

BASF Capron® 8333G HI Impact Modified, 33% Glass-Filled Nylon 6 (Dry) (discontinued **)

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

Material Notes:

Capron 8333G HI is a 33% glass reinforced, impact modified polyamide 6 injection molding compound developed for applications requiring improved dry as molded toughness in combination with a balance of strength, stiffness and excellent moldability/surface aesthetics. It is also available in heat stabilized (Capron 8333G HI HS) and/or pigmented versions. Capron 8333G HI is generally recommended for application such as front wheel chair wheels, bicycle wheels, power tool housings, chain saw housings, clips and fasteners, hose clamps and window hardware. Data provided by Allied Signal. Processing: Max. water content 0.12%. 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: 270-295 degC (518-563 degF). Mold Temperature: 80-95 degC (176-203 degF). Injection and Packing Pressure: 35-125 bar (500-1500psi) This product can be processed over a wide range of mold temperatures; however, for applications where aesthetics critical, a mold surface temperature of 80-95 degC (176-203 degF) is required. 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. Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. A maximum of 3.5 bar (50 psi) is recommended to minimize glass fiber breakage. Fast fill rates are recommended to insure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate. 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-8333G-HI-Impact-Modified-33-Glass-Filled-Nylon-6-Dry-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in ³	Melt Density
	1.34 g/cc	0.0484 lb/in ³	ISO data
Water Absorption	0.90 %	0.90 %	24 hrs; ISO data
Moisture Absorption at Equilibrium	1.5 %	1.5 %	50% RH; 23°C; ISO data
Water Absorption at Saturation	5.5 %	5.5 %	in water; 23°C; ISO data
Linear Mold Shrinkage	0.0020 cm/cm	0.0020 in/in	ISO data
	0.0030 cm/cm	0.0030 in/in	ASTM data MD
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	ISO Data

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	150 MPa	21800 psi	ASTM data at 5 mm/min.
	152 MPa	22000 psi	ISO value at 5mm/min.

Mechanical Properties	Metric	English	Comments
Elongation at Break	3.5 %	3.5 %	ISO, 5 mm/minl
Tensile Modulus	9.86 GPa	1430 ksi	same value from ASTM and ISO test.
Flexural Yield Strength	240 MPa	34800 psi	ASTM Data
Flexural Modulus	7.425 GPa	1077 ksi	ISO Value
	8.00 GPa	1160 ksi	ASTM Value
Poissons Ratio	0.35	0.35	ISO data
Shear Modulus	3.70 GPa	537 ksi	calculated
Charpy Impact, Notched	1.80 J/cm ²	8.57 ft-lb/in ²	ISO Data
	1.20 J/cm ²	5.71 ft-lb/in ²	ISO data
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	24.0 µm/m-°C	13.3 µin/in-°F	ISO data
	@Temperature 20.0 °C	@Temperature 68.0 °F	
CTE, linear, Transverse to Flow	84.0 µm/m-°C	46.7 µin/in-°F	ISO data
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Specific Heat Capacity	1.96 J/g-°C	0.468 BTU/lb-°F	Melt value
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	Melt
Melting Point	220 °C	428 °F	ASTM and ISO test
Deflection Temperature at 0.46 MPa (66 psi)	218 °C	424 °F	ISO data
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	ISO data
	210 °C	410 °F	ASTM Data
Flammability, UL94	HB	HB	
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
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Electrical Resistivity Electrical Properties	$\geq 1.00\text{e}+15$ ohm-cm Metric	$\geq 1.00\text{e}+15$ ohm-cm English	ISO data Comments
Comparative Tracking Index	600 V	600 V	ISO data

Processing Properties	Metric	English	Comments
Processing Temperature	275 °C	527 °F	See Materials Notes
Mold Temperature	95.0 °C	203 °F	See Materials Notes
Drying Temperature	85.0 °C	185 °F	See Materials Notes

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