

BASF Ultramid® B3EG7 35% Glass Filled PA6 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 40% Glass Fiber Filled

Material Notes:

Description: 35% Glass fiber reinforced injection molding grade for industrial articles and electrical insulating parts. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-B3EG7-35-Glass-Filled-PA6-Dry.php

Physical Properties	Metric	English	Comments
Bulk Density	0.500 - 0.800 g/cc	0.0181 - 0.0289 lb/in ³	
Density	1.41 g/cc	0.0509 lb/in ³	ISO 1183
Water Absorption	5.9 - 6.5 %	5.9 - 6.5 %	ISO 62
Moisture Absorption at Equilibrium	>= 2.0 %	>= 2.0 %	50% RH
	1.8 - 2.2 %	1.8 - 2.2 %	ISO 62
	>= 6.2 %	>= 6.2 %	Saturation
Viscosity Measurement	140	140	ISO 307
Linear Mold Shrinkage	0.0035 cm/cm	0.0035 in/in	
Melt Flow	63.45 g/10 min @Load 5.00 kg, Temperature 275 °C	63.45 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	195 MPa	28300 psi	ISO 527-1/-2
Elongation at Break	3.5 %	3.5 %	ISO 527-1/-2
Tensile Modulus	11.0 GPa	1600 ksi	ISO 527-1/-2
Flexural Strength	280 MPa	40600 psi	ISO 178
Flexural Modulus	10.0 GPa	1450 ksi	ISO 178
Izod Impact, Notched (ISO)	19.0 kJ/m ² @Temperature 23.0 °C	9.04 ft-lb/in ² @Temperature 73.4 °F	ISO 180/1A
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
	10.0 J/cm ²	47.6 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 179/1eJ Comments
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.80 J/cm ²	8.57 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	15.0 - 20.0 µm/m-°C	8.33 - 11.1 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	60.0 - 70.0 µm/m-°C	33.3 - 38.9 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Thermal Conductivity	0.360 W/m-K	2.50 BTU-in/hr-ft ² -°F	DIN 52612-1
Melting Point	220 °C	428 °F	ISO 11357-1/-3
Maximum Service Temperature, Air	135 °C	275 °F	for 50% loss of tensile strength after 20000hr
	165 °C	329 °F	for 50% loss of tensile strength after 5000hr
	200 °C	392 °F	
Deflection Temperature at 0.46 MPa (66 psi)	220 °C	428 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	215 °C	419 °F	ISO 75-1/-2
Decomposition Temperature	>= 300 °C	>= 572 °F	
UL RTI, Electrical	120 °C	248 °F	764B
UL RTI, Mechanical with Impact	95.0 °C	203 °F	764B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical without Impact	130 °C	266 °F	764B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Flammability, UL94	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
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Volume Resistivity Electrical Properties	1.00e+13 ohm-cm Metric	1.00e+13 ohm-cm English	IEC 60093 Comments
Dielectric Constant	3.9	3.9	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.021	0.021	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.021	0.021	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	575 V	575 V	Test Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Processing Temperature	80.0 °C	176 °F	Hopper Throat
Zone 1	260 °C	500 °F	Feed Zone
Zone 2	370 °C	698 °F	Compression
Zone 3	280 °C	536 °F	Metering-zone
Zone 4	280 °C	536 °F	Nozzle
Melt Temperature	270 - 290 °C	518 - 554 °F	Injection Molding/Extrusion
	280 °C	536 °F	Optimal
Mold Temperature	80.0 °C	176 °F	Optimal
	80.0 - 90.0 °C	176 - 194 °F	Injection Molding
Drying Temperature	80.0 °C	176 °F	
Dry Time	4 hour	4 hour	

Descriptive Properties	Value	Comments
Commercial Status	Europe and North America	
Ignition Temperature	>400°C	ASTM D1929
Peripheral screw speed	< 0.3 m/s	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China