

## BASF Capron® 8203C Nylon 6 (Dry) (discontinued \*\*)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Unreinforced

### Material Notes:

Capron 8203C is a high viscosity, nylon 6 extrusion compound, possessing a modified crystalline structure for increased property performance and faster set up for tubing and cable applications. It has high strength, stiffness and heat distortion temperature. It maintains excellent chemical resistance to greases, oils and hydrocarbons. It is available in natural, heat stabilized and pigmented versions. Capron 8203C is generally recommended for applications such as automotive tubing and cable liners. ASTM Callout PA234. Data provided by Allied Signal. Processing: Max. water content 0.25%. 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: 240-280 degC (464-536 degF). Mold Temperature: 80-95 degC (176-203 degF). Injection and Packing Pressure: 35-125 bar (500-1500psi) A mold temperature of 80-95 degC (176-203 degF) is recommended, but temperatures of as low as 10 degC (50 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. 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-8203C-Nylon-6-Dry-nbspdiscontinued-.php](http://www.lookpolymers.com/polymer_BASF-Capron-8203C-Nylon-6-Dry-nbspdiscontinued-.php)

Physical Properties	Metric	English	Comments
Density	1.13 g/cc	0.0408 lb/in <sup>3</sup>	ISO data
Water Absorption	1.6 %	1.6 %	24 hrs; ISO data
Moisture Absorption at Equilibrium	2.6 %	2.6 %	50% RH; 23°C; ISO data
Water Absorption at Saturation	9.3 %	9.3 %	in water; 23°C; ISO data
Viscosity Measurement	130	130	Formic Acid Viscosity; ISO data
Linear Mold Shrinkage	0.0090 cm/cm	0.0090 in/in	ASTM Data MD

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	85.0 MPa	12300 psi	ASTM value at 50 mm/min.
	86.0 MPa	12500 psi	ISO value at 50 mm/min.
Elongation at Break	20 %	20 %	Nominal
	40 %	40 %	Nominal
Elongation at Yield	5.0 %	5.0 %	ISO Value at 50 mm/min.
	5.0 %	5.0 %	ASTM Value at 50 mm/min.

Mechanical Properties	Metric <sup>Pa</sup>	English <sup>psi</sup>	Comments
Flexural Modulus	2.80 GPa	406 ksi	ISO Value
	3.345 GPa	485.2 ksi	ASTM Value
Poissons Ratio	0.35	0.35	ISO data

Thermal Properties	Metric	English	Comments
CTE, linear	81.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature 20.0 $^{\circ}\text{C}$	45.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Temperature 68.0 $^{\circ}\text{F}$	ASTM data
Melting Point	220 $^{\circ}\text{C}$	428 $^{\circ}\text{F}$	ASTM and ISO test
Deflection Temperature at 0.46 MPa (66 psi)	198 $^{\circ}\text{C}$	388 $^{\circ}\text{F}$	ASTM Data
Deflection Temperature at 1.8 MPa (264 psi)	75.0 $^{\circ}\text{C}$	167 $^{\circ}\text{F}$	ASTM Data
Flammability, UL94	HB @Thickness 0.750 mm	HB @Thickness 0.0295 in	
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Melt Temperature	240 - 280 $^{\circ}\text{C}$	464 - 536 $^{\circ}\text{F}$	
Mold Temperature	80.0 - 95.0 $^{\circ}\text{C}$	176 - 203 $^{\circ}\text{F}$	temperatures as low as 10 $^{\circ}\text{C}$ (50 $^{\circ}\text{F}$ ) can be used where applicable.
Drying Temperature	85.0 $^{\circ}\text{C}$	185 $^{\circ}\text{F}$	See Materials Notes
Injection Pressure	3.45 - 10.3 MPa	500 - 1500 psi	

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