BASF Ultramid® B3EG3 15% Glass Filled PA6 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 20% Glass Fiber Filled

Material Notes:

Description: 15% glass-fiber reinforced injection-molding grade with enhanced impact resistance, for example, for vehicle mirror housings as well as for the wheels of mountain bikes.Information provided by BASF

Order this product through the following link:
http://www.lookpolymers.com/polymer_BASF-Ultramid-B3EG3-15-Glass-Filled-PA6-Dry.php

Physical Properties	Metric	English	Comments
Density	1.23 g/cc	0.0444 lb/in³	ISO 1183
Water Absorption	7.7 - 8.3 %	7.7 - 8.3 %	Saturation; ISO 62
Moisture Absorption at Equilibrium	2.3 %	2.3 %	50% RH
	2.3 - 2.9 %	2.3 - 2.9 %	23°C; 50% RH; ISO 62
	7.7 %	7.7 %	Saturation
Viscosity Measurement	140	140	ISO 307
Linear Mold Shrinkage	0.0045 cm/cm	0.0045 in/in	restricted
Melt Flow	92.25 g/10 min @Load 5.00 kg, Temperature 275 °C	92.25 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	103 MPa	14900 psi	ASTM D638
Tensile Strength, Yield	130 MPa	18900 psi	50 mm/min; ISO 527-1/-2
Elongation at Break	3.5 %	3.5 %	ASTM D638
Elongation at Yield	3.5 %	3.5 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	5.80 GPa	841 ksi	ISO 527-1/-2
Flexural Strength	180 MPa	26100 psi	at max force; ISO 178
Flexural Modulus	5.20 GPa	754 ksi	ISO 178
Izod Impact, Notched (ISO)	6.00 kJ/m² @Temperature 23.0 °C	2.86 ft-lb/in² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	4.50 J/cm² @Temperature -30.0 °C	21.4 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU

Mechanical Properties	Metric	English	Comments
	[illegible] J/cm²	[illegible] ft-lb/in²	ASTM D256
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	5.00 J/cm²	23.8 ft-lb/in²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.700 J/cm²	3.33 ft-lb/in²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.800 J/cm²	3.81 ft-lb/in²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	20.0 µm/m-°C	11.1 µin/in-°F	ASTM E831
CTE, linear, Parallel to Flow	30.0 - 35.0 µm/m-°C	16.7 - 19.4 µin/in-°F	DIN 11359-1/-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	70.0 - 80.0 µm/m-°C	38.9 - 44.4 µin/in-°F	DIN 11359-1/-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Specific Heat Capacity	1.60 J/g-°C	0.382 BTU/lb-°F	
Thermal Conductivity	0.340 W/m-K	2.36 BTU-in/hr-ft²-°F	DIN 52612
Melting Point	220 °C	428 °F	DIN 53765
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)	215 °C	419 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	190 °C	374 °F	ISO 75-1/-2
UL RTI, Electrical	120 °C	248 °F	746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical with Impact	95.0 °C	203 °F	746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	130 °C	266 °F	

Thermal Properties	Metric	English	Comments
UL RTI, Mechanical without Impact	@Thickness 1.50 mm	@Thickness 0.0591 in	746B
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Dielectric Constant	3.8 @Frequency 1.00 Hz	3.8 @Frequency 1.00 Hz	IEC 60250
Dissipation Factor	0.025 @Frequency 1.00e+6 Hz	0.025 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	550 V	550 V	Test solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	270 - 290 °C	518 - 554 °F	Injection-molding/Extrusion
Mold Temperature	80.0 - 90.0 °C	176 - 194 °F	Injection-molding
Dry Time	2 - 4 hour	2 - 4 hour	

Descriptive Properties	Value	Comments
Commercial Status	Europe and North America	

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