

BASF Ultramid® B3WG6 30% Glass Filled PA6 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 30% Glass Fiber Filled

Material Notes:

Ultramid B3WG6 is a 30% glass fiber reinforced, heat stabilized injection molding PA6 grade.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-B3WG6-30-Glass-Filled-PA6-Dry.php

Physical Properties	Metric	English	Comments
Density	1.36 g/cc	0.0491 lb/in ³	ISO 1183
Water Absorption	6.3 - 6.9 %	6.3 - 6.9 %	ISO 62
Moisture Absorption at Equilibrium	1.9 - 2.3 %	1.9 - 2.3 %	23°C/50% R.H.; ISO 62
Viscosity Test	140 cm ³ /g	140 cm ³ /g	Viscosity number; ISO 307
Linear Mold Shrinkage	0.0035 cm/cm	0.0035 in/in	
Melt Flow	68 g/10 min @Load 5.00 kg, Temperature 275 °C	68 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	185 MPa	26800 psi	50mm/min; ISO 527
Elongation at Yield	3.5 %	3.5 %	50mm/min; ISO 527
Modulus of Elasticity	9.50 GPa	1380 ksi	ISO 527
Flexural Strength	270 MPa	39200 psi	ISO 178
Flexural Modulus	8.60 GPa	1250 ksi	ISO 178
Izod Impact, Notched (ISO)	15.0 kJ/m ²	7.14 ft-lb/in ²	ISO 180/A
Charpy Impact Unnotched	9.50 J/cm ²	45.2 ft-lb/in ²	ISO 179/1eU
	8.00 J/cm ² @Temperature -30.0 °C	38.1 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	1.50 J/cm ²	7.14 ft-lb/in ²	ISO 179/1eA
	1.10 J/cm ² @Temperature -30.0 °C	5.24 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 - 25.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 80.0 $^\circ\text{C}$	11.1 - 13.9 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 176 $^\circ\text{F}$	ISO 11359-1/-2
CTE, linear, Transverse to Flow	60.0 - 70.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 80.0 $^\circ\text{C}$	33.3 - 38.9 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 176 $^\circ\text{F}$	ISO 11359-1/-2
Specific Heat Capacity	1.50 J/g- $^\circ\text{C}$	0.359 BTU/lb- $^\circ\text{F}$	
Thermal Conductivity	0.360 W/m-K	2.50 BTU-in/hr-ft 2 - $^\circ\text{F}$	DIN 52612
Melting Point	220 $^\circ\text{C}$	428 $^\circ\text{F}$	DIN 53765
Maximum Service Temperature, Air	145 $^\circ\text{C}$	293 $^\circ\text{F}$	for 50% loss of tensile strength after 20,000 hr
	175 $^\circ\text{C}$	347 $^\circ\text{F}$	for 50% loss of tensile strength after 5,000 hr
	200 $^\circ\text{C}$	392 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	220 $^\circ\text{C}$	428 $^\circ\text{F}$	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	210 $^\circ\text{C}$	410 $^\circ\text{F}$	ISO 75
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 1.00e+6 Hz	3.8 @Frequency 1.00e+6 Hz	IEC 60250
Dissipation Factor	0.023 @Frequency 1.00e+6 Hz	0.023 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	450 V	450 V	Test Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	270 - 290 $^\circ\text{C}$	518 - 554 $^\circ\text{F}$	Injection-molding/Extrusion
Mold Temperature	80.0 - 90.0 $^\circ\text{C}$	176 - 194 $^\circ\text{F}$	Injection-molding

Descriptive Properties	Value	Comments
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Color Descriptive Properties	Natural Value	Comments
Commercial Status	North America and Europe	
Form	Pellets	
Impact Modified	No	
Primary Processing Technique	Injection Molding	
Processing	Injection Molding	
Special characteristic	Heat stabilized or stable to heat	

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