

## BASF Capron® 8351 Impact Modified Nylon 6 (Dry) (discontinued \*\*)

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

### Material Notes:

Capron 8351 is a type 6 polyamide graft copolymer developed for injection molding applications requiring a high level of toughness combined with moderate flexibility and faster cycles. It is also available in heat stabilized (Capron 8351 HS) and/or pigmented versions. Capron 8351 is generally recommended for applications such as storage bins, spray gun and power tool handles, trim clips and fasteners, wall anchors, and automotive roof racks. 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-Impact-Modified-Nylon-6-Dry-nbspdiscontinued-.php](http://www.lookpolymers.com/polymer_BASF-Capron-8351-Impact-Modified-Nylon-6-Dry-nbspdiscontinued-.php)

Physical Properties	Metric	English	Comments
Density	1.07 g/cc	0.0387 lb/in <sup>3</sup>	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	0.013 cm/cm	0.013 in/in	ISO data
	0.014 cm/cm	0.014 in/in	ASTM data MD
Linear Mold Shrinkage, Transverse	0.019 cm/cm	0.019 in/in	ISO Data

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	79	79	ASTM Data
Tensile Strength, Yield	50.0 MPa	7250 psi	ASTM value at 50 mm/min.
	52.0 MPa	7540 psi	ISO value at 50 mm/min.
Elongation at Break	>= 50 %	>= 50 %	Nominal
	>= 100 %	>= 100 %	Nominal
Elongation at Yield			ISO Value at 50 mm/min.

Mechanical Properties	<sup>7.0 %</sup> Metric	<sup>7.0 %</sup> English	Comments
	7.0 %	7.0 %	ASTM Value at 50 mm/min.
Flexural Yield Strength	65.0 MPa	9430 psi	ASTM Data
Flexural Modulus	1.40 GPa	203 ksi	ISO Value
	1.655 GPa	240.0 ksi	ASTM Value
Poissons Ratio	0.35	0.35	ISO data
Charpy Impact, Notched	NB	NB	ISO Data

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature 20.0 $^{\circ}\text{C}$	11.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Temperature 68.0 $^{\circ}\text{F}$	ISO data
CTE, linear, Transverse to Flow	110 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature 20.0 $^{\circ}\text{C}$	61.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Temperature 68.0 $^{\circ}\text{F}$	ISO data
Melting Point	220 $^{\circ}\text{C}$	428 $^{\circ}\text{F}$	ASTM and ISO test
Deflection Temperature at 0.46 MPa (66 psi)	94.0 $^{\circ}\text{C}$	201 $^{\circ}\text{F}$	ISO data
Deflection Temperature at 1.8 MPa (264 psi)	48.0 $^{\circ}\text{C}$	118 $^{\circ}\text{F}$	ISO data
	53.0 $^{\circ}\text{C}$	127 $^{\circ}\text{F}$	ASTM Data
Flammability, UL94	HB @Thickness 0.810 mm	HB @Thickness 0.0319 in	
	HB @Thickness 3.00 mm	HB @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
Dielectric Strength	20.0 kV/mm	508 kV/in	ISO data
Comparative Tracking Index	600 V	600 V	ISO data

Processing Properties	Metric	English	Comments
Processing Temperature	280 $^{\circ}\text{C}$	536 $^{\circ}\text{F}$	See Materials Notes
Mold Temperature	70.0 $^{\circ}\text{C}$	158 $^{\circ}\text{F}$	See Materials Notes

Drying Temperature Processing Properties	85.0 °C Metric	185 °F English	See Materials Notes Comments
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