

BASF Capron® GR30 30% Glass-Filled Nylon 6 (Dry) (discontinued **)

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

Material Notes:

Capron GR30 is a 30% glass reinforced polyamide 6 injection molding compound. IT is also available in heat stabilized (Capron GR30 HS) and/or pigmented versions. The glass fiber reinforcement enhances performance while maintaining good surface appearance. It demonstrates high toughness, strength and creep resistance. Wear and chemical resistance is very good to greases, oils, gasoline and hydrocarbons. Capron GR30 is generally recommended for applications where higher resistance and strength are needed such as linkage 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-GR30-30-Glass-Filled-Nylon-6-Dry-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.36 g/cc	0.0491 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	6.6 %	6.6 %	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	0.010 cm/cm	0.010 in/in	ISO Data

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	189 MPa	27400 psi	ISO value at 5mm/min.
	190 MPa	27600 psi	ASTM data at 5 mm/min.
Elongation at Break	3.5 %	3.5 %	ISO, 5 mm/minl

Mechanical Properties	Metric	English	ASTM 5 mm/min Comments
Tensile Modulus	9.65 GPa	1400 ksi	same value from ASTM and ISO test.
Flexural Yield Strength	290 MPa	42100 psi	ASTM Data
Flexural Modulus	8.41 GPa	1220 ksi	ASTM Data
Poissons Ratio	0.35	0.35	ISO data
Shear Modulus	3.60 GPa	522 ksi	calculated
Charpy Impact, Notched	1.35 J/cm ²	6.42 ft-lb/in ²	ISO Data

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	25.0 µm/m-°C	13.9 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)	220 °C	428 °F	ISO data
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	ISO data
	209 °C	408 °F	
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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