

BASF Ultramid® KR 4355 G10 BK 23215 50% Glass Filled PA6/6T (Conditioned)

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

Material Notes:

Description: 50% glass-fiber reinforced product for injection molding; high toughness and rigidity; low water absorption, high melting point (285°C); mechanical properties remain constant up to 60°C after moisture absorption; suitable e.g. for valve housings. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-KR-4355-G10-BK-23215-50-Glass-Filled-PA66T-Conditioned.php

Physical Properties	Metric	English	Comments
Bulk Density	0.500 - 0.800 g/cc	0.0181 - 0.0289 lb/in³	
Density	1.62 g/cc	0.0585 lb/in³	ISO 1183
Water Absorption	3.5 - 4.5 %	3.5 - 4.5 %	Saturation; ISO 62
Moisture Absorption at Equilibrium	0.40 - 0.80 %	0.40 - 0.80 %	23°C; 50% RH; ISO 62
Viscosity Measurement	135	135	ISO 307
Linear Mold Shrinkage	0.0029 cm/cm	0.0029 in/in	restricted
Linear Mold Shrinkage, Flow	0.0027 cm/cm	0.0027 in/in	TM=320°C, TW=100°C
	0.0030 cm/cm	0.0030 in/in	ISO 2577
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	190 MPa	27600 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	2.5 %	2.5 %	ISO 527-1/-2
Modulus of Elasticity	16.0 GPa	2320 ksi	ISO 527-1/-2
Charpy Impact Unnotched	7.50 J/cm² @Temperature -30.0 °C	35.7 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU
	8.00 J/cm² @Temperature 23.0 °C	38.1 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eU
Tensile Creep Modulus, 1000 hours	10500 MPa @Strain <=0.500 %	1.52e+6 psi @Strain <=0.500 %	ISO 899-1

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.320 W/m-K	2.22 BTU-in/hr-ft ² -°F	DIN 52612
Melting Point	285 °C	545 °F	DIN 53765
Maximum Service Temperature, Air	145 °C	293 °F	for 50% loss of tensile strength after 20000hr
	170 °C	338 °F	for 50% loss of tensile strength after 5000hr
	260 °C	500 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+16 ohm	>= 1.00e+16 ohm	IEC 60093
Dielectric Constant	4.8 @Frequency 1.00 Hz	4.8 @Frequency 1.00 Hz	IEC 60250
Dielectric Strength	31.0 kV/mm	787 kV/in	IEC 60243-1
Dissipation Factor	0.030 @Frequency 1.00e+6 Hz	0.030 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	Test solution A; IEC 60112

Processing Properties	Metric	English	Comments
Processing Temperature	80.0 °C	176 °F	Hopper Throat
Zone 1	300 °C	572 °F	Feed Zone
Zone 2	310 °C	590 °F	Compression
Zone 3	320 °C	608 °F	Metering-zone
Zone 4	320 °C	608 °F	Nozzle
Melt Temperature	310 - 330 °C	590 - 626 °F	Injection-molding/Extrusion
	320 °C	608 °F	Optimal
Mold Temperature	80.0 - 120 °C	176 - 248 °F	Injection-molding
	100 °C	212 °F	Optimal
Drying Temperature	110 °C	230 °F	
Dry Time			

Processing Properties	8 hour Metric	8 hour English	Comments
Moisture Content	<= 0.030 %	<= 0.030 %	Optimal
	<= 0.15 %	<= 0.15 %	

Descriptive Properties	Value	Comments
Color	BK 23215	
Commercial Status	Europe	
Peripheral screw speed	<0.3 m/s	

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