

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

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

Physical Properties	Metric	English	Comments
Bulk Density	0.500 - 0.800 g/cc	0.0181 - 0.0289 lb/in <sup>3</sup>	
Density	1.62 g/cc	0.0585 lb/in <sup>3</sup>	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	240 MPa	34800 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	2.3 %	2.3 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	17.0 GPa	2470 ksi	ISO 527-1/-2
Izod Impact, Notched (ISO)	13.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	6.19 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	8.50 J/cm <sup>2</sup> @Temperature -30.0 °C	40.4 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eU
	9.00 J/cm <sup>2</sup> @Temperature 23.0 °C	42.8 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.30 J/cm <sup>2</sup> @Temperature 23.0 °C	6.19 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 179/1eA

Mechanical Properties	Metric	English	Comments
<b>Thermal Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
CTE, linear, Parallel to Flow	50.0 - 90.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 80.0 $^\circ\text{C}$	27.8 - 50.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 176 $^\circ\text{F}$	DIN 11359-1/-2
CTE, linear, Transverse to Flow	18.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 80.0 $^\circ\text{C}$	10.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 176 $^\circ\text{F}$	DIN 11359-1/-2
Specific Heat Capacity	1.00 J/g- $^\circ\text{C}$	0.239 BTU/lb- $^\circ\text{F}$	
Thermal Conductivity	0.320 W/m-K	2.22 BTU-in/hr-ft <sup>2</sup> - $^\circ\text{F}$	DIN 52612
Melting Point	285 $^\circ\text{C}$	545 $^\circ\text{F}$	DIN 53765
Maximum Service Temperature, Air	145 $^\circ\text{C}$	293 $^\circ\text{F}$	for 50% loss of tensile strength after 20000hr
	170 $^\circ\text{C}$	338 $^\circ\text{F}$	for 50% loss of tensile strength after 5000hr
	260 $^\circ\text{C}$	500 $^\circ\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	245 $^\circ\text{C}$	473 $^\circ\text{F}$	ISO 75-1/-2
Decomposition Temperature	$\geq 350$ $^\circ\text{C}$	$\geq 662$ $^\circ\text{F}$	
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Dielectric Constant	4.7 @Frequency 1.00 Hz	4.7 @Frequency 1.00 Hz	IEC 60250
Dielectric Strength	33.0 kV/mm	838 kV/in	IEC 60243-1
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

Processing Properties	Metric	English	Comments
Processing Temperature	80.0 $^\circ\text{C}$	176 $^\circ\text{F}$	Hopper Throat

Zone 1 Processing Properties	300 °C Metric	572 °F English	Feed Zone Comments
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	8 hour	8 hour	
Moisture Content	<= 0.030 %	<= 0.030 %	Optimal
	<= 0.15 %	<= 0.15 %	

Descriptive Properties	Value	Comments
Color	BK 23215	
Commercial Status	Europe	
Ignition Temperature	>470°C	ASTM D1929
Peripheral screw speed	<0.3 m/s	

## Contact Songhan Plastic Technology Co.,Ltd.

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