Product Information

Aug 2013

Ultramid® 8267G HS BK-106
Polyamide 6

BASF The Chemical Company

Product Description

Ultramid 8267G HS BK-106 is a heat stabilized, weather resistant, 40% mineral and glass fiber reinforced PA6 injection molding compound with improved UV resistance and sink mark resistance. The combination of mineral and glass fibers result in a high performance, low warp and cost effective engineering thermoplastic. It exhibits high strength, good UV resistance, rigidity and good heat distortion temperatures. It has a relatively high resistance to creep under load. 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-106 is generally recommended for applications such as rotors, wheels, rims, timing belt covers, automotive cooling fans, shrouds and all external parts exposed to the environment.

PHYSICAL	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.48	
Mold Shrinkage (1/8" bar, in/in)		0.004	
Moisture, %	D-570		
(24 Hour)		0.9	
(50% RH)		1.6	
(Saturation)		5.7	
MECHANICAL	**ASTM Test Method**	**Dry**	**Conditioned**
Tensile Strength, Break, MPa (psi)	D-638		
-40C (-40F)		178 (25,800)	-
23C (73F)		125 (18,100)	-
80C (176F)		59 (8,560)	-
121C (250F)		51 (7,400)	-
Elongation, Break, %	D-638		
-40C (-40F)		3	-
23C (73F)		2	-
80C (176F)		13	-
121C (250F)		11	-
Flexural Modulus, MPa (psi)	D-790		
23C (73F)		7,580 (1,100,000)	-
Flexural Strength, MPa (psi)	D-790		
23C (73F)		200 (29,000)	-
Rockwell Hardness, R Scale	D-785	121	-
IMPACT	**ASTM Test Method**	**Dry**	**Conditioned**
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
23C (73F)		55 (1.0)	-
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	202 (395)	-

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Coef. of Linear Thermal Expansion, mm/mm C (in/in F)	E-831	0.31 X10-4	-

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

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