

Global EPP PA 6C Cast Polyamide 6

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Cast

Material Notes:

Cast nylons are generally accepted as the primary engineering polymer, suitable for virtually any plain bearing application. By varying the conditions of polymerisation the mechanical properties of cast nylons may be altered to suit specific applications, and the performance of the basic polymer can be enhanced with the addition of various additives, fillers, lubricants and colorants. Key characteristics: Unequaled formulation options and profile range Excellent mechanical, thermal and chemical resistance Excellent PV and load bearing capabilities Excellent wear and abrasion resistance Good dimensional stability, largely free from internal stresses FDA compliant grades available This unmodified grade, produced by an anionic polymerisation casting process, demonstrates similar characteristics to PA 66 E. Cast products contain significantly lower stress levels combined with high strength, good creep and wear resistance resulting in great dimensional accuracy when machining.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Global-EPP-PA-6C-Cast-Polyamide-6.php

Physical Properties	Metric	English	Comments
Density	1.145 g/cc	0.04137 lb/in ³	Test Method A; ISO 1183:1987
Water Absorption	0.30 % @Temperature 23.0 Â°C, Time 86400 sec	0.30 % @Temperature 73.4 Â°F, Time 24.0 hour	Immersion; ISO 62:1999 (modified)
Water Absorption at Saturation	7.0 %	7.0 %	ISO 62:1999

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	84	84	ISO 868:2003
Tensile Strength at Break	80.0 MPa	11600 psi	Sample Type 1B, 50mm/min; ISO 527-1/2:1993
Elongation at Break	>= 20 %	>= 20 %	Sample Type 1B, 50 mm/min; ISO 527-1/2:1993
Modulus of Elasticity	4.00 GPa	580 ksi	Sample Type 1B, 50 mm/min; ISO 527-1/2:1993
Flexural Strength	105 MPa	15200 psi	1.5 mm/min; ISO 178:2001
Flexural Modulus	3.30 GPa	479 ksi	1.5 mm/min; ISO 178:2001
Compressive Strength	95.0 MPa	13800 psi	Sample Type B, 5 mm/min; ISO 604:2002
Compressive Modulus	2.70 GPa	392 ksi	Sample Type A, 1 mm/min; ISO 604:2002
Izod Impact, Notched (ISO)	5.60 kJ/m ²	2.66 ft-lb/in ²	Sample Type A; ISO 180:2000

Mechanical Properties	Metric	English	Comments
	@Pressure 1.75 MPa	@Pressure 254 psi	
K (wear) Factor	500 x 10 ⁻⁸ mm ³ /N-M @Pressure 1.75 MPa	248 x 10 ⁻¹⁰ in ³ - min/ft-lb-hr @Pressure 254 psi	31.4 m/min

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 Åµm/m-Å°C @Temperature 23.0 - 55.0 Å°C	44.4 Åµin/in-Å°F @Temperature 73.4 - 131 Å°F	ISO 11359-2:1999
Thermal Conductivity	0.260 W/m-K	1.80 BTU-in/hr-ftÅ²- Å°F	ISO 8301:1991
Melting Point	220 Å°C	428 Å°F	
Maximum Service Temperature, Air	100 Å°C	212 Å°F	Continuous
	170 Å°C	338 Å°F	Intermittent
Minimum Service Temperature, Air	-100 Å°C	-148 Å°F	Intermittent
	-40.0 Å°C	-40.0 Å°F	Continuous
Flammability, UL94	HB	HB	IEC 60695-11-10:2003-08

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093:1980-01
Surface Resistance	1.00e+12 ohm	1.00e+12 ohm	IEC 60093:1980-01
Dielectric Constant	3.7 @Frequency 1.00e+6 Hz	3.7 @Frequency 1.00e+6 Hz	IEC 60250:1969-01
	4.0 @Frequency 100 Hz	4.0 @Frequency 100 Hz	IEC 60250:1969-01
Dielectric Strength	25.0 kV/mm	635 kV/in	IEC 60243-1:1998-01
Comparative Tracking Index	600 V	600 V	IEC 60112:2003-01

Descriptive Properties	Value	Comments
Color	Natural, Black	

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