BASF Ultramid® B3ZG8 BK 20560 40% Glass Filled PA6-1 (Dry)

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

Material Notes:

Description: Impact-modified and 40% glass-fiber reinforced injection-molding grade for technical articles of very high stiffness and toughness, for instance, for vehicle airbag housings and suitcase shell.Information provided by BASF

Order this product through the following link:
http://www.lookpolymers.com/polymer_BASF-Ultramid-B3ZG8-BK-20560-40-Glass-Filled-PA6-1-Dry.php

Physical Properties	Metric	English	Comments
Density	1.40 g/cc	0.0506 lb/in³	ISO 1183
Water Absorption	4.7 - 5.3 %	4.7 - 5.3 %	Saturation; ISO 62
Moisture Absorption at Equilibrium	1.4 - 1.8 %	1.4 - 1.8 %	23°C; 50% RH; ISO 62
Viscosity Measurement	160	160	ISO 307
Linear Mold Shrinkage	0.0035 cm/cm	0.0035 in/in	restricted
Melt Flow	12.6 g/10 min @Load 5.00 kg, Temperature 275 °C	12.6 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	84.0 MPa @Load 36.5 kg, Time 30.0 sec	12200 psi @Load 80.5 lb, Time 0.00833 hour	ISO 2039-1
Tensile Strength, Yield	165 MPa	23900 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	4.6 %	4.6 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	11.6 GPa	1680 ksi	ISO 527-1/-2
Flexural Strength	250 MPa	36300 psi	at max force; ISO 178
Flexural Modulus	9.50 GPa	1380 ksi	ISO 178
Izod Impact, Notched (ISO)	14.0 kJ/m² @Temperature -30.0 °C	6.66 ft-lb/in² @Temperature -22.0 °F	ISO 180/A
	22.0 kJ/m² @Temperature 23.0 °C	10.5 ft-lb/in² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	10.5 J/cm² @Temperature -30.0 °C	50.0 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU

Mechanical Properties	Metric	English	Comments
	11.0 J/cm²	52.4 ft-lb/in²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.50 J/cm² @Temperature -30.0 °C	7.14 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eA
	2.40 J/cm² @Temperature 23.0 °C	11.4 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	10.0 - 20.0 µm/m-°C @Temperature 23.0 - 80.0 °C	5.56 - 11.1 µin/in-°F @Temperature 73.4 - 176 °F	DIN 11359-1/-2
CTE, linear, Transverse to Flow	50.0 - 60.0 µm/m-°C @Temperature 23.0 - 80.0 °C	27.8 - 33.3 µin/in-°F @Temperature 73.4 - 176 °F	DIN 11359-1/-2
Thermal Conductivity	0.360 W/m-K	2.50 BTU-in/hr-ft²-°F	DIN 52612
Melting Point	220 °C	428 °F	DIN 53765
Maximum Service Temperature, Air	180 °C	356 °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)	205 °C	401 °F	ISO 75-1/-2
Decomposition Temperature	>= 300 °C	>= 572 °F	
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
Surface Resistance	1.00e+12 ohm	1.00e+12 ohm	IEC 60093
Dielectric Constant	4.0 @Frequency 1.00 Hz	4.0 @Frequency 1.00 Hz	IEC 60250
Dissipation Factor	0.020 @Frequency 1.00e+6 Hz	0.020 @Frequency 1.00e+6 Hz	IEC 60250

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
	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	
Moisture Content	0.030 - 0.060 %	0.030 - 0.060 %	Optimal
	<= 0.15 %	<= 0.15 %	

Descriptive Properties	Value	Comments
Color	BK 20560	
Commercial Status	Europe	
Ignition Temperature	>400°C	ASTM D129
Peripheral screw speed	< 0.3 m/s	

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