

BASF Capron® 8351 HS BK-102 Impact Modified Nylon 6 (Dry) (discontinued **)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Impact Grade

Material Notes:

Capron 8351 HS BK-102 is a heat stabilized, pigmented black 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 polyamide backbone. It demonstrates the highest impact performance within the Capron copolymer product line while maintaining an excellent balance of strength and stiffness. Excellent chemical resistance to greases, oils and hydrocarbons. Capron 8351 HS Bk-102 is generally recommended for applications such as spray gun and power tool handles, trim clips and fasteners, wall anchors and automotive roof clips rack components. ASTM Callout PA263 + PA0220 B32310. Data provided by Allied Signal. Processing: Max. water content 0.2%. Product is supplied in sealed containers and drying is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 85°C (185 °F). Is recommended. Drying time is dependent on moisture level. Melt Temperature: 240-270 degC (464-518 degF). Mold Temperature: 80-95 degC (176-203 degF). Injection and Packing Pressure: 35-125 bar (500-1500psi) 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. 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. Fast fill rates are recommended to insure uniform melt delivery to the cavity and prevent premature freezing. Capron® is no longer a part of the BASF standard line. The BASF nylon products have been consolidated in the Ultramid ® line.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Capron-8351-HS-BK-102-Impact-Modified-Nylon-6-Dry-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.07 g/cc	0.0387 lb/in ³	ISO data
Water Absorption	1.1 %	1.1 %	24 hrs; ISO data
Moisture Absorption at Equilibrium	1.9 %	1.9 %	50% RH; 23°C; ISO data
Water Absorption at Saturation	6.7 %	6.7 %	in water; 23°C; ISO data
Linear Mold Shrinkage	0.0050 cm/cm	0.0050 in/in	ISO data
	0.014 cm/cm	0.014 in/in	ASTM data MD
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	ISO Data

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	53.0 MPa	7690 psi	ISO value at 50 mm/min.
	55.0 MPa	7980 psi	ASTM value at 50 mm/min.
Elongation at Break	>= 50 %	>= 50 %	Nominal

Mechanical Properties	$\geq 100\%$ Metric	$\geq 100\%$ English	Nominal Comments
Flexural Modulus	1.40 GPa	203 ksi	ISO Value
	1.69 GPa	245 ksi	ASTM Value
Poissons Ratio	0.35	0.35	ISO data

Thermal Properties	Metric	English	Comments
CTE, linear	106 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	58.9 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM data
	@Temperature 20.0 $^\circ\text{C}$	@Temperature 68.0 $^\circ\text{F}$	
Melting Point	220 $^\circ\text{C}$	428 $^\circ\text{F}$	ASTM and ISO test
Deflection Temperature at 1.8 MPa (264 psi)	55.0 $^\circ\text{C}$	131 $^\circ\text{F}$	ASTM Data
Flammability, UL94	HB	HB	
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	$\geq 1.00\text{e}+15$ ohm-cm	$\geq 1.00\text{e}+15$ ohm-cm	ISO data

Processing Properties	Metric	English	Comments
Processing Temperature	275 $^\circ\text{C}$	527 $^\circ\text{F}$	See Materials Notes
Mold Temperature	95.0 $^\circ\text{C}$	203 $^\circ\text{F}$	See Materials Notes
Drying Temperature	85.0 $^\circ\text{C}$	185 $^\circ\text{F}$	See Materials Notes

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