Product Information

Aug 2013

Ultramid® 8333G HI HS BK-106
Polyamide 6

Product Description

Ultramid 8333G HI HS BK-106 is a 33% glass reinforced, impact modified PA6 injection molding compound pigmented black developed for applications requiring improved dry as molded toughness in combination with a balance of strength, stiffness and excellent moldability/surface aesthetics.

Applications

Ultramid 8333G HI HS BK-106 is generally recommended for application such as front wheel chair wheels, bicycle wheels, power tool housings, chain saw housings, clips and fasteners, hose clamps and window hardware.

PHYSICAL	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.36	
Mold Shrinkage (1/8" bar, in/in)		0.003	
Moisture, %	D-570		
(24 Hour)		0.9	
(50% RH)		1.5	
(Saturation)		5.5	
MECHANICAL	**ASTM Test Method**	**Dry**	**Conditioned**
Tensile Strength, Break, MPa (psi)	D-638		
23C (73F)		145 (21,000)	-
Elongation, Break, %	D-638		
23C (73F)		2.5	-
Flexural Modulus, MPa (psi)	D-790		
23C (73F)		7,990 (1,160,000)	-
Flexural Strength, MPa (psi)	D-790		
23C (73F)		232 (33,600)	-
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)		182 (3.4)	-
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	208 (406)	-

Processing Guidelines

Material Handling
Max. Water content: 0.08%
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)

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Mold Temperature 80-95 degC (176-203 degF)
Injection and Packing Pressure 35-125 bar (500-1800psi)
Rear Zone 245-275 degC (473-527 degF)
Center Zone 260-285 degC (500-545 degC)
Front Zone 270-295 degC (518-563 degF)
Nozzle 270-295 degC (518-563 degF)

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 required.

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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