Product Information

Aug 2013

Ultramid® BG50XFI
Polyamide 6

BASF
The Chemical Company

Product Description

Ultramid BG50XFI 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 BG50XFI is generally recommended for applications such as cellular phone housings, handheld device, caps, furniture rails, covers, mower decks and tool.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm	1183	1.10	
Moisture, %	62		
(50% RH)		2.4	
(Saturation)		8.6	
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23C		2,500	755
Tensile stress at yield, MPa	527		
23C		70	36
Tensile strain at yield, %	527		
23C		4	28
Nominal strain at break, %	527		
23C		>50	>50
Flexural Strength, MPa	178		
23C		85	20
Flexural Modulus, MPa	178		
23C		2,350	670
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Izod Notched Impact, kJ/m^2	180		
23C		15	-
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, C	3146	220	-
HDT A, C	75	57	-
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

ASF Corporation
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509 Biddle Avenue
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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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