

Product Information

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Ultramid® 8253 HS BK102 **Polyamide 6**


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Product Description

Ultramid 8253 HS BK102 is a heat stabilized, pigmented black, impact modified type 6 nylon graft copolymer developed for both injection molding and extrusion applications. It exhibits varying levels of toughness and flexibility combined with excellent thermal and chemical properties.

Applications

Ultramid 8253 HS BK102 is generally recommended for applications such as plugs, receptacles, flexible connector covers, weed trimmer components, clips fasteners, flanges, key housings as well as many flexible tubing applications.

PHYSICAL	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.09	
Mold Shrinkage (1/8" bar, in/in)		0.012	
Moisture, %	D-570		
(24 Hour)		1.5	
(50% RH)		2.3	
(Saturation)		8.1	
MECHANICAL	ASTM Test Method	Dry	Conditioned
Tensile Strength, Yield, MPa (psi)	D-638		
23°C (73°F)		65 (9,430)	-
Elongation, Yield, %	D-638		
23°C (73°F)		4	-
Elongation, Break, %	D-638		
23°C (73°F)		>100	-
Flexural Modulus, MPa (psi)	D-790		
23°C (73°F)		2,270 (329,000)	-
Flexural Strength, MPa (psi)	D-790		
23°C (73°F)		85 (12,300)	-
Rockwell Hardness, R Scale	D-785	82	-
IMPACT	ASTM Test Method	Dry	Conditioned
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
23°C (73°F)		150 (2.8)	-
Drop Weight Impact, ft-lbs, 23°C	BASF Drop Weight Impact Test	200	-
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	60 (140)	-
Coef. of Linear Thermal Expansion, mm/mm °C (in/in °F)	E-831	0.99 X10-4	-
UL RATINGS	UL Test Method	Property Value	
Relative Temperature Index, .71mm	UL746B		
Mechanical w/o Impact, °C		95	
Mechanical w/ Impact, °C		95	
Electrical, °C		105	
Flammability Rating, .75mm	UL94	HB	
Relative Temperature Index, .75mm	UL746B		
Mechanical w/o Impact, °C		95	
Mechanical w/ Impact, °C		95	
Electrical, °C		105	
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	
Flammability Rating, 3.0mm	UL94	HB	
Relative Temperature Index, 3.0mm	UL746B		
Mechanical w/o Impact, °C		105	
Mechanical w/ Impact, °C		105	
Electrical, °C		105	
Flammability Rating, 6.0mm	UL94	HB	
Relative Temperature Index, 6.0mm	UL746B		
Mechanical w/o Impact, °C		105	
Mechanical w/ Impact, °C		105	
Electrical, °C		105	

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°C (176°F) is recommended. Drying time is dependent on moisture level, however 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 240-270°C (464-518°F)

Mold Temperature 60-85°C (140-185°F)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures

A mold temperature of 60-85°C (140-185°F) is recommended, however temperatures of as low as 10°C (50°F) 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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BASF Corporation
Engineering Plastics
1609 Biddle Avenue
Wyandotte, MI 48192

General Information: 800-BC-RESIN
Technical Assistance: 800-527-TECH (734-324-5150)
Web address: <http://www.plasticsportal.com/usa>

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