

SOUND VELOCITIES

Following is tabulation of the longitudinal velocity of sound in various materials. It is provided only as a guide* and is a compilation from a number of published sources. The actual velocity in these materials can vary significantly due to a range of causes, such as composition, crystallographic orientation, porosity and temperature. Therefore, for maximum accuracy, establish the sound velocity in a given material by first testing a sample in the direction through the material that the thickness checks will be made.

<u>MATERIAL</u>	<u>M/sec</u>	<u>in/μsec</u>
Acrylic resin (perspex)	2730	0.1070
Alumina, Al ₂ O ₃ 99.5%	10190	0.4013
Aluminium, rolled	6420	0.2530
Aluminium, 6061T6	6383	0.2510
Araldite	2500	0.0984
Beryllium	12890	0.5073
Brass, naval	4430	0.1740
Brass, yellow 70 Cu, 30 Zn	4385	0.1726
Cadmium	2780	0.1090
Cast Iron, Grey	4600	0.1810
Copper	4660	0.1830
Copper, rolled	5010	0.1972
Duraluminium, 17S	6320	0.2487
Fused Silica	5968	0.2349
Fused Silica	5932	0.2335
Glass, borosilicate	5640	0.2220
Glass, crown	5100	0.2008
Glass, flint	3980	0.1567
Glass, pyrex	5640	0.2220
Glass, quartz	5570	0.2190
Glass, soda-lime	6000	0.2360
Glycerine	1960	0.0760
Inconel	5700	0.2240
Iron, Armco	5960	0.2345
Lead	2160	0.0850
Lead, rolled	1960	0.0771
Lucite	2680	0.1055

<u>MATERIAL</u>	<u>M/sec</u>	<u>in/μ sec</u>
Magnesium, drawn annealed	5770	0.2270
Manganese	4660	0.1830
Mercury	1450	0.0570
Molybdenum	6250	0.2470
Monel	5350	0.2105
Nickel	5630	0.2377
Nylon	2735	0.1031
Phosphor Bronze	3530	0.1380
Platinum	3960	0.1560
Polyethylene	1950	0.0705
Polystyrene	2350	0.0925
PVC	2395	0.0940
Polyurethane	1700	0.0765
Silicone Rubber RTV	0948	0.0373
Steel, 1020	5890	0.2320
Steel, 4340	5850	0.2300
Steel, low alloy	5734	0.2259
Steel, mild (default setting for gauges)	5920	0.2330
Steel, stainless 302	5660	0.2220
Steel, stainless 347	5790	0.2278
Steel, <i>tool</i>	5870	0.2310
Tin	3320	0.1307
Titanium	5990	0.2370
Tungsten, drawn	5410	0.2129
Uranium	3370	0.1330
Water	1498	0.0590
Zinc. Rolled	4210	0.1657

***No liability is assumed for the results obtained by the use of the above data.**

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