

Ultramid® 8253 HS BK102

Polyamide 6

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	ISO Test Method	Property Value	
Density, g/cm ³	1183	1.09	
Moisture, %	62		
(24 Hour)		1.5	
(50% RH)		2.3	
(Saturation)		8.1	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23°C		2,400	-
Tensile stress at yield, MPa	527		
23°C		60	-
Tensile strain at yield, %	527		
23°C		4	-
Tensile strain at break, %	527		
23°C		40	-
Flexural Strength, MPa	178		
23°C		65	-

Flexural Modulus, MPa		178	
23 °C		1,900	-
IMPACT		ISO Test Method	Dry Conditioned
Izod Notched Impact, kJ/m ²		180	
23 °C		14	-
Charpy Notched, kJ/m ²		179	
23 °C		17	-
Charpy Unnotched, kJ/m ²		179	
23 °C		N	-
THERMAL		ISO Test Method	Dry Conditioned
Melting Point, °C		3146	220 -
HDT A, ° C		75	55 -
HDT B, ° C		75	160 -
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: 0.15%

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). Further information concerning safe handling procedures can be obtained from the Safety Data Sheet (MSDS), or by contacting 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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