

BASF Capron® HPN 9315G Impact Modified, 15% Glass-Filled Nylon 6 (Dry) (discontinued **)

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

Material Notes:

Capron HPN 9315G is a 15% glass reinforced, impact modified polyamide 6 injection molding grade resin in the High Productivity Nylon Series developed for applications requiring superior dry-as-molded toughness, improved impact resistance and reduced cycle times. It also has excellent surface appearance and is available in natural, heat stabilized, and pigmented versions. It combines the strength, toughness and stiffness of a modified glass reinforced nylon 6 resin. In addition to these characteristics, surface appearance and cycle time performance have been significantly improved. It maintains its inherent chemical resistance to greases, oils and hydrocarbons. Capron HPN 9315G is generally recommended for applications such as power tool and chain saw and vacuum housings and under hood components. 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-9315G-Impact-Modified-15-Glass-Filled-Nylon-6-Dry-nspsdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO data
Water Absorption	1.1 %	1.1 %	24 hrs; ISO data
Moisture Absorption at Equilibrium	2.0 %	2.0 %	50% RH; 23°C; ISO data
Water Absorption at Saturation	7.1 %	7.1 %	in water; 23°C; ISO data
Viscosity Measurement	31	31	Formic Acid Viscosity; ISO data
Linear Mold Shrinkage	0.0050 cm/cm	0.0050 in/in	ASTM Data MD

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	110 MPa	16000 psi	Same value from ASTM and ISO tests; 5 mm/min.
Elongation at Break	3.2 %	3.2 %	ISO, 5 mm/minl

Mechanical Properties	Metric	English	Comments
Tensile Modulus	5.61 GPa	814 ksi	same value from ASTM and ISO test.
Flexural Yield Strength	175 MPa	25400 psi	ASTM Data
Flexural Modulus	4.83 GPa	701 ksi	ASTM Data
Poissons Ratio	0.35	0.35	ISO data
Shear Modulus	2.10 GPa	305 ksi	calculated
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	ISO Data
	0.610 J/cm ² @Temperature -30.0 °C	2.90 ft-lb/in ² @Temperature -22.0 °F	ISO data

Thermal Properties	Metric	English	Comments
Melting Point	220 °C	428 °F	ASTM and ISO test
Deflection Temperature at 0.46 MPa (66 psi)	210 °C	410 °F	ISO data
Deflection Temperature at 1.8 MPa (264 psi)	190 °C	374 °F	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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