

Ensinger TECASINT 3022 Polyimide, Black, 15% Graphite (PI)

Category : Polymer , Thermoplastic , Polyimide, Thermoplastic , Thermoplastic Polyimide, Graphite Filled

Material Notes:

TECASINT is a range of non-melting high temperature polyimides characterized by high strength over a wide range of temperatures, good long term thermal stability, minimal thermal expansion and excellent wear resistance among other things. The TECASINT 2000 series offers these enhanced thermal properties along with lower moisture absorption, a higher degree of toughness, and better machining properties.

TECASINT 2011 is unfilled, while TECASINT 2021 contains 15% graphite which offer improved wear resistance and a lower coefficient of friction. TECASINT 2000 series with their superior physical properties, are ideal for application in the aerospace, nuclear, automotive, electrical/electronics, and chemical processing industries. Main features: High temperature resistance, very creep resistant, good radiation-resistance, good sliding properties, low outgassing, good chemical resistance, flame retardant according to UL94 V-0, not electrically insulating, easily machined, sensitive to hydrolysis in higher thermal range. Applications: Mechanical engineering, automotive engineering, conveyor technology, cryogenics, aircraft and aerospace industries, vacuum technology, precision engineering, hot glass technology. Preferred Fields: Valve seats, friction rings, skid rails, chain guides, piston rings, gripper for hot glass, washers, bearings. Information Provided by Ensinger Sintimid

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ensinger-TECASINT-3022-Polyimide-Black-15-Graphite-PI.php

Physical Properties	Metric	English	Comments
Density	1.38 g/cc	0.0499 lb/in ³	DIN 53 479
Water Absorption	0.64 %	0.64 %	24 hours in water; DIN EN ISO 62
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.26 %	2.26 %	24 hours in water; DIN EN ISO 62
	@Temperature 80.0 °C	@Temperature 176 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	80	80	DIN 53 505
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength	54.4 MPa	7890 psi	EN ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	4.6 %	4.6 %	EN ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Yield	4.4 %	4.4 %	Flexural Elongation; EN ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	2.904 GPa	421.2 ksi	EN ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Flexural Strength	@Temperature 23.0 °C	@Temperature 73.4 °F	EN ISO 178
Flexural Modulus	2.84 GPa @Temperature 23.0 °C	412 ksi @Temperature 73.4 °F	EN ISO 178
Compressive Yield Strength	83.0 MPa @Strain 10.0 %, Temperature 23.0 °C	12000 psi @Strain 10.0 %, Temperature 73.4 °F	EN ISO 604
Compressive Strength	225 MPa @Temperature 23.0 °C	32600 psi @Temperature 73.4 °F	EN ISO 604
Compressive Modulus	1.026 GPa @Temperature 23.0 °C	148.8 ksi @Temperature 73.4 °F	EN ISO 604
Charpy Impact Unnotched	2.35 J/cm² @Temperature 23.0 °C	11.2 ft-lb/in² @Temperature 73.4 °F	EN ISO 179
Charpy Impact, Notched	0.430 J/cm² @Temperature 23.0 °C	2.05 ft-lb/in² @Temperature 73.4 °F	EN ISO 179
Compression Set	50.4 % @Temperature 23.0 °C	50.4 % @Temperature 73.4 °F	Compression at Break; EN ISO 604

Thermal Properties	Metric	English	Comments
CTE, linear	44.0 µm/m-°C @Temperature 50.0 - 200 °C	24.4 µin/in-°F @Temperature 122 - 392 °F	DIN 53 752
	57.0 µm/m-°C @Temperature 200 - 300 °C	31.7 µin/in-°F @Temperature 392 - 572 °F	DIN 53 752

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