

BASF Ultramid® A3WG6

Ultramid A3WG6 is a 30% glass fiber reinforced and heat resistance injection molding PA66 grade for machinery components and housings of high stiffness and dimensional stability.

Physical Properties	Metric	English	Comments
Density	1.36 g/cc	0.0491 lb/in ³	ISO 1183
Water Absorption	5.2 - 5.8 %	5.2 - 5.8 %	ISO 62
Moisture Absorption at Equilibrium	1.5 - 1.9 %	1.5 - 1.9 %	23°C/50% R.H.; ISO 62
Viscosity Number	145 cm ³ /g	1.45 dl/g	ISO 307
Linear Mold Shrinkage	0.0055 cm/cm	0.0055 in/in	
Melt Flow	54.4 g/10 min @Load 5.00 kg, Temperature 275 °C	54.4 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	190 MPa	27600 psi	ISO 527
Elongation at Yield	3.0 %	3.0 %	ISO 527
Modulus of Elasticity	10.0 GPa	1450 ksi	ISO 527
Flexural Strength	280 MPa	40600 psi	ISO 178
Flexural Modulus	8.60 GPa	1250 ksi	ISO 178
Izod Impact, Notched (ISO)	11.5 kJ/m ²	5.47 ft-lb/in ²	ISO 180/A
Charpy Impact Unnotched	8.50 J/cm ²	40.5 ft-lb/in ²	ISO 179/1eU
	7.00 J/cm ² @Temperature -30.0 °C	33.3 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	ISO 179/1eA
	1.00 J/cm ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Dielectric Constant	3.5 @Frequency 1e+6 Hz	3.5 @Frequency 1e+6 Hz	IEC 60250
Dissipation Factor	0.014 @Frequency 1e+6 Hz	0.014 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	450 V	450 V	Test Solution A; IEC 60112