

BASF Capron® GR15 15% Glass-Filled Nylon 6 (Dry) (discontinued **)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 20% Glass Fiber Filled

Material Notes:

Capron GR15 is a 15% glass reinforced polyamide 6 injection molding compound possessing a balance of engineering properties combined with excellent processability and surface aesthetics. It is also available in heat stabilized (Capron GR15 HS) and/or pigmented versions. Capron GR15 is ideally suited for more demanding performance applications such as safety helmet parts, washers, gears, engine and motor parts, chutes, and higher temperature environments. Data provided by Allied Signal. Processing: Max. water content 0.16%. 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: 250-280 degC (482-536 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-GR15-15-Glass-Filled-Nylon-6-Dry-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.22 g/cc	0.0441 lb/in ³	ISO data
Water Absorption	1.4 %	1.4 %	24 hrs; ISO data
Moisture Absorption at Equilibrium	2.3 %	2.3 %	50% RH; 23°C; ISO data
Water Absorption at Saturation	8.1 %	8.1 %	in water; 23°C; ISO data
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 in/in	ASTM and ISO value
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	ISO Data

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	125 MPa	18100 psi	Same value from ASTM and ISO tests; 5 mm/min.
Elongation at Break	3.5 %	3.5 %	ISO, 5 mm/minl
	3.5 %	3.5 %	ASTM, 5 mm/minl
Tensile Modulus	6.10 GPa	885 ksi	same value from ASTM and ISO test.
Poissons Ratio	0.35	0.35	ISO data

Mechanical Properties	Metric Pa	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	39.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	21.7 $\mu\text{in}/\text{in}\cdot\text{°F}$	ISO data
	@Temperature 20.0 °C	@Temperature 68.0 °F	
CTE, linear, Transverse to Flow	78.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	43.3 $\mu\text{in}/\text{in}\cdot\text{°F}$	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)	215 °C	419 °F	ISO data
Deflection Temperature at 1.8 MPa (264 psi)	196 °C	385 °F	ISO data
	200 °C	392 °F	ASTM Data
Flammability, UL94	HB	HB	
	@Thickness 0.810 mm	@Thickness 0.0319 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	$\geq 1.00\text{e}+15$ ohm-cm	$\geq 1.00\text{e}+15$ 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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