

BASF Capron® HPN 9233G 33% Glass-Filled Nylon 6 (Dry) (discontinued **)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 30% Glass Fiber Filled

Material Notes:

Capron HPN 9233G is a 33% glass reinforced polyamide 6 injection molding compound combining exceptional strength, stiffness and high temperature performance with excellent surface aesthetics. It is one of the High Productivity Nylon series products, offering the performance characteristics of a premium glass fiber reinforced polyamide while reducing cycle time and improving surface appearance. It is also available in heat stabilized (Capron HPN 9233G HS) and/or pigmented versions. Capron HPN 9233G is generally recommended for high performance applications such as window locks, valve bodies, chair shells, door and window hardware, connectors, switch components, relay parts, terminal blocks, power tool housings, gears, chain saws, blowers, and trimmer housings. 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-HPN-9233G-33-Glass-Filled-Nylon-6-Dry-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.39 g/cc	0.0502 lb/in ³	ISO data
Water Absorption	1.1 %	1.1 %	24 hrs; ISO data
Moisture Absorption at Equilibrium	1.8 %	1.8 %	50% RH; 23°C; ISO data
Water Absorption at Saturation	6.4 %	6.4 %	in water; 23°C; ISO data
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 in/in	ASTM Data MD

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	185 MPa	26800 psi	Same value from ASTM and ISO tests; 5 mm/min.
Elongation at Break	3.0 %	3.0 %	ISO, 5 mm/minI
	3.0 %	3.0 %	ASTM, 5 mm/minI
Tensile Modulus	11.17 GPa	1620 ksi	same value from ASTM and ISO test.

Mechanical Properties	Metric	English	Comments
Flexural Modulus	8.40 GPa	1220 ksi	ISO Value
	9.45 GPa	1370 ksi	ASTM Value
Poissons Ratio	0.35	0.35	ISO data
Shear Modulus	4.10 GPa	595 ksi	calculated
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	ISO Data
	1.00 J/cm ²	4.76 ft-lb/in ²	ISO data
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	21.0 µm/m-°C	11.7 µin/in-°F	ISO data
	@Temperature 20.0 °C	@Temperature 68.0 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO data
	@Temperature 20.0 °C	@Temperature 68.0 °F	
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)	207 °C	405 °F	ISO data
	207 °C	405 °F	ASTM Data
Flammability, UL94	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	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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