.32	47.64 ± 3.76	48.84 ± 3.37	49.57 ± 3.19	51.05 ± 2.92	51.79 ± 3.17	52.04 ± 3.19	52.55 ± 3.42

^aP is pressure in MPa; velocities are in km/s, and stiffness constants in GPa. For hexagonal samples, V_p(0°) and V_p(90°)_{avg} are compressional wave velocities parallel and perpendicular to the symmetry axis. V_p(45°) is a quasicompressional wave velocity for propagation at 45° degrees to the symmetry axis. V_{SH}(90°) is a shear wave velocity with propagation and vibration directions normal to the symmetry axis. V_{SVavg} is an average shear wave velocity for (1) propagation parallel to the symmetry axis and (2) propagation normal and vibration parallel to the symmetry axis. For orthorhombic samples, V_{Px}, V_{Py} and V_{Pz} are compressional wave velocities parallel to the 2-fold symmetry axes with V_{Px} the fast velocity and V_{Pz} the slow velocity. V_{Pxz}, V_{Pyz} and V_{Pzy} are quasicompressional wave velocities at 45° to the symmetry axes. V_{Szy}, V_{Sxz} and V_{Syz} are shear wave velocities parallel to the symmetry axes where the first letter indicates propagation direction and the second letter vibration direction.