BASF Capron® GR630 HS 30% Glass-Filled Nylon 66 (Dry) (discontinued **)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 30% Glass Fiber Filled

Material Notes:

Capron GR630 HS is a heat stabilized, 30% glass fiber reinforced polyamide 6,6 injection molding compound offering excellent strength, stiffness, creep resistance and dimensional stability. This balance of engineering properties combined with excellent processability make it ideal in applications replacing metal, resulting in overall cost and weight reduction. It is also available in non-heat stabilized (Capron GR630) and/or pigmented versions.Capron GR630 HS is generally recommended for switch components, valve bodies and relay parts.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: 290-315 degC (555-600 degF). Mold Temperature: 80-95 degC (176-203 degF). Injection and Packing Pressure: 35-125 bar (500-1500psi) A mold temperature of 80-95degC (176-203 degF) is recommended, but temperatures of as low as 45 degC (113degF) and as high as 105 degC (221 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. 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-GR630-HS-30-Glass-Filled-Nylon-66-Dry-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.38 g/cc	0.0499 lb/in³	ISO data
Moisture Absorption at Equilibrium	1.8 %	1.8 %	50% RH; 23°C; ISO data
Water Absorption at Saturation	5.9 %	5.9 %	in water; 23°C; ISO data
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	ASTM and ISO value
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	ISO Data

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	205 MPa	29700 psi	Same value from ASTM and ISO tests; 5 mm/min.
Elongation at Break	3.0 %	3.0 %	ASTM, 5 mm/minl
	3.0 %	3.0 %	ISO, 5 mm/minl
Tensile Modulus	9.74 GPa	1410 ksi	same value from ASTM and ISO test.
Poissons Ratio	0.35	0.35	ISO data

Mechanical Properties	Metric	English	Comments
Shear Modulus	3.60 GPa	522 ksi	calculated

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	23.0 µm/m-°C @Temperature 20.0 °C	12.8 µin/in-°F @Temperature 68.0 °F	ISO data
CTE, linear, Transverse to Flow	69.0 µm/m-°C @Temperature 20.0 °C	38.3 µin/in-°F @Temperature 68.0 °F	ISO data
Melting Point	260 °C	500 °F	ASTM and ISO test
Deflection Temperature at 0.46 MPa (66 psi)	257 °C	495 °F	ISO data
Deflection Temperature at 1.8 MPa (264 psi)	245 °C	473 °F	ISO Data

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	ISO data
Dielectric Strength	30.0 kV/mm	762 kV/in	ISO data

Processing Properties	Metric	English	Comments
Processing Temperature	290 °C	554 °F	See Materials Notes
Mold Temperature	80.0 °C	176 °F	See Materials Notes
Drying Temperature	85.0 °C	185 °F	See Materials Notes

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