

## BASF Ultramid® A3EG7 35% Glass Filled PA66 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 40% Glass Fiber Filled

### Material Notes:

Ultramid A3EG6 is a 35% glass fiber reinforced injection molding PA66 grade for machinery components and housings of high stiffness and dimensional stability.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_BASF-Ultramid-A3EG7-35-Glass-Filled-PA66-Dry.php](http://www.lookpolymers.com/polymer_BASF-Ultramid-A3EG7-35-Glass-Filled-PA66-Dry.php)

Physical Properties	Metric	English	Comments
Density	1.41 g/cc	0.0509 lb/in <sup>3</sup>	ISO 1183
Water Absorption	4.7 - 5.3 %	4.7 - 5.3 %	ISO 62
Moisture Absorption at Equilibrium	1.4 - 1.8 %	1.4 - 1.8 %	23°C/50% R.H.; ISO 62
Viscosity Test	145 cm <sup>3</sup> /g	145 cm <sup>3</sup> /g	Viscosity number; ISO 307
Linear Mold Shrinkage	0.0050 cm/cm	0.0050 in/in	
Melt Flow	49.3 g/10 min @Load 5.00 kg, Temperature 275 °C	49.3 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	210 MPa	30500 psi	50mm/min; ISO 527
Elongation at Yield	3.0 %	3.0 %	50mm/min; ISO 527
Tensile Modulus	11.5 GPa	1670 ksi	ISO 527
Flexural Strength	300 MPa	43500 psi	ISO 178
Flexural Modulus	10.0 GPa	1450 ksi	ISO 178
Izod Impact, Notched (ISO)	14.0 kJ/m <sup>2</sup>	6.66 ft-lb/in <sup>2</sup>	ISO 180/A
Charpy Impact Unnotched	9.50 J/cm <sup>2</sup>	45.2 ft-lb/in <sup>2</sup>	ISO 179/1eU
	7.50 J/cm <sup>2</sup> @Temperature -30.0 °C	35.7 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
	1.20 J/cm <sup>2</sup> @Temperature -30.0 °C	5.71 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eA

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 $\text{°C}$	@Temperature 73.4 - 176 $\text{°F}$	
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 $\text{°C}$	@Temperature 73.4 - 176 $\text{°F}$	
Specific Heat Capacity	1.50 $\text{J}/\text{g}\cdot\text{°C}$	0.359 $\text{BTU}/\text{lb}\cdot\text{°F}$	
Thermal Conductivity	0.350 $\text{W}/\text{m}\cdot\text{K}$	2.43 $\text{BTU}\cdot\text{in}/\text{hr}\cdot\text{ft}^2\cdot\text{°F}$	DIN 52612
Melting Point	260 $\text{°C}$	500 $\text{°F}$	DIN 53765
Maximum Service Temperature, Air	135 $\text{°C}$	275 $\text{°F}$	for 50% loss of tensile strength after 20,000 hr
	165 $\text{°C}$	329 $\text{°F}$	for 50% loss of tensile strength after 5,000 hr
	240 $\text{°C}$	464 $\text{°F}$	
Deflection Temperature at 0.46 MPa (66 psi)	250 $\text{°C}$	482 $\text{°F}$	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	250 $\text{°C}$	482 $\text{°F}$	ISO 75
Flammability, UL94	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 $\text{ohm}\cdot\text{cm}$	1.00e+13 $\text{ohm}\cdot\text{cm}$	IEC 60093
Dielectric Constant	3.5	3.5	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	550 V	550 V	Test Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	280 - 300 $\text{°C}$	536 - 572 $\text{°F}$	Injection-molding/Extrusion
Mold Temperature	80.0 - 90.0 $\text{°C}$	176 - 194 $\text{°F}$	Injection-molding

Descriptive Properties	Value	Comments
Color	Natural	
Commercial Status	North America and Europe	
Form	Pellets	
Impact Modified	No	
NSF Std. 61	Yes	
Primary Processing Technique	Injection Molding	
Processing	Injection Molding	
Special characteristic	Heat stabilized or stable to heat	

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