Product Information

Nov 2012

Ultramid® 8233G HS BK-102
Polyamide 6

BASF The Chemical Company

Product Description

Ultramid 8233G HS BK-102 is a heat stabilized, black pigmented,33% glass fiber reinforced PA6 injection molding compound. The higher glass fiber reinforcement results in excellent strength, stiffness, high temperature performance and dimensional stability with a high resistance to creep under load. The heat stabilizer system extends properties at elevated temperatures. It offers easy processing and good aesthetics. It maintains its inherent chemical resistance to greases, oils and hydrocarbons. It is suited for metal replacement.

Applications

Ultramid 8233G HS BK-102 is generally recommended for applications such as chain saw, power tool housings, weed trimmer components, gears, automotive window hardware, under hood applications including cables, fittings, cooling fans, electrical connectors and coil bobbins.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm	1183	1.39	
Moisture, %	62		
(24 Hour)		1.1	
(50% RH)		1.8	
(Saturation)		6.4	
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
-40C		10,300	-
23C		10,200	5,600
80C		4,820	-
121C		4,010	-
Tensile stress at break, MPa	527		
-40C		230	-
23C		170	99
80C		90	-
121C		70	-
Tensile strain at break, %	527		
23C		3	7
Flexural Strength, MPa	178		
23C		245	130
Flexural Modulus, MPa	178		
23C		8,500	5,200
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Charpy Notched, kJ/m^2	179		
23C		10	-
-30C		10	-
Charpy Unnotched, kJ/m^2	179		
23C		65	-
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, C	3146	220	-

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Engineering Plastics
1609 Biddle Avenue
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General Information: 800-BC-RESIN
Technical Assistance: 800-527-TECH (734-324-5150)
Web address: http://www.plasticsportal.com/usa

HDT A, C	75	205	-
HDT B, C	75	215	-

UL RATINGS	UL Test Method	Property Value
Flammability Rating, 1.5mm	UL94	HB
Relative Temperature Index, 1.5mm	UL746B	
Mechanical w/o Impact, C		140
Mechanical w/ Impact, C		115
Electrical, C		140

Processing Guidelines

Material Handling
Max. Water content: 0.10%
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 270-295 degC (518-563 degF)
Mold Temperature 80-95 degC (176-203 degF)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
This product can be processed over a wide range of mold temperatures; however, for applications where aesthetics are critical, a mold surface temperature of 80-95 degC (176-203 degF) is recommended.

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.

Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. Minimal back pressure should be utilized to prevent glass breakage.

Fill Rate
Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate.

Note

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