

Saint-Gobain Meldin[®] 5001 Thermoplastic Bearing Material

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK)

Material Notes:

General Notes on Meldin 3000/5000 Series Bearing Products: Injection Moldable, High-Performance Bearings. Can withstand environments of high temperature, corrosive, and water. Specific Notes on Meldin[®] 5001 Bearing: Meldin[®] 5001 components offer superior strength in structural applications where electrical insulation combined with intricate part design is required. The melt characteristics of Meldin[®] 5001 material allow for fine detail, regardless of part complexity. Applications include: Appliances, Automotive, Document Processing Equipment, Industrial, Medical, Transportation. Information provided by Saint Gobain Performance Products.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Saint-Gobain-Meldin-5001-Thermoplastic-Bearing-Material.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	ASTM D792
Water Absorption	0.23 %	0.23 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Tensile Strength	110 MPa	16000 psi	ASTM D638
Elongation at Yield	2.8 %	2.8 %	ASTM D638
Tensile Modulus	4.80 GPa	696 ksi	ASTM D 638
Flexural Strength	169 MPa	24500 psi	ASTM D790
Flexural Modulus	5.60 GPa	812 ksi	ASTM D790
Compressive Strength	207 MPa	30000 psi	ASTM D695
Compressive Modulus	2.90 GPa	421 ksi	ASTM D695
Poissons Ratio	0.36	0.36	

Thermal Properties	Metric	English	Comments
CTE, linear	34.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	18.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E831-93
	@Temperature 24.0 - 149 $\text{Å}^\circ\text{C}$	@Temperature 75.2 - 300 $\text{Å}^\circ\text{F}$	
	71.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	39.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E831-93
	@Temperature 199 - 299 $\text{Å}^\circ\text{C}$	@Temperature 390 - 570 $\text{Å}^\circ\text{F}$	
Maximum Service Temperature, Air	316 $\text{Å}^\circ\text{C}$	600 $\text{Å}^\circ\text{F}$	UL-746 B
Deflection Temperature at 1.8 MPa			

(264 psi) Thermal Properties	255 Å°C Metric	491 Å°F English	ASTM D648 Comments
Electrical Properties	Metric	English	Comments
Dielectric Constant	3.4 @Frequency 1000 Hz	3.4 @Frequency 1000 Hz	ASTM D150
	3.4 @Frequency 10000 Hz	3.4 @Frequency 10000 Hz	ASTM D150
Dielectric Strength	17.0 kV/mm	433 kV/in	ASTM D149
Dissipation Factor	0.0010 @Frequency 10000 Hz	0.0010 @Frequency 10000 Hz	ASTM D150
Arc Resistance	135 sec	135 sec	ASTM D495

Descriptive Properties	Value	Comments
Hardness, Rockwell K	50	ASTM D785

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