

Ensinger TECASINT™ 2061 Polyimide, 15% Graphite, 10% PTFE Filled (PI)

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

Material Notes:

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 long term 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. Superior high temperature characteristics (TECASINT™ 2000 series can operate up to 536° F continuously)Excellent long-term thermal stabilityOutstanding bearing and wear properties (at elevated temperatures, TECASINT™ 2000 formulations offer superior wear rates)Excellent creep resistanceHigh strength and stiffness propertiesHigh purity characteristics (only extremely low levels of extractables and ionic impurities are apparent in TECASINT™ 2011)Good chemical resistance (TECASINT™ 2000 series is not attacked by common solvents or fuels and is acceptable for use in contact with many acids)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.Information Provided by Ensinger Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ensinger-TECASINT-2061-Polyimide-15-Graphite-10-PTFE-Filled-PI.php

Physical Properties	Metric	English	Comments
Dancity	1.51 g/cc	0.0546 lb/in ³	DIN 53 479
Density	@Temperature 23.0 °C	@Temperature 73.4 °F	DIN 33 413
Filler Content	10 %	10 %	PTFE
	15 %	15 %	Graphite
	0.35 %	0.35 %	
Water Absorption	@Temperature 23.0 °C, Time 86400 sec	@Temperature 73.4 °F, Time 24.0 hour	EN ISO 62
	1.5 %	1.5 %	EN ISO 62
	@Temperature 80.0 °C, Time 86400 sec	@Temperature 176 °F, Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	84	84	DIN 53 505
naturiess, Silvie D	@Temperature 23.0 °C	@Temperature 73.4 °F	DIN 33 303



