

BASF Ultramid® A3EG10 50% Glass Filled PA66 (Conditioned)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 50% Glass Fiber Filled

Material Notes:

Description: 50% glass-fiber reinforced injection-molding grade for technical articles of very high stiffness as well as for electric insulating parts. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-A3EG10-50-Glass-Filled-PA66-Conditioned.php

Physical Properties	Metric	English	Comments
Bulk Density	0.500 - 0.800 g/cc	0.0181 - 0.0289 lb/in ³	
Density	1.56 g/cc	0.0564 lb/in ³	ISO 1183
Water Absorption	3.7 - 4.3 %	3.7 - 4.3 %	Saturation; ISO 62
Moisture Absorption at Equilibrium	1.0 - 1.4 %	1.0 - 1.4 %	23°C; 50% RH; ISO 62
Viscosity Measurement	130	130	ISO 307
Linear Mold Shrinkage	0.0045 cm/cm	0.0045 in/in	restricted
Linear Mold Shrinkage, Flow	0.0033 cm/cm	0.0033 in/in	ISO 2577
	0.0045 cm/cm	0.0045 in/in	TM=300°C, TW=80°C
Linear Mold Shrinkage, Transverse	0.0082 cm/cm	0.0082 in/in	ISO 2577
Melt Flow	31.2 g/10 min @Load 5.00 kg, Temperature 275 °C	31.2 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	180 MPa	26100 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	3.5 %	3.5 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	12.5 GPa	1810 ksi	ISO 527-1/-2
Flexural Strength	300 MPa	43500 psi	at max force; ISO 178
Flexural Modulus	13.5 GPa	1960 ksi	ISO 178
Izod Impact, Notched (ISO)	14.5 kJ/m ² @Temperature 23.0 °C	6.90 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

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179/1eA
Tensile Creep Modulus, 1000 hours	7800 MPa @Strain <=0.500 %	1.13e+6 psi @Strain <=0.500 %	ISO 899-1

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	1.30 J/g-°C	0.311 BTU/lb-°F	
Thermal Conductivity	0.370 W/m-K	2.57 BTU-in/hr-ft²-°F	DIN 52612
Melting Point	260 °C	500 °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
	240 °C	464 °F	
Decomposition Temperature	>= 310 °C	>= 590 °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	6.6 @Frequency 1.00 Hz	6.6 @Frequency 1.00 Hz	IEC 60250
Dissipation Factor	0.17 @Frequency 1.00e+6 Hz	0.17 @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
Melt Temperature	290 - 310 °C	554 - 590 °F	Injection-molding/Extrusion
	300 °C	572 °F	Optimal
Mold Temperature	80.0 °C	176 °F	Optimal
	80.0 - 90.0 °C	176 - 194 °F	Injection-molding

Drying Temperature Processing Properties	80.0 °C Metric	176 °F 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
Commercial Status	Europe	
Ignition Temperature	>400°C	ASTM D129
Peripheral screw speed	< 0.3 m/s	

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