

Ultramid® BG50XF1

Polyamide 6



Product Description

Ultramid BG50XF1 is an impact modified, injection molding type 6 nylon graft copolymer with superior impact resistance and flow especially for thinner walled parts and long flow lengths. It is also available in natural and pigmented versions. Copolymerization results in varying levels of toughness and flexibility combined with excellent thermal and chemical properties. Exhibits higher impact performance than that of conventional nylon homopolymers while maintaining good strength, chemical resistance and stiffness.

Applications

Ultramid BG50XF1 is generally recommended for applications such as cellular phone housings, handheld device, caps, furniture rails, covers, mower decks and tool.

PHYSICAL	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.10	
Moisture, %	D-570		
(50% RH)		2.4	
(Saturation)		8.6	
MECHANICAL	ASTM Test Method	Dry	Conditioned
Tensile Strength, Yield, MPa (psi)	D-638		
23C (73F)		70 (10,200)	36 (5,220)
Elongation, Yield, %	D-638		
23C (73F)		4	28
Elongation, Break, %	D-638		
23C (73F)		70	>100
Flexural Modulus, MPa (psi)	D-790		
23C (73F)		2,390 (347,000)	-
Flexural Strength, MPa (psi)	D-790		
23C (73F)		95 (13,800)	-
IMPACT	ASTM Test Method	Dry	Conditioned
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
23C (73F)		145 (2.7)	-
Drop Weight Impact, ft-lbs, 23C	BASF Drop Weight Impact Test	148	-
THERMAL	ASTM Test Method	Dry	Conditioned
Melting Point, C(F)	D-3418	220 (428)	-
Heat Deflection @ 264 psi (1.8 MPa) C(F)	D-648	60 (140)	-
UL RATINGS	UL Test Method	Property Value	
Flammability Rating, 1.5mm	UL94	HB	
Relative Temperature Index, 1.5mm	UL746B		
Mechanical w/o Impact, C		65	
Mechanical w/ Impact, C		65	
Electrical, C		65	

Processing Guidelines



Material Handling

Max. Water content: 0.15%

Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 80 degC (176 degF) is recommended. Drying time is dependent on moisture level, but 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 240-285 degC (464-545 degF)

Mold Temperature 65-80 degC (149-176 degF)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures

A mold temperature of 65-80 degC (149-176 degF) is recommended, but temperatures of as low as 10 degC (50 degF) can be used where applicable.

Pressures

Injection pressure controls the filling of the part and should be applied for 90% of ram travel.

Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Fill Rate

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing.

Note

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