

BASF Ultramid[®] A3X2G10

Description: 50% glass-fiber reinforced injection-molding grade with improved flame retardance and enhanced long-term stability. Flame retardant based on red phosphorus; very high stiffness and strength; outstanding electrical properties.

Physical Properties	Metric	English	Comments
Density	1.60 g/cc	0.0578 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.70 - 1.1 %	0.70 - 1.1 %	23°C; 50% RH; ISO 62
Water Absorption at Saturation	3.7 - 4.3 %	3.7 - 4.3 %	ISO 62
Viscosity Measurement	140	140	ISO 307
Linear Mold Shrinkage	0.0040 cm/cm	0.0040 in/in	restricted
Melt Flow	40 g/10 min @Load 5.00 kg, Temperature 275 °C	40 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	180 MPa	26100 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	2.0 %	2.0 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	16.0 GPa	2320 ksi	ISO 527-1/-2
Flexural Modulus	13.0 GPa	1890 ksi	ISO 178
Izod Impact, Notched (ISO)	14.0 kJ/m ² @Temperature 23.0 °C	6.66 ft-lb/in ² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	5.00 J/cm ² @Temperature -30.0 °C	23.8 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	5.50 J/cm ² @Temperature 23.0 °C	26.2 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.10 J/cm ² @Temperature -30.0 °C	5.23 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	1.30 J/cm ² @Temperature 23.0 °C	6.19 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Dielectric Constant	3.6 @Frequency 1e+6 Hz	3.6 @Frequency 1e+6 Hz	IEC 60250
Dissipation Factor	0.020 @Frequency 1e+6 Hz	0.020 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	Test solution A; IEC 60112
Hot Wire Ignition, HWI	1.0 sec @Thickness >=0.800 mm	1.0 sec @Thickness >=0.0315 in	ASTM D3874-88
High Amp Arc Ignition, HAI	1.0 arcs @Thickness >=0.800 mm	1.0 arcs @Thickness >=0.0315 in	