

BASF Capron® 8253 Impact Modified Nylon 6 (Dry) (discontinued **)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Impact Grade

Material Notes:

Capron 8253 is an unfilled type 6 graft copolymer developed for both injection molding and extrusion applications. It is also available in heat stabilized (Capron 8253 HS) and/or pigmented versions. Copolymerization results in improved dry as molded toughness and increased flexibility to meet higher impact performance compared to conventional unreinforced homopolymers. Good nylon thermal and chemical properties are maintained along with good strength and stiffness retention. Capron 8253 is generally recommended for applications such as plugs, receptacles, flexible connector covers, weed trimmer components, clips, fasteners, flanges, key housings as well as many flexible tubing applications. ASTM Callout PA254 + PA0270 B40410. Data provided by Allied Signal. Processing: Max. water content 0.2%. 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: 240-270 degC (464-518 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-8253-Impact-Modified-Nylon-6-Dry-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.09 g/cc	0.0394 lb/in ³	ISO data
Water Absorption	1.5 %	1.5 %	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	0.0090 cm/cm	0.0090 in/in	ISO data
	0.012 cm/cm	0.012 in/in	ASTM data MD
Linear Mold Shrinkage, Transverse	0.019 cm/cm	0.019 in/in	ISO Data

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	60.0 MPa	8700 psi	ASTM data at 5 mm/min.
Tensile Strength, Yield	65.0 MPa	9430 psi	50 mm/min; Same value from ASTM and ISO test.
Elongation at Break	>= 50 %	>= 50 %	Nominal
	>= 100 %	>= 100 %	Nominal

Mechanical Properties	Metric	English	Comments
	4.0 %	4.0 %	ASTM Value at 50 mm/min.
Tensile Modulus	2.53 GPa	367 ksi	same value from ASTM and ISO test.
Flexural Yield Strength	90.0 MPa	13100 psi	ASTM Data
Flexural Modulus	2.165 GPa	314.0 ksi	ISO Value
	2.21 GPa	321 ksi	ASTM Value
Poissons Ratio	0.35	0.35	ISO data
Shear Modulus	0.900 GPa	131 ksi	calculated
Charpy Impact, Notched	1.40 J/cm ²	6.66 ft-lb/in ²	ISO Data
	0.600 J/cm ²	2.86 ft-lb/in ²	ISO data
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	88.0 µm/m-°C	48.9 µin/in-°F	ISO data
	@Temperature 20.0 °C	@Temperature 68.0 °F	
CTE, linear, Transverse to Flow	93.0 µm/m-°C	51.7 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)	155 °C	311 °F	ISO data
	168 °C	334 °F	ASTM Data
Deflection Temperature at 1.8 MPa (264 psi)	56.0 °C	133 °F	ISO data
	60.0 °C	140 °F	ASTM Data
Flammability, UL94	HB	HB	
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	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

Comparative Tracking Index Electrical Properties	600 V Metric	600 V English	ISO data Comments
Processing Properties	Metric	English	Comments
Processing Temperature	280 °C	536 °F	See Materials Notes
Mold Temperature	70.0 °C	158 °F	See Materials Notes
Drying Temperature	85.0 °C	185 °F	See Materials Notes

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