Ensinger Sintimid™ V-HP high-purity Polyimide (PI) (discontinued **)

Category : Polymer , Thermoplastic , Polyimide, Thermoplastic

Material Notes:

SINTIMID™ V polyimide stock shapes provide a superior combination of high temperature and bearing and wear, properties that make it an idea choice for the most demanding applications. SINTIMID™ V is characterized by its long-term thermal stability, outstanding wear resistance, high creep resistance, and strength up to its continuous use temperature of 572°F.Superior high temperature characteristicsExcellent long-term thermal stabilityOutstanding bearing and wear properties (at elevated temperatures, SINTIMID™ V formulations offer superior wear rates)Excellent creep resistanceHigh strength and stiffness properties (SINTIMID™ V has a tensile strength of 20,000 psi at room temperature)High purity characteristics (only extremely low levels of extractables and ionic impurities are apparent in SINTIMID™ V)Good chemical resistance (SINTIMID™ V is not attacked by common solvents or fuels and is acceptable for use in contact with many acids)SINTIMID™ V with its superior physical properties, is ideal for applications in the aerospace, nuclear, automotive, electrical/electronic, and chemical processing industries. It is an excellent candidate for high purity applications in the semiconductor processing industry. Typical components produced from SINTIMID™ V include seals, thrust washers, bushings and wear pads in transportation/off-highway equipment, insulating and support elements in electrical welding and brazing equipment, and wafer-handling components in the harsh environment of semiconductor plasma ovens. Pump and valve seals, vanes, and piston rings are also commonly produced from SINTIMID™ V.Information Provided by Ensinger Industries, Inc.Sintimid has been replaced with Tecasint in the Ensinger product line.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Ensinger-Sintimid-V-HP-high-purity-Polyimide-PI-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.34 g/cc	1.34 g/cc	ASTM D792
Density	1.34 g/cc	0.0484 lb/in³	ASTM D792
Water Absorption	0.62 % @Temperature 22.8 °C, Time 86400 sec	0.62 % @Temperature 73.0 °F, Time 24.0 hour	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	120	120	ASTM D785
Tensile Strength, Yield	140 MPa @Temperature 22.8 °C	20300 psi @Temperature 73.0 °F	ASTM D638
Elongation at Break	9.0 % @Temperature 22.8 °C	9.0 % @Temperature 73.0 °F	ASTM D638
Flexural Strength	205 MPa @Temperature 22.8 °C	29700 psi @Temperature 73.0 °F	ASTM D790
	4.00 GPa	580 ksi	

Mechanical Properties	Metric	English	Comments
Flexural Modulus	@Temperature 22.8 °C	@Temperature 73.0 °F	ASTM D790
Izod Impact, Notched	0.320 J/cm @Temperature 22.8 °C	0.600 ft-lb/in @Temperature 73.0 °F	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	50.4 µm/m-°C	28.0 µin/in-°F	ASTM D696
Maximum Service Temperature, Air	280 °C	536 °F	Long Term
	330 °C	626 °F	Intermittent
Deflection Temperature at 1.8 MPa (264 psi)	316 °C	600 °F	ASTM D648

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+18 ohm-cm	1.00e+18 ohm-cm	ASTM D257
Dielectric Strength	19.7 kV/mm	500 kV/in	ASTM D149

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