

BASF Ultramid® KR 4365 G5 35% Glass Filled PA6/6T FR (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 40% Glass Fiber Filled

Material Notes:

Description: Partially aromatic polyamide; flame retardant based on red phosphorus; low water absorption, high melting point (295°C); low tendency to form deposits on electrical contacts, very resistant to electrolytic corrosion, resistant to soldering temperatures, can be electroplated. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-KR-4365-G5-35-Glass-Filled-PA66T-FR-Dry.php

Physical Properties	Metric	English	Comments
Bulk Density	0.500 - 0.800 g/cc	0.0181 - 0.0289 lb/in ³	
Density	1.38 g/cc	0.0499 lb/in ³	ISO 1183
Water Absorption	5.0 - 6.0 %	5.0 - 6.0 %	Saturation; ISO 62
Moisture Absorption at Equilibrium	1.1 - 1.5 %	1.1 - 1.5 %	23°C; 50% RH; ISO 62
Viscosity Measurement	130	130	ISO 307
Linear Mold Shrinkage	0.0040 cm/cm	0.0040 in/in	restricted
Linear Mold Shrinkage, Flow	0.0041 cm/cm	0.0041 in/in	TM=320°C, TW=100°C
	0.0050 cm/cm	0.0050 in/in	ISO 2577
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	150 MPa	21800 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	3.0 %	3.0 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	8.30 GPa	1200 ksi	ISO 527-1/-2
Izod Impact, Notched (ISO)	13.0 kJ/m ² @Temperature 23.0 °C	6.19 ft-lb/in ² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	7.50 J/cm ² @Temperature 23.0 °C	35.7 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.30 J/cm ² @Temperature 23.0 °C	6.19 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	50.0 - 60.0 $\mu\text{m}/\text{m}\cdot\text{°C}$ @Temperature 23.0 - 80.0 $^{\circ}\text{C}$	27.8 - 33.3 $\mu\text{in}/\text{in}\cdot\text{°F}$ @Temperature 73.4 - 176 $^{\circ}\text{F}$	DIN 11359-1/-2
CTE, linear, Transverse to Flow	25.0 $\mu\text{m}/\text{m}\cdot\text{°C}$ @Temperature 23.0 - 80.0 $^{\circ}\text{C}$	13.9 $\mu\text{in}/\text{in}\cdot\text{°F}$ @Temperature 73.4 - 176 $^{\circ}\text{F}$	DIN 11359-1/-2
Specific Heat Capacity	1.40 J/g- $^{\circ}\text{C}$	0.335 BTU/lb- $^{\circ}\text{F}$	
Thermal Conductivity	0.310 W/m-K	2.15 BTU-in/hr-ft ² - $^{\circ}\text{F}$	DIN 52612
Melting Point	295 $^{\circ}\text{C}$	563 $^{\circ}\text{F}$	DIN 53765
Maximum Service Temperature, Air	125 $^{\circ}\text{C}$	257 $^{\circ}\text{F}$	for 50% loss of tensile strength after 20000hr
	150 $^{\circ}\text{C}$	302 $^{\circ}\text{F}$	for 50% loss of tensile strength after 5000hr
	270 $^{\circ}\text{C}$	518 $^{\circ}\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	270 $^{\circ}\text{C}$	518 $^{\circ}\text{F}$	ISO 75-1/-2
Decomposition Temperature	≥ 350 $^{\circ}\text{C}$	≥ 662 $^{\circ}\text{F}$	
Flammability, UL94	V-2 @Thickness ≥ 0.370 mm	V-2 @Thickness ≥ 0.0146 in	
	V-0 @Thickness ≥ 0.750 mm	V-0 @Thickness ≥ 0.0295 in	
	5VB @Thickness ≥ 1.50 mm	5VB @Thickness ≥ 0.0591 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	IEC 60093
Dielectric Constant	4.0 @Frequency 1.00 Hz	4.0 @Frequency 1.00 Hz	IEC 60250
Dissipation Factor	0.020 @Frequency 1.00e+6 Hz	0.020 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	Test solution A; IEC 60112

Electrical Properties	Metric	English	Comments
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	>= 320 °C	>= 608 °F	Optimal
	310 - 330 °C	590 - 626 °F	Injection-molding/Extrusion
Mold Temperature	80.0 - 120 °C	176 - 248 °F	Injection-molding
	100 °C	212 °F	Optimal
Drying Temperature	110 °C	230 °F	
Dry Time	8 hour	8 hour	

Descriptive Properties	Value	Comments
Commercial Status	Europe	
Ignition Temperature	>470°C	ASTM D1929
Peripheral screw speed	< 0.3 m/s	

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