

BASF Capron® BU50I Ultratough Nylon 6 (Dry) (discontinued **)

Category : Polymer , Thermoplastic , Nylon , Nylon 6

Material Notes:

Capron Ultratough Nylon BU50I is an unfilled nylon 6 product that maintains its impact strength and ductility to -40 deg F (-40 deg C). The extreme low temperature tolerance of Ultratough Nylon BU50I makes it ideal for applications in which the weldline impact strength at low temperatures is critical. Capron BU50I is generally recommended for automotive components, small engines, power tool parts and casings, cold weather and high impact supports gear, such as snowboards, ski components, helmets and hockey masks. Data provided by Allied Signal. Processing: Max. water content 0.15%. 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: 270-315 degC (520-600 degF). Mold Temperature: 70 degC (158 degF). Injection and Packing Pressure: 35-125 bar (500-1500psi) A mold temperature of 70 degC (158 degF) is recommended, but temperatures of 10-85 degC (50-185 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. Fast fill rates are recommended to insure uniform melt delivery to the cavity and prevent premature freezing. Injection speeds of one inch of ram travel per second are typical. 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-BU50I-Ultratough-Nylon-6-Dry-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.06 g/cc	0.0383 lb/in ³	ISO data
Moisture Absorption at Equilibrium	2.1 %	2.1 %	50% RH; 23°C; ISO data
Water Absorption at Saturation	7.3 %	7.3 %	in water; 23°C; ISO data
Linear Mold Shrinkage	0.015 cm/cm	0.015 in/in	ASTM Data MD

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	45.0 MPa	6530 psi	ASTM data at 5 mm/min.
Tensile Strength, Yield	48.0 MPa	6960 psi	ISO value at 50 mm/min.
	50.0 MPa	7250 psi	ASTM value at 50 mm/min.
Elongation at Break	>= 50 %	>= 50 %	Nominal
	>= 100 %	>= 100 %	Nominal
Tensile Modulus	1.84 GPa	267 ksi	same value from ASTM and ISO test.
Flexural Yield Strength	65.0 MPa	9430 psi	ASTM Data
Flexural Modulus	1.69 GPa	245 ksi	ASTM Data

Mechanical Properties	Metric	English	Comments
Shear Modulus	0.700 GPa	102 ksi	calculated
Charpy Impact, Notched	NB	NB	ISO Data

Thermal Properties	Metric	English	Comments
Melting Point	220 °C	428 °F	ASTM and ISO test
Deflection Temperature at 1.8 MPa (264 psi)	50.0 °C	122 °F	ASTM Data
Flammability, UL94	HB	HB	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
Flammability, UL94	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Drying Temperature	85.0 °C	185 °F	See Materials Notes

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