TECASINT™ 2021

Thermoplastic Polyimide

Ensinger Inc.

Message:

TECASINT™ 2000 series of polyimide stock shapes provide a superior combination of high temperature and bearing and wear, properties that make it an ideal choice for the most demanding applications. TECASINT™ 2011 is very pure, and exhibits low outgassing. It is also characterized by it's longterm thermal stability, outstanding wear resistance, high creep resistance, and strength up to its continuous use temperature of 536° F. TECASINT™ 2021 contains 15% graphite and is also available for applications requiring improved wear resistance & lower coefficient of friction.
TECASINT™ 2000 series with their superior physical properties, are ideal for applications in the aerospace, nuclear, automotive, electrical/electronics, and chemical processing industries. TECASINT™ shapes are excellent candidates for high purity applications in the semiconductor processing industry. Typical components produced from TECASINT™ applications 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 TECASINT™ series materials.

General Information			
Filler / Reinforcement	Graphite fiber reinforced material, 15% filler by weight		
Features	Low friction coefficient Rigidity, high High strength Good creep resistance Good chemical resistance Good wear resistance Heat resistance, high Thermal stability, good		
Uses	Pump parts Bushing Electrical/Electronic Applications Valve/valve components Aerospace applications Nuclear energy applications Insulating material Seals Application in Automobile Field Thrust washer		
Forms	Shapes		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.46	g/cm³	ASTM D792
Water Absorption (23°C, 24 hr)	1.3	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	87		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**

Tensile Modulus	4400	MPa	ASTM D638
Tensile Strength (Yield, 23°C)	101	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	3.7	%	ASTM D638
Flexural Modulus (23°C)	4050	MPa	ASTM D790
Flexural Strength (23°C)	143	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	523	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	> 316	°C	ASTM D648
CLTE - Flow (-40 to 38°C)	4.1E-5	cm/cm/°C	ASTM D696
Maximum Service Temperature			
Intermittent	330	°C	
Long Term	280	°C	

Additional Information

Data obtained from extruded shapes material.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

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