

## BASF Ultramid® A3EG5 25% Glass Filled PA66 (Dry)

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

### Material Notes:

Description: Glass fiber reinforced injection molding grade for machinery components and housings of high stiffness and dimensional stability such as coil formers and bearing cages. Also used for electrically insulating parts. Information provided by BASF

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_BASF-Ultramid-A3EG5-25-Glass-Filled-PA66-Dry.php](http://www.lookpolymers.com/polymer_BASF-Ultramid-A3EG5-25-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	1.32 g/cc	0.0477 lb/in <sup>3</sup>	ISO 1183
Water Absorption	5.7 - 6.3 %	5.7 - 6.3 %	ISO 62
Moisture Absorption at Equilibrium	1.7 - 2.1 %	1.7 - 2.1 %	ISO 62
Viscosity Measurement	145	145	ISO 307
Linear Mold Shrinkage	0.0055 cm/cm	0.0055 in/in	
Linear Mold Shrinkage, Flow	0.0048 cm/cm	0.0048 in/in	ISO 2577
	0.0055 cm/cm	0.0055 in/in	TM=300°C, TW=80°C
Linear Mold Shrinkage, Transverse	0.0106 cm/cm	0.0106 in/in	ISO 2577
Melt Flow	66 g/10 min @Load 5.00 kg, Temperature 275 °C	66 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	175 MPa	25400 psi	ISO 527-1/-2
Elongation at Break	3.0 %	3.0 %	ISO 527-1/-2
Modulus of Elasticity	8.60 GPa	1250 ksi	ISO 527-1/-2
Flexural Strength	260 MPa	37700 psi	ISO 178
Flexural Modulus	7.60 GPa	1100 ksi	ISO 178
Izod Impact, Notched (ISO)	9.50 kJ/m <sup>2</sup> @Temperature 23.0 °C	4.52 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 180/1A
Charpy Impact Unnotched	5.50 J/cm <sup>2</sup> @Temperature -30.0 °C	26.2 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eU

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	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	
	1.20 J/cm <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1000 hours	4300 MPa	624000 psi	ISO 899-1
	@Strain <=0.500 %	@Strain <=0.500 %	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 - 35.0 µm/m-°C	13.9 - 19.4 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	60.0 - 70.0 µm/m-°C	33.3 - 38.9 µin/in-°F	ISO 11359-1/-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Thermal Conductivity	0.340 W/m-K	2.36 BTU-in/hr-ft <sup>2</sup> -°F	DIN 52612-1
Melting Point	260 °C	500 °F	ISO 11357-1/-3
Maximum Service Temperature, Air	135 °C	275 °F	for 50% loss of tensile strength after 5000hr
	165 °C	329 °F	for 50% loss of tensile strength after 20000hr
	240 °C	464 °F	
Deflection Temperature at 0.46 MPa (66 psi)	250 °C	482 °F	ISO 527-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	245 °C	473 °F	ISO 527-1/-2
Decomposition Temperature	>= 310 °C	>= 590 °F	
Flammability, UL94	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
	3.5	3.5	
Dielectric Constant			IEC 60250

Electrical Properties	@Frequency 1.00e+6 Metric Hz	@Frequency 1.00e+6 English Hz	Comments
Dissipation Factor	0.014	0.014	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
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
Commercial Status	Europe	
Ignition Temperature	>400°C	ASTM D1929
Peripheral screw speed	< 0.3 m/s	

## Contact Songhan Plastic Technology Co.,Ltd.

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