

ULTRASONIC TESTING(UT)- VELOCITY TABLE

| Table - Sound Velocity, Density, Acoustic Impedance | | | | |
|---|---------------------------|---------------------------|-------------------------------|---------|
| Material | V _{Lon} M/Sec | V _{TRA} M/Sec | DENSITY gm/cm ³ | ACO.IMP |
| Aluminium | 6320 | 3130 | 2.7 | 17.0 |
| Aluminium Oxide | 9000 | 5500 | 3.6 | 32.4 |
| Bismuth | 2180 | 1100 | 9.8 | 21.4 |
| Brass | 4430 | 2120 | 8.1 | 35.9 |
| Cadmium | 2780 | 1500 | 8.6 | 23.9 |
| Cast Iron | 2200 | 3500 | 6.9 | 24.2 |
| Concrete | 4600 | - | 2.0 | 9.2 |
| Copper | 4700 | 2260 | 8.9 | 41.8 |
| Glass | 4260 | 2560 | 3.6 | 15.3 |
| Glycerin | 1920 | - | 1.3 | 2.5 |
| Gold | 3240 | 1200 | 19.3 | 62.5 |
| Grey casting | 4600 | 2650 | 7.2 | 33.1 |
| Hard Metal | 6800 | 4000 | 11.0 | 74.8 |
| Lead | 2160 | 700 | 11.4 | 24.6 |
| Magnesium | 5770 | 3050 | 1.7 | 9.8 |
| Motor oil | 1740 | - | 0.87 | 1.5 |
| Nickel | 5630 | 2960 | 8.8 | 49.5 |
| Perspex | 2730 | 1430 | 1.18 | 3.2 |
| Platinum | 3960 | 1670 | 21.4 | 84.7 |
| Polyamide (nylon) | 2620 | 1080 | 1.1 | 2.8 |
| Polyethylene | 2340 | 925 | 0.94 | 2.2 |
| Polystyrol | 2380 | 1150 | 1.06 | 2.523 |
| Polyvinyl chloride (PVC Hard) | 2395 | 1060 | 1.4 | 3.353 |

For reference only. 'TINT' is not responsible for errors and omissions in the data if any.

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Table - Sound Velocity, Density, Acoustic Impedance

| Material | V_{Lon} M/Sec | V_{TRA} M/Sec | DENSITY gm/cm³ | ACO.IMP |
|---------------------------|----------------------------------|----------------------------------|--------------------------------------|----------------|
| Porcelain | 5600 | 3500 | 2.4 | 13.4 |
| Quartz | 5760 | - | 2.65 | 15.2 |
| Quartz Glass | 5570 | 3515 | 2.6 | 14.5 |
| Silver | 3600 | 1590 | 10.5 | 37.8 |
| Steel (low Alloy) | 5940 | 3250 | 7.85 | 46.6 |
| Steel (Calibration block) | | | | |
| Catin block | 5920 | 3250 | 7.85 | 46.5 |
| Tin | 3320 | 1670 | 7.3 | 24.2 |
| Titanium | 6230 | 3180 | 4.54 | 28.3 |
| Tungsten | 5460 | 2680 | 19.1 | 104.3 |
| Uranium | 3200 | - | 18.7 | 59.8 |
| Water 20°C | 1480 | - | 1.0 | 1.48 |
| Zinc | 4170 | 2410 | 7.1 | 29.6 |

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