

## BASF Ultramid® A3HG6 HR BK 23591 30% Glass Filled PA66 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 30% Glass Fiber Filled

### Material Notes:

Description: 30% glass-fiber reinforced injection-molding grade with enhanced hydrolysis resistance, e.g., for applications in vehicle cooling systems. Information provided by BASF

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_BASF-Ultramid-A3HG6-HR-BK-23591-30-Glass-Filled-PA66-Dry.php](http://www.lookpolymers.com/polymer_BASF-Ultramid-A3HG6-HR-BK-23591-30-Glass-Filled-PA66-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	1.37 g/cc	0.0495 lb/in <sup>3</sup>	ISO 1183
Water Absorption	5.2 - 5.8 %	5.2 - 5.8 %	Saturation; ISO 62
Moisture Absorption at Equilibrium	1.5 - 1.9 %	1.5 - 1.9 %	23°C; 50% RH; ISO 62
	1.7 %	1.7 %	50% RH; ISO 62
	5.5 %	5.5 %	Saturation; ISO 62
Viscosity Measurement	145	145	ISO 307
Linear Mold Shrinkage	0.0055 cm/cm	0.0055 in/in	restricted
Melt Flow	34.25 g/10 min	34.25 g/10 min	ISO 1133
	@Load 5.00 kg, Temperature 275 °C	@Load 11.0 lb, Temperature 527 °F	

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	225 MPa	32600 psi	ISO 2039-1
Tensile Strength, Yield	190 MPa	27600 psi	50 mm/min; ISO 527-1/-2
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Yield	240 MPa	34800 psi	ISO 527
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Modulus of Elasticity	10.0 GPa	1450 ksi	ISO 527-1/-2
Flexural Strength	275 MPa	39900 psi	at max force; ISO 178
Flexural Modulus	8.70 GPa	1260 ksi	ISO 178
	9.00 kJ/m <sup>2</sup>	4.28 ft-lb/in <sup>2</sup>	

Impact Notched (ISO)	Metric	English	ISO 180/A
<b>Mechanical Properties</b>	@Temperature -30.0 °C	@Temperature -22.0 °F	
	13.0 kJ/m <sup>2</sup>	6.19 ft-lb/in <sup>2</sup>	ISO 180/A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
<b>Charpy Impact Unnotched</b>	6.50 J/cm <sup>2</sup>	30.9 ft-lb/in <sup>2</sup>	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	8.00 J/cm <sup>2</sup>	38.1 ft-lb/in <sup>2</sup>	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
<b>Charpy Impact, Notched</b>	0.900 J/cm <sup>2</sup>	4.28 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.10 J/cm <sup>2</sup>	5.23 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
<b>CTE, linear, Parallel to Flow</b>	20.0 - 30.0 μm/m-°C	11.1 - 16.7 μin/in-°F	DIN 11359-1/-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
<b>CTE, linear, Transverse to Flow</b>	60.0 - 70.0 μm/m-°C	33.3 - 38.9 μin/in-°F	DIN 11359-1/-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
<b>Specific Heat Capacity</b>	1.50 J/g-°C	0.359 BTU/lb-°F	
<b>Thermal Conductivity</b>	0.340 W/m-K	2.36 BTU-in/hr-ft <sup>2</sup> -°F	DIN 52612
<b>Melting Point</b>	260 °C	500 °F	DIN 53765
<b>Maximum Service Temperature, Air</b>	240 °C	464 °F	
<b>Deflection Temperature at 0.46 MPa (66 psi)</b>	250 °C	482 °F	ISO 75-1/-2
<b>Deflection Temperature at 1.8 MPa (264 psi)</b>	250 °C	482 °F	ISO 75-1/-2
<b>Decomposition Temperature</b>	>= 310 °C	>= 590 °F	
<b>UL RTI, Electrical</b>	65.0 °C	149 °F	746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
<b>UL RTI, Mechanical with Impact</b>	65.0 °C	149 °F	746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	65.0 °C	149 °F	

UL RTI Mechanical without Impact Thermal Properties	Metric @ Thickness 1.50 mm	English @ Thickness 0.0591 in	746B Comments
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	
Dielectric Constant	3.5 @Frequency 1.00 Hz	3.5 @Frequency 1.00 Hz	IEC 60250
Dissipation Factor	0.014 @Frequency 100 Hz	0.014 @Frequency 100 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	290 °C	554 °F	Feed zone
Zone 2	290 °C	554 °F	Compression
Zone 3	290 °C	554 °F	Metering-zone
Zone 4	290 °C	554 °F	Nozzle
Melt Temperature	280 - 300 °C	536 - 572 °F	Injection-molding/Extrusion
	290 °C	554 °F	Optimal
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
Color	BK 23591	
Commercial Status	Europe and North America	

Ignition Temperature Descriptive Properties	>400°C Value	ASTM D1929 Comments
Peripheral screw speed	< 0.3 m/s	

## Contact Songhan Plastic Technology Co.,Ltd.

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