

BASF Ultramid® B3WG5 25% Glass Filled PA6 (Conditioned)

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

Material Notes:

Description: 25% glass-fiber reinforced and heat aging resistant injection-molding grade, for instance, for fan impeller glass-fiber reinforced injection-molding grade for industrial articles and electrical insulating parts. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-B3WG5-25-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	1.32 g/cc	0.0477 lb/in ³	ISO 1183
Water Absorption	6.8 - 7.4 %	6.8 - 7.4 %	Saturation; ISO 62
Moisture Absorption at Equilibrium	2.1 - 2.5 %	2.1 - 2.5 %	23°C; 50% RH; ISO 62
	2.3 %	2.3 %	50% RH
	7.1 %	7.1 %	Saturation
Viscosity Measurement	140	140	ISO 307
Linear Mold Shrinkage	0.0035 cm/cm	0.0035 in/in	restricted
Melt Flow	72.6 g/10 min @Load 5.00 kg, Temperature 275 °C	72.6 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	105 MPa	15200 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	8.5 %	8.5 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	5.00 GPa	725 ksi	ISO 527-1/-2
Flexural Strength	150 MPa	21800 psi	at max force; ISO 178
Flexural Modulus	4.20 GPa	609 ksi	ISO 178
Izod Impact, Notched (ISO)	17.0 kJ/m ² @Temperature 23.0 °C	8.09 ft-lb/in ² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	10.5 J/cm ² @Temperature 23.0 °C	50.0 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
	2.50 J/cm ²	11.9 ft-lb/in ²	

Charpy Impact, Notched Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 179/1eA Comments
Tensile Creep Modulus, 1000 hours	3000 MPa @Strain <=0.500 %	435000 psi @Strain <=0.500 %	ISO 899-1

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	1.50 J/g-°C	0.359 BTU/lb-°F	
Thermal Conductivity	0.350 W/m-K	2.43 BTU-in/hr-ft²-°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	7.0 @Frequency 1.00 Hz	7.0 @Frequency 1.00 Hz	IEC 60250
Dissipation Factor	0.24 @Frequency 1.00e+6 Hz	0.24 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	450 V	450 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

Processing Properties	280 °C Metric	536 °F English	Optimal Comments
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
Commercial Status	Europe	
Ignition Temperature	>400°C	ASTM D129
Peripheral screw speed	< 0.3 m/s	

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