

## BASF Ultramid® A3X2G7 35% Glass Filled PA66 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Glass Fiber Filled, Flame Retardant

### Material Notes:

Ultramid A3X2G7 is a 35% glass fiber reinforced injection molding PA66 grade with improved flame retardance and enhanced long-term stability. Flame retardant based on red phosphorus; very high stiffness and strength; outstanding mechanical and electrical properties.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_BASF-Ultramid-A3X2G7-35-Glass-Filled-PA66-Dry.php](http://www.lookpolymers.com/polymer_BASF-Ultramid-A3X2G7-35-Glass-Filled-PA66-Dry.php)

Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 lb/in <sup>3</sup>	ISO 1183
Water Absorption	4.4 - 5.0 %	4.4 - 5.0 %	ISO 62
Moisture Absorption at Equilibrium	1.0 - 1.4 %	1.0 - 1.4 %	23°C/50% R.H.; ISO 62
Viscosity Test	140 cm <sup>3</sup> /g	140 cm <sup>3</sup> /g	Viscosity number; ISO 307
Linear Mold Shrinkage	0.0045 cm/cm	0.0045 in/in	
Melt Flow	43.5 g/10 min @Load 5.00 kg, Temperature 275 °C	43.5 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	160 MPa	23200 psi	50mm/min; ISO 527
Elongation at Yield	3.0 %	3.0 %	50mm/min; ISO 527
Modulus of Elasticity	11.0 GPa	1600 ksi	ISO 527
Flexural Modulus	9.20 GPa	1330 ksi	ISO 178
Izod Impact, Notched (ISO)	13.0 kJ/m <sup>2</sup>	6.19 ft-lb/in <sup>2</sup>	ISO 180/A
Charpy Impact Unnotched	7.00 J/cm <sup>2</sup>	33.3 ft-lb/in <sup>2</sup>	ISO 179/1eU
	6.50 J/cm <sup>2</sup> @Temperature -30.0 °C	30.9 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	1.40 J/cm <sup>2</sup>	6.66 ft-lb/in <sup>2</sup>	ISO 179/1eA
	10.00 J/cm <sup>2</sup> @Temperature -30.0 °C	47.59 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	15.0 - 20.0 $\mu\text{m}/\text{m}\cdot\text{C}$	8.33 - 11.1 $\mu\text{in}/\text{in}\cdot\text{F}$	ISO 11359-1/-2
	@Temperature 23.0 - 80.0 $^{\circ}\text{C}$	@Temperature 73.4 - 176 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	60.0 - 70.0 $\mu\text{m}/\text{m}\cdot\text{C}$	33.3 - 38.9 $\mu\text{in}/\text{in}\cdot\text{F}$	ISO 11359-1/-2
	@Temperature 23.0 - 80.0 $^{\circ}\text{C}$	@Temperature 73.4 - 176 $^{\circ}\text{F}$	
Specific Heat Capacity	1.40 J/g- $^{\circ}\text{C}$	0.335 BTU/lb- $^{\circ}\text{F}$	
Thermal Conductivity	0.340 W/m-K	2.36 BTU-in/hr-ft $^2$ - $^{\circ}\text{F}$	DIN 52612
Melting Point	260 $^{\circ}\text{C}$	500 $^{\circ}\text{F}$	DIN 53765
Maximum Service Temperature, Air	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	for 50% loss of tensile strength after 20,000 hr
	157 $^{\circ}\text{C}$	315 $^{\circ}\text{F}$	for 50% loss of tensile strength after 5,000 hr
	220 $^{\circ}\text{C}$	428 $^{\circ}\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	250 $^{\circ}\text{C}$	482 $^{\circ}\text{F}$	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	250 $^{\circ}\text{C}$	482 $^{\circ}\text{F}$	ISO 75
Flammability, UL94	HB	HB	
	@Thickness $\geq$ 0.400 mm	@Thickness $\geq$ 0.0157 in	
	V-0	V-0	
	@Thickness $\geq$ 0.750 mm	@Thickness $\geq$ 0.0295 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Dielectric Constant	3.6	3.6	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	0.020	0.020	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	Test Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	280 - 300 $^{\circ}\text{C}$	536 - 572 $^{\circ}\text{F}$	Injection-molding/Extrusion

Processing Properties	Metric 10.0 °C	English 14 °F	Comments molding
Descriptive Properties	Value	Comments	
Color	Natural		
Commercial Status	Active America		
Form	Pellets		
Impact Modified	No		
Primary Processing Technique	Injection Molding		
Processing	Injection Molding		
Special characteristic	Flame retarding agent		
	Heat stabilized or stable to heat		
	Release agent		

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