

BASF Ultramid® A3UG5

Description: Without halogenes and red phosphorus flame retarded 25% glass fiber reinforced injection molding grade; light colorable; outstanding mechanical and electrical properties.

Physical Properties	Metric	English	Comments
Bulk Density	0.500 - 0.800 g/cc	0.0181 - 0.0289 lb/in ³	
Density	1.39 g/cc	0.0502 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	1.1 - 1.5 %	1.1 - 1.5 %	ISO 62
Linear Mold Shrinkage	0.0040 cm/cm	0.0040 in/in	
Melt Flow	34.75 g/10 min @Load 5.00 kg, Temperature 275 °C	34.75 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133
Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	145 MPa	21000 psi	ISO 527-1/-2
Elongation at Break	3.0 %	3.0 %	ISO 527-1/-2
Modulus of Elasticity	9.50 GPa	1380 ksi	ISO 527-1/-2
Flexural Strength	230 MPa	33400 psi	ISO 178
Flexural Modulus	9.50 GPa	1380 ksi	ISO 178
Charpy Impact Unnotched	6.30 J/cm ² @Temperature -30.0 °C	30.0 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	6.50 J/cm ² @Temperature 23.0 °C	30.9 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.750 J/cm ² @Temperature 23.0 °C	3.57 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	0.017 @Frequency 1e+6 Hz	0.017 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 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 D 3874-88
High Amp Arc Ignition, HAI	0.00 arcs @Thickness >=0.750 mm	0.00 arcs @Thickness >=0.0295 in	US 746C
Thermal Properties	Metric	English	Comments
Melting Point	260 °C	500 °F	ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	260 °C	500 °F	ISO 527-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	245 °C	473 °F	ISO 527-1/-2
Decomposition Temperature	>= 310 °C	>= 590 °F	
UL RTI, Electrical	120 °C @Thickness 1.50 mm	248 °F @Thickness 0.0591 in	UL-746B
Flammability, UL94	V-0 @Thickness >=0.750 mm	V-0 @Thickness >=0.0295 in	
Oxygen Index	32 %	32 %	ISO 4589-1/-2
Glow Wire Flammability Index	960 °C @Thickness 1.00 mm	1760 °F @Thickness 0.0394 in	IEC 60695-2-12
Ignition Temperature	>= 350 °C	>= 662 °F	ASTM D1929