

Ultramid® BU50I BK-106

Polyamide 6

BASF Corporation

Message:

Ultramid Ultratough Nylon BU50I BK-106 is an unreinforced PA6, impact modified, pigmented black, injection molding product that maintains its impact strength and ductility to -40 deg F (-40 deg C). The extreme low temperature tolerance of Ultramid BU50I BK106 makes it ideal for applications in which the weldline impact strength at low temperatures is critical.

Applications

Ultramid BU50I BK-106 is generally recommended for automotive components, small engines, power tool parts and casings, cold weather and high impact sports gear, such as snowboards, ski components, helmets and hockey masks.

General Information			
UL YellowCard	E36632-231173		
Additive	Impact Modifier		
Features	Ductile		
	Impact Modified		
	Low Temperature Impact Resistance		
	Low Temperature Resistant		
	Oil Resistant		
	Ultra High Toughness		
	Weldable		
Uses	Automotive Applications		
	Power/Other Tools		
	Safety Helmets		
	Sporting Goods		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Appearance	Black		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.06	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage - Flow (3.18 mm)	1.8	%	
Water Absorption			
Saturation	7.3	%	ASTM D570
Saturation, 23°C	7.3	%	ISO 62
Equilibrium, 50% RH	2.1	%	ASTM D570
Equilibrium, 23°C, 50% RH	2.1	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			

Yield, 23°C	48.0	MPa	ASTM D638
Yield, 23°C	44.0	MPa	ISO 527-2
Tensile Elongation (Break, 23°C)	> 100	%	ASTM D638
Nominal Tensile Strain at Break (23°C)	> 50	%	ISO 527-2
Flexural Modulus (23°C)	1790	MPa	ASTM D790
Flexural Strength			
23°C	67.0	MPa	ASTM D790
23°C	73.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	No Break		ASTM D256, ISO 180
Thermal	Nominal Value	Unit	Test Method
Peak Melting Temperature	220	°C	ASTM D3418, ISO 3146
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.15	%	
Processing (Melt) Temp	270 to 300	°C	
Mold Temperature	60.0 to 85.0	°C	
Injection Pressure	3.50 to 12.5	MPa	
Injection Rate	Fast		

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