

BASF Ultramid® B3WG10 BK 00564 50% Glass Filled PA6 (Conditioned)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 50% Glass Fiber Filled

Material Notes:

Description: 50% glass-fiber reinforced and heat aging resistant injection-molding grade for technical parts with very high stiffness. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-B3WG10-BK-00564-50-Glass-Filled-PA6-Conditioned.php

Physical Properties	Metric	English	Comments
Bulk Density	0.500 - 0.800 g/cc	0.0181 - 0.0289 lb/in ³	
Density	1.55 g/cc	0.0560 lb/in ³	ISO 1183
Water Absorption	4.5 - 5.1 %	4.5 - 5.1 %	Saturation; ISO 62
Moisture Absorption at Equilibrium	1.3 - 1.7 %	1.3 - 1.7 %	23°C; 50% RH; ISO 62
Viscosity Measurement	135	135	ISO 307
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 in/in	restricted
Melt Flow	38.75 g/10 min @Load 5.00 kg, Temperature 275 °C	38.75 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	150 MPa	21800 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	4.5 %	4.5 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	11.0 GPa	1600 ksi	ISO 527-1/-2
Flexural Strength	220 MPa	31900 psi	at max force; ISO 178
Flexural Modulus	10.0 GPa	1450 ksi	ISO 178
Izod Impact, Notched (ISO)	24.0 kJ/m ² @Temperature 23.0 °C	11.4 ft-lb/in ² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	10.0 J/cm ² @Temperature 23.0 °C	47.6 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	2.70 J/cm ² @Temperature 23.0 °C	12.8 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA
	7400 MPa	1.07e+6 psi	

Tensile Creep Modulus, 1000 hours Mechanical Properties	Metric @Strain <=0.500 %	English @Strain <=0.500 %	ISO 899-1 Comments
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Thermal Properties	Metric	English	Comments
Specific Heat Capacity	1.30 J/g-°C	0.311 BTU/lb-°F	
Thermal Conductivity	0.380 W/m-K	2.64 BTU-in/hr-ft ² -°F	DIN 52612
Melting Point	220 °C	428 °F	DIN 53765
Maximum Service Temperature, Air	145 °C	293 °F	for 50% loss of tensile strength after 20000hr
	175 °C	347 °F	for 50% loss of tensile strength after 5000hr
	200 °C	392 °F	
Decomposition Temperature	>= 300 °C	>= 572 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+10 ohm-cm	1.00e+10 ohm-cm	IEC 60093
Surface Resistance	1.00e+10 ohm	1.00e+10 ohm	IEC 60093
Dielectric Constant	6.1 @Frequency 1.00 Hz	6.1 @Frequency 1.00 Hz	IEC 60250
Dissipation Factor	0.14 @Frequency 1.00e+6 Hz	0.14 @Frequency 1.00e+6 Hz	IEC 60250

Processing Properties	Metric	English	Comments
Processing Temperature	80.0 °C	176 °F	Hopper Throat
Zone 1	270 °C	518 °F	Feed Zone
Zone 2	280 °C	536 °F	Compression
Zone 3	290 °C	554 °F	Metering-zone
Zone 4	290 °C	554 °F	Nozzle
Melt Temperature	290 °C	554 °F	Optimal
	280 - 300 °C	536 - 572 °F	Injection-molding/Extrusion
Mold Temperature	80.0 °C	176 °F	Optimal
	80.0 - 90.0 °C	176 - 194 °F	Injection-molding

Processing Properties	Metric	English	Comments
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 00564	
Commercial Status	Europe	
Ignition Temperature	>400°C	ASTM D129
Peripheral screw speed	< 0.3 m/s	

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