Seismic Velocities of Rocks and Various Materials

| **Material** | P-wave (m/s) | S-wave (m/s) |
| --- | --- | --- |
| Air | 343 | N/A |
| Water | 1450 - 1500 | N/A |
| Ice | 3400 - 3800 | 1700 - 1900 |
| Oil | 1200 - 1250 | N/A |
| Vegetal Soil | 300 - 700 | 100 - 300 |
| Dry Sands | 400 - 1200 | 100 - 500 |
| Wet Sands | 1500 - 2000 | 400 - 600 |
| Saturated Shales and Clays | 1100 - 2500 | 200 - 800 |
| Porous and Saturated Sandstones | 2000 - 3500 | 800 - 1800 |
| Marls | 2000 - 3000 | 750 - 1500 |
| Chalk | 2300 - 2600 | 1100 - 1300 |
| Coal | 2200 - 2700 | 1000 - 1400 |
| Salt | 4500 - 5500 | 2500 - 3100 |
| Anhydrites | 4000 - 5500 | 2200 - 3100 |
| Limestones | 3500 - 6000 | 2000 - 3300 |
| Dolomites | 3500 - 6500 | 1900 - 3600 |
| Granite | 4500 - 6000 | 2500 - 3300 |
| Basalt | 5000 - 6000 | 2800 - 2400 |
| Gneiss | 4400 - 5200 | 2700 - 3200 |