Ensinger TECATOR™ TI 5031 Polyamide-imide (PAI), Bearing Grade

Category : Polymer , Thermoplastic , Polyamide-imide (PAI)

Material Notes:

TECATOR™ is a high performance melt processable polyamideimide that maintains its excellent mechanical and wear properties in temperature environments exceeding 500°F. Stock shapes from Ensinger are available in three grades: TECATOR™ TI 5013, high strength structural grade featuring good electrical properties and strength, making it ideal for demanding applications at a broad range of temperatures. TECATOR™ TI 5031 offers high PV capabilities in bearing applications, primarily at high loads and low speeds. TECATOR™ GF30 (XP1424T) is a 30% glass filled grade, compression molded with superior stiffness and dimensional stability. It is available in a wide variety of custom tube, ring, rod and plate sizes.Excellent weather and gamma radiation resistanceOutstanding bearing wear properties (at elevated temperatures, TECATOR™ TI 5031 offers superior wear rates)High strength and stiffnessExcellent electrical valuesGood chemical resistance (TECATOR™ is not attacked by common solvents or fuels and is acceptable for use in contact with many acids)Maintains a high proportion of mechanical properties over a broad temperature spectrum - cryogenic to 500°FTECATOR™ TI 5013 and TI 5031 are available in a wide variety of metric sizes in rod and plateTECATOR™ (PAI) typical applications: Pump parts, valve seats, piston rings, seal rings, engine transmission parts and bearing cages. For the semiconductor industry it is used for "burn in" test sockets, nests, chassis and other applications such as welding nozzle tips.Information Provided by Ensinger Industries, Inc.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Ensinger-TECATOR-TI-5031-Polyamide-imide-PAI-Bearing-Grade.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.46 g/cc	1.46 g/cc	ASTM D792

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	109	109	ASTM D785
Tensile Strength at Break	131 MPa @Temperature 22.8 °C	19000 psi @Temperature 73.0 °F	ASTM D638
Elongation at Break	10 % @Temperature 22.8 °C	10 % @Temperature 73.0 °F	ASTM D638
Flexural Strength	159 MPa @Temperature 22.8 °C	23000 psi @Temperature 73.0 °F	ASTM D790
Flexural Modulus	6.00 GPa @Temperature 22.8 °C	870 ksi @Temperature 73.0 °F	ASTM D790
Izod Impact, Notched	1.07 J/cm @Temperature 22.8 °C	2.00 ft-lb/in @Temperature 73.0 °F	ASTM D256

Thermal Properties	Metric	English	Comments

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	260 °C	500 °F	continuous
Deflection Temperature at 1.8 MPa (264 psi)	279 °C	534 °F	ASTM D648
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.8 @Frequency 2.00e+7 Hz	3.8 @Frequency 2.00e+7 Hz	ASTM D150
	3.9 @Frequency 3.00e+7 Hz	3.9 @Frequency 3.00e+7 Hz	ASTM D150
Dissipation Factor	0.012 @Frequency 2.00e+7 Hz	0.012 @Frequency 2.00e+7 Hz	
	0.018 @Frequency 3.00e+7 Hz	0.018 @Frequency 3.00e+7 Hz	

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