

ABS (Machine Grade) Material Data Sheet

| Physical Properties | Metric | English | Comments |
|---|------------------|---------------------------|--|
| Physical Properties | | | |
| Density | 1.04 g/cc | 0.0376 lb/in ³ | Grade Count = 3 |
| Melt Flow | 18 - 23 g/10 min | 18 - 23 g/10 min | Average = 21.3 g/10 min; Grade Count = 3 |
| Mechanical Properties | | | |
| Hardness, Rockwell R | 103 - 112 | 103 - 112 | Average = 110; Grade Count = 3 |
| Tensile Strength, Yield | 42.5 - 44.8 MPa | 6160 - 6500 psi | Average = 44 MPa; Grade Count = 3 |
| Elongation at Break | 23 - 25 % | 23 - 25 % | Average = 24.3%; Grade Count = 3 |
| Flexural Modulus | 2.25 - 2.28 GPa | 326 - 331 ksi | Average = 2.3 GPa; Grade Count = 3 |
| Flexural Yield Strength | 60.6 - 73.1 MPa | 8790 - 10600 psi | Average = 68.9 MPa; Grade Count = 3 |
| Izod Impact, Notched | 2.46 - 2.94 J/cm | 4.61 - 5.51 ft-lb/in | Average = 2.8 J/cm; Grade Count = 3 |
| Electrical Properties | | | |
| Arc Resistance | 120 sec | 120 sec | Grade Count=1 |
| Comparative Tracking Index | 600 V | 600 V | Grade Count=1 |
| Hot Wire Ignition, HWI | 15 sec | 15 sec | Grade Count = 1 |
| High Amp Arc Ignition, HAI | 120 arcs | 120 arcs | Grade Count = 1 |
| High Voltage Arc-Tracking Rate, HVTR | 25 mm/min | 0.984 in/min | Grade Count = 1 |
| Thermal Properties | | | |
| Maximum Service Temperature, Air | 88 - 89 °C | 190 - 192 °F | Average = 88.7°C; Grade Count = 3 |
| Deflection Temperature at 1.8 MPa (264 psi) | 88 - 89 °C | 190 - 192 °F | Average = 88.7°C; Grade Count=3 |
| Vicat Softening Point | 100 °C | 212 °F | Grade Count = 1 |
| Flammability, UL94 | HB | HB | Grade Count = 3 |