

Ultramid® BU50I

Polyamide 6

BASF Corporation

Message:

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 weldline impact strength at low temperatures is critical.

Applications

Ultramid BU50I is generally recommended for 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.

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		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	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	Dry	Conditioned	Unit	Test Method

Tensile Modulus (23°C)	1600	510	MPa	ISO 527-2
Tensile Strength				
Yield, 23°C	50.0	--	MPa	ASTM D638
Yield, 23°C	45.0	27.0	MPa	ISO 527-2
Break, 23°C	45.0	--	MPa	ASTM D638
Tensile Elongation				
Yield, 23°C	5.0	--	%	ASTM D638
Yield, 23°C	4.0	42	%	ISO 527-2
Break, 23°C	> 100	--	%	ASTM D638
Nominal Tensile Strain at Break (23°C)	40	> 50	%	ISO 527-2
Flexural Modulus				
23°C	1690	--	MPa	ASTM D790
23°C	1550	460	MPa	ISO 178
Flexural Strength				
23°C	65.0	--	MPa	ASTM D790
23°C	50.0	15.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	95	--	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break	--		ISO 179
Notched Izod Impact				ASTM D256
-40°C	No Break	--		
23°C	No Break	--		
Drop Impact Resistance (23°C)	8.67	--	J/cm	Internal Method
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	50.0	--	°C	ASTM D648, ISO 75-2/A
Peak Melting Temperature	220	--	°C	ASTM D3418, ISO 3146
RTI Elec				UL 746
0.800 mm	65.0	--	°C	
1.50 mm	65.0	--	°C	
3.00 mm	65.0	--	°C	
RTI Imp				UL 746
0.800 mm	65.0	--	°C	
1.50 mm	65.0	--	°C	
3.00 mm	65.0	--	°C	
RTI Str				UL 746
0.800 mm	65.0	--	°C	
1.50 mm	65.0	--	°C	
3.00 mm	65.0	--	°C	

Flammability	Dry	Conditioned	Test Method
Flame Rating			UL 94
0.800 mm	HB	--	
1.50 mm	HB	--	
3.00 mm	HB	--	
Injection	Dry	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		

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

