

BASF Ultramid® A3WG10

Description: 50% glass-fiber reinforced injection-molding grade with high heat aging resistance for technical articles of very high stiffness.

Information provided by BASF

Physical Properties	Metric	English	Comments
Density	1.56 g/cc	0.0564 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	1.0 - 1.4 %	1.0 - 1.4 %	23°C; 50% RH; ISO 62
Water Absorption at Saturation	3.7 - 4.3 %	3.7 - 4.3 %	ISO 62
Viscosity Measurement	130	130	ISO 307
Linear Mold Shrinkage	0.0045 cm/cm	0.0045 in/in	restricted
Melt Flow	31.2 g/10 min @Load 5.00 kg, Temperature 275 °C	31.2 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133
Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	240 MPa	34800 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	2.5 %	2.5 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	16.8 GPa	2440 ksi	ISO 527-1/-2
Flexural Strength	360 MPa	52200 psi	at max force; ISO 178
Flexural Modulus	15.0 GPa	2180 ksi	ISO 178
Izod Impact, Notched (ISO)	13.0 kJ/m ² @Temperature 23.0 °C	6.19 ft-lb/in ² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	9.00 J/cm ² @Temperature -30.0 °C	42.8 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	9.50 J/cm ² @Temperature 23.0 °C	45.2 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.30 J/cm ² @Temperature -30.0 °C	6.19 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	1.80 J/cm ² @Temperature 23.0 °C	8.57 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	3.8 @Frequency 1e+6 Hz	3.8 @Frequency 1e+6 Hz	IEC 60250
Dissipation Factor	0.015 @Frequency 1e+6 Hz	0.015 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	450 V	450 V	Test solution A; IEC 60112