

BASF Ultramid® A3EG3 15% Glass Filled PA66 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 20% Glass Fiber Filled

Material Notes:

Ultramid A3EG3 is a 15% glass fiber reinforced injection molding PA66 grade. It conforms to FDA requirements of 21 CFR 177.1500.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-A3EG3-15-Glass-Filled-PA66-Dry.php

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in ³	ISO 1183
Water Absorption	7.0 %	7.0 %	ISO 62
Moisture Absorption at Equilibrium	2.2 %	2.2 %	23°C/50% R.H.; ISO 62
Viscosity Test	145 cm ³ /g	145 cm ³ /g	Viscosity number
Linear Mold Shrinkage	0.0055 cm/cm	0.0055 in/in	ASTM Data; MD
Melt Flow	70 g/10 min @Load 5.00 kg, Temperature 275 °C	70 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	114 MPa	16500 psi	0.2 in/min; ASTM Test
	156 MPa @Temperature -40.0 °C	22600 psi @Temperature -40.0 °F	ISO Data
Tensile Strength, Ultimate	130 MPa	18900 psi	5mm/min; ISO 527
Tensile Strength, Yield	74.0 MPa @Temperature 80.0 °C	10700 psi @Temperature 176 °F	ISO Data
Elongation at Break	3.0 %	3.0 %	5mm/min; ISO 527
	3.0 %	3.0 %	0.2 in/min; ASTM Test
	2.6 % @Temperature -40.0 °C	2.6 % @Temperature -40.0 °F	ISO Data
Elongation at Yield	7.4 % @Temperature 80.0 °C	7.4 % @Temperature 176 °F	ISO Data
Tensile Modulus	5.86 GPa	850 ksi	ASTM Test
	6.00 GPa	870 ksi	1mm/min; ISO 527

Mechanical Properties	Metric ^{Pa}	English ^{psi}	Comments
Flexural Modulus	5.17 GPa	750 ksi	ASTM Test
	5.20 GPa	754 ksi	ISO Data
Izod Impact, Notched	0.530 J/cm @Temperature -40.0 °C	0.993 ft-lb/in @Temperature -40.0 °F	ASTM Test
	0.590 J/cm @Thickness 3.17 mm	1.11 ft-lb/in @Thickness 0.125 in	ASTM Test
Izod Impact, Notched (ISO)	5.50 kJ/m ²	2.62 ft-lb/in ²	ISO Test
Charpy Impact Unnotched	4.50 J/cm ²	21.4 ft-lb/in ²	ISO 179
	4.30 J/cm ² @Temperature -30.0 °C	20.5 ft-lb/in ² @Temperature -22.0 °F	ISO 179
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	ISO 179
	0.700 J/cm ² @Temperature -30.0 °C	3.33 ft-lb/in ² @Temperature -22.0 °F	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	20.0 µm/m-°C	11.1 µin/in-°F	ASTM Test
	@Temperature -30.0 - 30.0 °C	@Temperature -22.0 - 86.0 °F	
CTE, linear, Parallel to Flow	33.0 µm/m-°C	18.3 µin/in-°F	ISO 11359
CTE, linear, Transverse to Flow	75.0 µm/m-°C	41.7 µin/in-°F	ISO 11359
Melting Point	260 °C	500 °F	10 K/min
	260 °C	500 °F	ASTM Test
Deflection Temperature at 0.46 MPa (66 psi)	250 °C	482 °F	ASTM Test
	250 °C	482 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	250 °C	482 °F	ASTM Test
	250 °C	482 °F	ISO 75
Vicat Softening Point	250 °C	482 °F	(50 °C/h / 50N) - B/50; ISO 306
Flammability, UL94	HB	HB	

Thermal Properties	@Thickness 1.66 mm Metric	@Thickness 0.0654 in English	Comments
	HB	HB	
	@Thickness 0.810 mm	@Thickness 0.0319 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Surface Resistance	1.00e+12 ohm	1.00e+12 ohm	IEC 60093
Dielectric Constant	3.5	3.5	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.014	0.014	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.023	0.023	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	550 V	550 V	IEC 60112

Descriptive Properties	Value	Comments
Color	Natural	
Commercial Status	Active America	
FDA	21 CFR 177.1500	
Form	Pellets	
Impact Modified	No	
NSF Std. 51	Yes	
Primary Processing Technique	Injection Molding	
Processing	Injection Molding	
Special characteristic	Heat stabilized or stable to heat	

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