

Global EPP PA 66E Extruded Polyamide 66

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Extruded

Material Notes:

Polyamides, commonly referred to as nylons, are macromolecular, partially crystalline thermoplastics. Their physical properties are mainly determined by the composition and structure of their molecular chains. Their combined strengths and characteristics position them as obvious first choice materials for all components, subject to structural and wear conditions, in mechanical and plant engineering environments. Key characteristics: Excellent sliding and wear properties Perfect balance of mechanical strength, toughness and rigidity Good electrical insulating properties Various FDA compliant grades available. This grade is noted for its elevated mechanical strength, rigidity, abrasion and heat resistance. Its impact strength and vibration damping abilities are reduced when compared to PA 6, making this the preferred extruded grade for highly stressed, thermally loaded components.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Global-EPP-PA-66E-Extruded-Polyamide-66.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 °C, Time 86400 sec	0.30 % @Temperature 73.4 °F, Time 24.0 hour	Immersion; ISO 62:1999 (modified)
Moisture Absorption at Equilibrium	2.7 %	2.7 %	50% RH; ISO 62:1999
Water Absorption at Saturation	8.5 %	8.5 %	ISO 62:1999

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	82	82	ISO 868:2003
Tensile Strength at Break	90.0 MPa	13100 psi	Sample Type 1B, 50mm/min; ISO 527-1/2:1993
Elongation at Break	>= 30 %	>= 30 %	Sample Type 1B, 50 mm/min; ISO 527-1/2:1993
Modulus of Elasticity	3.70 GPa	537 ksi	Sample Type 1B, 50 mm/min; ISO 527-1/2:1993
Flexural Strength	100 MPa	14500 psi	1.5 mm/min; ISO 178:2001
Flexural Modulus	3.10 GPa	450 ksi	1.5 mm/min; ISO 178:2001
Compressive Strength	90.0 MPa	13100 psi	Sample Type B, 5 mm/min; ISO 604:2002
Compressive Modulus	3.20 GPa	464 ksi	Sample Type A, 1 mm/min; ISO 604:2002
Izod Impact, Notched (ISO)	5.70 kJ/m ²	2.71 ft-lb/in ²	Sample Type A; ISO 180:2000

Mechanical Properties	Metric	English	Comments
Coefficient of Friction, Dynamic			31.4 m/min
	@Pressure 1.75 MPa	@Pressure 254 psi	
Limiting Pressure Velocity	0.100 MPa-m/sec	2860 psi-ft/min	

Thermal Properties	Metric	English	Comments
CTE, linear	100 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	55.6 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2:1999
	@Temperature 23.0 - 55.0 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 131 $\text{Å}^\circ\text{F}$	
Thermal Conductivity	0.230 W/m-K	1.60 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	ISO 8301:1991
Melting Point	260 $\text{Å}^\circ\text{C}$	500 $\text{Å}^\circ\text{F}$	
Maximum Service Temperature, Air	100 $\text{Å}^\circ\text{C}$	212 $\text{Å}^\circ\text{F}$	Continuous
	170 $\text{Å}^\circ\text{C}$	338 $\text{Å}^\circ\text{F}$	Intermittent
Deflection Temperature at 0.46 MPa (66 psi)	205 $\text{Å}^\circ\text{C}$	401 $\text{Å}^\circ\text{F}$	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	100 $\text{Å}^\circ\text{C}$	212 $\text{Å}^\circ\text{F}$	ISO 75
Glass Transition Temp, Tg	72.0 $\text{Å}^\circ\text{C}$	162 $\text{Å}^\circ\text{F}$	ISO 11359-2:1999
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	3.6	3.6	IEC 60250:1969-01
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.3	4.3	IEC 60250:1969-01
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	30.5 kV/mm	775 kV/in	IEC 60243-1:1998-01
Dissipation Factor	0.024	0.024	IEC 60250:1969-01
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112:2003-01

Descriptive Properties	Value	Comments
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Descriptive Properties

Value ^{Natural, Black}

Comments

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