Elongation at Break 2.7 % 2.7 % 2.7 % EN ISO 527	Mechanical Properties	Metric	English	Comments EN 130 321
Elongation at Break ©Temperature 23.0 °C ©Temperature 73.4 °F EN ISO 527 Elongation at Yield 3.3 % 3.3 % Flexural; EN ISO 178 Tensile Modulus 3.90 GPa		@Temperature 23.0 °C	@Temperature 73.4 °F	
Biongation at Yield 3.3 % 3.3 % Flexural; EN ISO 178	Elongation at Break	2.7 %	2.7 %	EN ISO 527
Tensile Modulus 3.90 GPa (perperature 23.0 °C) 566 ksi EN ISO 527 Flexural Strength 89.0 MPa (perperature 23.0 °C) 12900 psi (perperature 73.4 °F) EN ISO 178 Flexural Modulus 3.49 GPa (perperature 23.0 °C) 506 ksi (perperature 73.4 °F) EN ISO 178 Compressive Yield Strength 142 MPa (perperature 23.0 °C) 20600 psi (perperature 73.4 °F) 10% Strain; EN ISO 604 Compressive Strength 164 MPa (perperature 23.0 °C) (perperature 73.4 °F) EN ISO 604 Compressive Modulus 1.748 GPa (perperature 23.0 °C) (perperature 73.4 °F) EN ISO 604 Charpy Impact Unnotched 1.94 J/cm² (perperature 23.0 °C) (perperature 73.4 °F) EN ISO 179 Charpy Impact, Notched 0.320 J/cm² (perperature 23.0 °C) (perperature 73.4 °F) (perperature 73.4 °F) EN ISO 179		@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus @Temperature 23.0 °C @Temperature 73.4 °F B9.0 MPa 12900 psi @Temperature 73.4 °F @Temperature 23.0 °C @Temperature 73.4 °F Plexural Strength 89.0 MPa 12900 psi @Temperature 73.4 °F @Temperature 23.0 °C @Temperature 73.4 °F PN ISO 178 EN ISO 604 Compressive Modulus 1.748 GPa @Temperature 23.0 °C @Temperature 73.4 °F Charpy Impact Unnotched 1.94 J/cm² 9.23 ft-lb/in² EN ISO 179 EN ISO 179 EN ISO 179	Elongation at Yield	3.3 %	3.3 %	Flexural; EN ISO 178
Flexural Strength 89.0 MPa 12900 psi @Temperature 23.0 °C @Temperature 73.4 °F Plexural Strength 3.49 GPa @Temperature 23.0 °C @Temperature 73.4 °F EN ISO 178 EN ISO 178 EN ISO 178 EN ISO 178 Compressive Yield Strength 142 MPa 20600 psi 10% Strain; EN ISO 604 Compressive Strength 164 MPa 23800 psi @Temperature 23.0 °C @Temperature 73.4 °F EN ISO 604 EN ISO 604 EN ISO 604 EN ISO 604 Compressive Modulus 1.748 GPa @Temperature 23.0 °C @Temperature 73.4 °F Charpy Impact Unnotched 1.94 J/cm² 9.23 ft-lb/in² EN ISO 179 EN ISO 179 EN ISO 179	Toncila Modulus	3.90 GPa	566 ksi	EN 100 527
Flexural Strength @Temperature 23.0 °C @Temperature 73.4 °F 3.49 GPa 3.49 GPa @Temperature 23.0 °C @Temperature 73.4 °F EN ISO 178 EN ISO 604 EN ISO 179 EN ISO 179 EN ISO 179 EN ISO 179	Tensite Modulus	@Temperature 23.0 °C	@Temperature 73.4 °F	EN 150 321
## Compressive Yield Strength 142 MPa 23800 psi 23800 psi 253.5 ksi 253.5 ksi	Florusal Strongth	89.0 MPa	12900 psi	FN ISO 178
Flexural Modulus @Temperature 23.0 °C @Temperature 73.4 °F Compressive Yield Strength 142 MPa 20600 psi 10% Strain; EN ISO 604 Compressive Modulus 1.748 GPa @Temperature 23.0 °C @Temperature 73.4 °F Charpy Impact Unnotched 1.94 J/cm² 9.23 ft-lb/in² EN ISO 604 EN ISO 604 EN ISO 604 EN ISO 179 EN ISO 179 Charpy Impact, Notched 0.320 J/cm² @Temperature 23.0 °C @Temperature 73.4 °F EN ISO 179	Trexular outlingth	@Temperature 23.0 °C	@Temperature 73.4 °F	ENIOO ITO
©Temperature 23.0 °C @Temperature 73.4 °F Compressive Yield Strength 142 MPa 20600 psi 10% Strain; EN ISO 604 164 MPa 23800 psi ©Temperature 23.0 °C @Temperature 73.4 °F EN ISO 604 Compressive Modulus 1.748 GPa ©Temperature 23.0 °C @Temperature 73.4 °F Charpy Impact Unnotched 1.94 J/cm² 9.23 ft-lb/in² EN ISO 179 Charpy Impact, Notched 0.320 J/cm² 1.52 ft-lb/in² ©Temperature 73.4 °F EN ISO 179	Flexural Modulus	3.49 GPa	506 ksi	EN ISO 178
Compressive Strength 164 MPa 23800 psi @Temperature 23.0 °C @Temperature 73.4 °F EN ISO 604 1.748 GPa 253.5 ksi @Temperature 23.0 °C @Temperature 73.4 °F Charpy Impact Unnotched 1.94 J/cm² 9.23 ft-lb/in² EN ISO 179 Charpy Impact, Notched 0.320 J/cm² 1.52 ft-lb/in² EN ISO 179	Trextal modulus	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Strength One of the perature 23.0 °C (a) Temperature 73.4 °F Compressive Modulus 1.748 GPa One of the perature 23.0 °C (a) Temperature 73.4 °F Charpy Impact Unnotched 1.94 J/cm² 1.52 ft-lb/in² Charpy Impact, Notched One of temperature 23.0 °C (a) Temperature 73.4 °F EN ISO 604 EN ISO 604 EN ISO 179 Charpy Impact, Notched One of temperature 23.0 °C (a) Temperature 73.4 °F EN ISO 179	Compressive Yield Strength	142 MPa	20600 psi	10% Strain; EN ISO 604
@Temperature 23.0 °C @Temperature 73.4 °F 1.748 GPa 253.5 ksi	Compressive Strength	164 MPa	23800 psi	FN ISO 604
Compressive Modulus @Temperature 23.0 °C @Temperature 73.4 °F Charpy Impact Unnotched 1.94 J/cm² 9.23 ft-lb/in² EN ISO 604 EN ISO 179 Charpy Impact, Notched 0.320 J/cm² 1.52 ft-lb/in² EN ISO 179 @Temperature 23.0 °C @Temperature 73.4 °F	compressive ottength	@Temperature 23.0 °C	@Temperature 73.4 °F	EN 130 004
@Temperature 23.0 °C @Temperature 73.4 °F Charpy Impact Unnotched 1.94 J/cm² 9.23 ft-lb/in² EN ISO 179 Charpy Impact, Notched 0.320 J/cm² 1.52 ft-lb/in² EN ISO 179 @Temperature 23.0 °C @Temperature 73.4 °F	Compressive Modulus	1.748 GPa	253.5 ksi	EN ISO 604
0.320 J/cm ² 1.52 ft-lb/in ² Charpy Impact, Notched EN ISO 179 @Temperature 23.0 °C @Temperature 73.4 °F	oompressive Modulus	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched EN ISO 179 @Temperature 23.0 °C @Temperature 73.4 °F	Charpy Impact Unnotched	1.94 J/cm ²	9.23 ft-lb/in ²	EN ISO 179
@Temperature 23.0 °C @Temperature 73.4 °F	Charpy Impact, Notched	0.320 J/cm ²	1.52 ft-lb/in ²	FN ISO 170
Compression Set 16.4 % 16.4 % Compression at Break; EN ISO 604		@Temperature 23.0 °C	@Temperature 73.4 °F	LN 100 113
	Compression Set	16.4 %	16.4 %	Compression at Break; EN ISO 604

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	370 °C	698 °F	DMTA
Flammability, UL94	V-0	V-0	

Descriptive Properties	Value	Comments
Color	Shiny Black	
DIN-Abbreviation	PI CS15 TF10	

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