

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

<b>Flexural Modulus, MPa</b>	178		
23°C		1,900	-
<b>IMPACT</b>	<b>ISO Test Method</b>	<b>Dry</b>	<b>Conditioned</b>
<b>Izod Notched Impact, kJ/m<sup>2</sup></b>	180		
23°C		14	-
<b>Charpy Notched, kJ/m<sup>2</sup></b>	179		
23°C		17	-
<b>Charpy Unnotched, kJ/m<sup>2</sup></b>	179		
23°C		N	-
<b>THERMAL</b>	<b>ISO Test Method</b>	<b>Dry</b>	<b>Conditioned</b>
Melting Point, °C	3146	220	-
HDT A, °C	75	55	-
HDT B, °C	75	160	-
<b>UL RATINGS</b>	<b>UL Test Method</b>	<b>Property Value</b>	
<b>Relative Temperature Index, .71mm</b>	UL746B		
Mechanical w/o Impact, °C		95	
Mechanical w/ Impact, °C		95	
Electrical, °C		105	
Flammability Rating, .75mm	UL94	HB	
<b>Relative Temperature Index, .75mm</b>	UL746B		
Mechanical w/o Impact, °C		95	
Mechanical w/ Impact, °C		95	
Electrical, °C		105	
Flammability Rating, 1.5mm	UL94	HB	
<b>Relative Temperature Index, 1.5mm</b>	UL746B		
Mechanical w/o Impact, °C		105	
Mechanical w/ Impact, °C		105	

Electrical, °C		105
Flammability Rating, 3.0mm	UL94	HB
<b>Relative Temperature Index, 3.0mm</b>	UL746B	
Mechanical w/o Impact, °C		105
Mechanical w/ Impact, °C		105
Electrical, °C		105
Flammability Rating, 6.0mm	UL94	HB
<b>Relative Temperature Index, 6.0mm</b>	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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