Product Information

Aug 2013

Ultramid® 8351 HS BK-106
Polyamide 6

BASF The Chemical Company

Product Description

Ultramid 8351 HS BK-106 is a heat stabilized, pigmented black, impact modified type 6 nylon graft copolymer developed for injection molding applications requiring a high level of toughness combined with a moderate flexibility and faster cycles. Excellent thermal and chemical resistance properties provided by the nylon backbone. It demonstrates the highest impact performance within the Ultramid copolymer product line while maintaining an excellent balance of strength and stiffness. Excellent chemical resistance to greases, oils and hydrocarbons.

Applications

Ultramid 8351 HS BK-106 is generally recommended for applications such as storage bins, spray gun and power tool handles, trim clips and fasteners, wall anchors and automotive roof clips rack components.

PHYSICAL	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.07	
Mold Shrinkage (1/8" bar, in/in)		0.014	
Moisture, %	D-570		
(24 Hour)		1.1	
(50% RH)		1.9	
(Saturation)		6.7	
MECHANICAL	**ASTM Test Method**	**Dry**	**Conditioned**
Tensile Strength, Yield, MPa (psi)	D-638		
23C (73F)		55 (7,970)	-
Elongation, Break, %	D-638		
23C (73F)		>100	-
Flexural Modulus, MPa (psi)	D-790		
23C (73F)		1,655 (240,000)	-
Flexural Strength, MPa (psi)	D-790		
23C (73F)		66 (9,570)	-
Rockwell Hardness, R Scale	D-785	78	-
IMPACT	**ASTM Test Method**	**Dry**	**Conditioned**
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
23C (73F)		NB	-
THERMAL	**ASTM Test Method**	**Dry**	**Conditioned**
Melting Point, C(F)	D-3418	220 (428)	-
Coef. of Linear Thermal Expansion, mm/mm C (in/in F)	E-831	1.06 X10-4	-

Processing Guidelines

Material Handling

Max. Water content: 0.2%

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.

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Typical Profile
Melt Temperature 240-270 degC (464-518 degF)
Mold Temperature 80-95 degC (176-203 degF)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
A mold temperature of 80-95 degC (176-203 degF) is recommended, but temperatures of 10-95 degC (50-203 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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