

BASF Ultramid® BU50I PA6 (Dry)

Categories: [Polymer](#); [Thermoplastic](#); [Nylon \(Polyamide PA\)](#); [Nylon 6 \(PA6\)](#); [Nylon 6, Unreinforced](#)


Material Notes: Description: Ultramid Ultratough Nylon BU50I is an unreinforced PA6, impact modified injection molding product that maintains its impact strength and ductility to -40 deg F (-40 deg C). The extreme low temperature tolerance of Ultratough Nylon BU50I makes it ideal for applications in which the weld line impact strength at low temperatures is critical.

Applications: Automotive components, small engines, power tool parts and casings, cold weather and high impact supports gear, such as snowboards, ski components, helmets and hockey masks.

Information provided by BASF

Vendors: No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.06 g/cc	0.0383 lb/in ³	ASTM D792
Moisture Absorption at Equilibrium	2.1 %	2.1 %	50% RH; ASTM D570
	7.3 %	7.3 %	Saturation; ASTM D570
Linear Mold Shrinkage	0.04572 cm/cm	0.04572 in/in	1/8" bar

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	45.0 MPa	6530 psi	ASTM D638
Tensile Strength, Yield	50.0 MPa	7250 psi	ASTM D638
Elongation at Break	>= 100 %	>= 100 %	ASTM D638
Elongation at Yield	5.0 %	5.0 %	ASTM D638
Flexural Strength	65.0 MPa	9430 psi	ASTM D790
Flexural Modulus	1.69 GPa	245 ksi	ASTM D790
Izod Impact, Notched (ISO) 	NB @Temperature -40.0 °C	NB @Temperature -40.0 °F	ASTM D256
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ASTM D256
Dart Drop, Total Energy	264 J	195 ft-lb	BASF

Thermal Properties	Metric	English	Comments
Melting Point	220 °C	428 °F	ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	50.0 °C	122 °F	ASTM D648
UL RTI, Electrical	65.0 °C @Thickness 1.50 mm	149 °F @Thickness 0.0591 in	746B
UL RTI, Mechanical with Impact	65.0 °C @Thickness 1.50 mm	149 °F @Thickness 0.0591 in	746B
UL RTI, Mechanical without Impact	65.0 °C @Thickness 1.50 mm	149 °F @Thickness 0.0591 in	746B
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	

Processing Properties	Metric	English	Comments
Melt Temperature	270 - 300 °C	518 - 572 °F	
Mold Temperature	60.0 - 85.0 °C	140 - 185 °F	
Dry Time	2 - 4 hour	2 - 4 hour	
Moisture Content	<= 0.15 %	<= 0.15 %	

Descriptive Properties

Commercial Status	North America
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