

BASF Ultramid® B3ZG8

Description: Impact-modified and 40% glass-fiber reinforced injection-molding grade for technical articles of very high stiffness and toughness, for instance, for vehicle airbag housings and suitcase shell.

Physical Properties	Metric	English	Comments
Density	1.40 g/cc	0.0506 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	1.4 - 1.8 %	1.4 - 1.8 %	23°C; 50% RH; ISO 62
Water Absorption at Saturation	4.7 - 5.3 %	4.7 - 5.3 %	ISO 62
Viscosity Measurement	160	160	ISO 307
Linear Mold Shrinkage	0.0035 cm/cm	0.0035 in/in	restricted
Melt Flow	12.6 g/10 min @Load 5.00 kg, Temperature 275 °C	12.6 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	84.0 MPa @Load 36.5 kg, Time 30.0 sec	12200 psi @Load 80.5 lb, Time 0.00833 hour	ISO 2039-1
Tensile Strength, Yield	165 MPa	23900 psi	50 mm/min; ISO 527-1/-2
Elongation at Yield	4.6 %	4.6 %	50 mm/min; ISO 527-1/-2
Modulus of Elasticity	11.6 GPa	1680 ksi	ISO 527-1/-2
Flexural Strength	250 MPa	36300 psi	at max force; ISO 178
Flexural Modulus	9.50 GPa	1380 ksi	ISO 178
Izod Impact, Notched (ISO)	14.0 kJ/m ² @Temperature -30.0 °C	6.66 ft-lb/in ² @Temperature -22.0 °F	ISO 180/A
	22.0 kJ/m ² @Temperature 23.0 °C	10.5 ft-lb/in ² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	10.5 J/cm ² @Temperature -30.0 °C	50.0 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	11.0 J/cm ² @Temperature 23.0 °C	52.3 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	1.50 J/cm ² @Temperature -30.0 °C	7.14 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	2.40 J/cm ² @Temperature 23.0 °C	11.4 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA