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BASF Ultramid® A3XZG5

Impact-modified, 25% glass-fiber reinforced injection-molding grade with improved flame retardance and enhanced long-term stability. Flame retardant based on red phosphorus; for components requiring high stiffness and enhanced toughness like photovoltaic connectors and junction boxes.

Physical Properties	Metric	English	Comments
Bulk Density	0.500 - 0.800 g/cc	0.0181 - 0.0289 lb/in³	
Density	1.32 g/cc	0.0477 lb/in³	ISO 1183
Moisture Absorption at Equilibrium	1.0 - 1.4 %	1.0 - 1.4 %	23°C; 50% RH; ISO 62
Water Absorption at Saturation	4.7 - 5.3 %	4.7 - 5.3 %	ISO 62
Viscosity Measurement	140	140	ISO 307
Linear Mold Shrinkage	0.0055 cm/cm	0.0055 in/in	restricted

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	105 MPa	15200 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	6.50 GPa	943 ksi	ISO 527-1/-2
Flexural Modulus	5.50 GPa	798 ksi	ISO 178
Izod Impact, Notched (ISO)	10.0 kJ/m² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	ISO 180/A
	24.0 kJ/m² @Temperature 23.0 °C	11.4 ft-lb/in² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	8.50 J/cm² @Temperature -30.0 °C	40.4 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU
	9.00 J/cm² @Temperature 23.0 °C	42.8 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	2.50 J/cm² @Temperature 23.0 °C	11.9 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eA

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	IEC 60093
Dielectric Constant	3.8 @Frequency 1e+6 Hz	3.8 @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	575 V	575 V	Test solution A; IEC 60112
Hot Wire Ignition, HWI	0.00 sec @Thickness >=0.750 mm	0.00 sec @Thickness >=0.0295 in	ASTM D3874-88
High Amp Arc Ignition, HAI	0.00 arcs @Thickness >=0.750 mm	0.00 arcs @Thickness >=0.0295 in	UL 746C