

# BASF Ultramid® A3Z

Description: Impact-modified and stabilized injection- molding grade for components and housings with good low temperature impact resistance.

Information provided by BASF

Physical Properties	Metric	English	Comments
Bulk Density	0.500 - 0.800 g/cc	0.0181 - 0.0289 lb/in <sup>3</sup>	
Density	1.06 g/cc	0.0383 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	2.0 - 2.6 %	2.0 - 2.6 %	23°C; 50% RH; ISO 62
Water Absorption at Saturation	6.7 - 7.7 %	6.7 - 7.7 %	ISO 62
Linear Mold Shrinkage	0.0085 cm/cm	0.0085 in/in	restricted
Melt Flow	10.6 g/10 min @Load 5.00 kg, Temperature 275 °C	10.6 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133
Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	48.0 MPa	6960 psi	50 mm/min; ISO 527-1/-2
Elongation at Break	45 %	45 %	Nominal, 50mm/min; ISO 527-1/-2
Elongation at Yield	5 %	5 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	1.90 GPa	276 ksi	ISO 527-1/-2
Izod Impact, Notched (ISO)	29.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	13.8 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 180/A
	90.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	42.8 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
Charpy Impact, Notched	3.10 J/cm <sup>2</sup> @Temperature -30.0 °C	14.8 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	ISO 179/1eA
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179/1eA
Tensile Creep Modulus, 1000 hours	450 MPa @Strain <=0.5 %	65300 psi @Strain <=0.5 %	ISO 899-1
Electrical Properties	Metric	English	Comments
Volume Resistivity	4.00e+12 ohm-cm	4.00e+12 ohm-cm	IEC 60093
Dielectric Constant	3.1 @Frequency 1e+6 Hz	3.1 @Frequency 1e+6 Hz	IEC 60250
Dissipation Factor	0.016 @Frequency 1e+6 Hz	0.016 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	Test solution A; IEC 60112