

BASF Ultramid® B35EG3 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 for gIT applications such as, for example, steering column switches, vehicle mirror housings and the wheels of mountain bikes. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-B35EG3-15-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	1.23 g/cc	0.0444 lb/in ³	ISO 1183
Water Absorption	7.7 - 8.3 %	7.7 - 8.3 %	Saturation; ISO 62
Moisture Absorption at Equilibrium	2.3 - 2.9 %	2.3 - 2.9 %	23°C; 50% RH; ISO 62
Viscosity Measurement	170	170	ISO 307
Linear Mold Shrinkage	0.0055 cm/cm	0.0055 in/in	restricted
Melt Flow	67.65 g/10 min @Load 5.00 kg, Temperature 275 °C	67.65 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	130 MPa	18900 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	4.0 %	4.0 %	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)	6.50 kJ/m ² @Temperature 23.0 °C	3.09 ft-lb/in ² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	5.50 J/cm ² @Temperature -30.0 °C	26.2 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	6.00 J/cm ² @Temperature 23.0 °C	28.6 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
	0.800 J/cm ²	3.81 ft-lb/in ²	

Charpy Impact, Notched Mechanical Properties	Metric @ Temperature -30.0 °C	English @ Temperature -22.0 °F	ISO 179/1eA Comments
	0.900 J/cm²	4.28 ft-lb/in²	ISO 179/1eA
	@ Temperature 23.0 °C	@ Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	30.0 - 35.0 µm/m-°C @ Temperature 23.0 - 80.0 °C	16.7 - 19.4 µin/in-°F @ Temperature 73.4 - 176 °F	DIN 11359-1/-2
CTE, linear, Transverse to Flow	70.0 - 80.0 µm/m-°C @ Temperature 23.0 - 80.0 °C	38.9 - 44.4 µin/in-°F @ Temperature 73.4 - 176 °F	DIN 11359-1/-2
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
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
Processing Temperature	80.0 °C	176 °F	Hopper Throat
Zone 1	260 °C	500 °F	Feed Zone
Zone 2	270 °C	518 °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
	290 °C	554 °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	
Peripheral screw speed	< 0.3 m/s	

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