Ensinger TECASINT 1041 Polyimide, 30% MoS2 Filled (PI)

Category : Polymer , Thermoplastic , Polyimide, Thermoplastic , Thermoplastic Polyimide, Machined, MoS2 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 FeaturesHigh thermal and mechanical capacityGood radiation-resistanceLow outgassingFlame retardant according to UL94 V-0Easily machinedVery creep resistantGood slid and wear propertiesBroad chemical compatibilityGood electrical insulatingSensitive to hydrolysis in higher thermal rangeApplicationsMechanical engineeringVacuum engineeringAircraft and aerospace industriesPrecision engineeringCryogenicsPreferred FieldsVacuum seal, valve seating, skid rails, chain guides, piston rings, bearings, washersInformation Provided by Ensinger, Inc.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Ensinger-TECASINT-1041-Polyimide-30-MoS2-Filled-PI.php

Physical Properties	Metric	English	Comments
Density	1.67 g/cc @Temperature 23.0 °C	0.0603 lb/in³ @Temperature 73.4 °F	DIN 53 479
Filler Content	30 %	30 %	Molybdenum disulfide
Water Absorption	0.72 % @Temperature 23.0 °C, Time 86400 sec	0.72 % @Temperature 73.4 °F, Time 24.0 hour	EN ISO 62

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	89 @Temperature 23.0 °C	89 @Temperature 73.4 °F	DIN 53 505
Tensile Strength, Yield	82.0 MPa @Temperature 23.0 °C	11900 psi @Temperature 73.4 °F	EN ISO 527
Elongation at Break	2.8 % @Temperature 23.0 °C	2.8 % @Temperature 73.4 °F	EN ISO 527
Elongation at Yield	3.7 %	3.7 %	Flexural; EN ISO 178
Tensile Modulus	4.34 GPa @Temperature 23.0 °C	629 ksi @Temperature 73.4 °F	EN ISO 527
	126 MPa	18300 psi	

Mechanical Properties	Metric	English	Comments
Flexural Strength	@Temperature 23.0 °C	@Temperature 73.4 °F	EN ISO 178
Flexural Modulus	4.33 GPa @Temperature 23.0 °C	628 ksi @Temperature 73.4 °F	EN ISO 178
Compressive Strength	204 MPa @Temperature 23.0 °C	29600 psi @Temperature 73.4 °F	EN ISO 604
Charpy Impact Unnotched	2.965 J/cm²	14.11 ft-lb/in²	EN ISO 179
Compression Set	64 %	64 %	Compression at Break; EN ISO 604

Thermal Properties	Metric	English	Comments
CTE, linear	65.0 µm/m-°C @Temperature 50.0 - 200 °C	36.1 µin/in-°F @Temperature 122 - 392 °F	DIN 53 752
Glass Transition Temp, Tg	330 °C	626 °F	DMTA
Flammability, UL94	V-0	V-0	

Descriptive Properties	Value	Comments
Color	Black	
DIN-Abbreviation	PI M 30	

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