Product Information

Aug 2013

Ultramid® 8267G HS BK-102
Polyamide 6

BASF The Chemical Company

Product Description

Ultramid 8267G HS BK-102 is a heat stabilized, black pigmented, 40% mineral and glass fiber reinforced PA6 injection molding compound. It possesses a balance of engineering properties in combination with excellent dimensional stability, low warp and resistance to sink-mark formation. It exhibits high strength, rigidity, and good heat distortion temperature. It resists creep under load and the heat stabilizer system extends its retention of properties at elevated temperatures. It has good chemical resistance to greases, oils and hydrocarbons.

Applications

Ultramid 8267G HS BK-102 is generally recommended for applications such as rotors, wheels, rims, timing belt covers, automotive cooling fans and shrouds.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm	1183	1.48	
Moisture, %	62		
(24 Hour)		0.9	
(50% RH)		1.6	
(Saturation)		5.7	
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
-40C		9,790	-
23C		8,300	4,160
80C		3,530	-
121C		2,740	-
Tensile stress at break, MPa	527		
23C		125	67
Tensile strain at break, %	527		
23C		3	14
Flexural Strength, MPa	178		
23C		195	90
Flexural Modulus, MPa	178		
23C		7,200	3,680
Ball Indentation, MPa	2039-1	220	-
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Izod Notched Impact, kJ/m^2	180		
23C		6	-
-40C		4	-
Charpy Notched, kJ/m^2	179		
23C		5	-
-30C		3.5	-
Charpy Unnotched, kJ/m^2	179		
23C		52	-
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, C	3146	220	-

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HDT A, C	75	200	-
HDT B, C	75	215	-
Coef. of Linear Thermal Expansion, Parallel, mm/mm C		0.3 X10-4	-
Coef. of Linear Thermal Expansion, Normal, mm/mm C		0.67 X10-4	-

ELECTRICAL	ISO Test Method	Dry	Conditioned
Volume Resistivity	IEC 60093	>1E13	-

UL RATINGS	UL Test Method	Property Value
Flammability Rating, 1.5mm	UL94	HB
Relative Temperature Index, 1.5mm	UL746B	
Mechanical w/o Impact, C		105
Mechanical w/ Impact, C		105
Electrical, C		105

Processing Guidelines

Material Handling
Material is supplied in sealed containers and drying prior to molding in a dehumidifying or desiccant dryer is recommended. Drying parameters are dependent upon the actual percentage of moisture in the pellets and typical pre-drying conditions are 2-4 hours at 180F (83C). Recommended moisture levels for achieving optimum surface qualities and mechanical properties is 0.05% - 0.12%. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet (MSDS), or by contacting 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

Note

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