

## Ensinger TECASINT 1061 Polyimide, 15% Graphite, 10% PTFE Filled (PI)

Category : Polymer , Thermoplastic , Polyimide, Thermoplastic , Thermoplastic Polyimide, Graphite Filled , Thermoplastic Polyimide, Molded, PTFE 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 thermal and mechanical capacity Good radiation-resistance Low outgassing Easily machined to tight tolerances Flame retardant according to UL94 V-0 Very creep resistant Good sliding properties Broad chemical compatibility Sensitive to hydrolysis in higher thermal range Applications Mechanical engineering Materials handling equipment Aircraft and aerospace industries Precision engineering Automotive industry Nuclear and vacuum technology Textile industry Preferred Fields Valve seating, switch parts, chain guides, piston rings, guide piece, thrust washer, bearings Information Provided by Ensinger, Inc.

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[http://www.lookpolymers.com/polymer\\_Ensinger-TECASINT-1061-Polyimide-15-Graphite-10-PTFE-Filled-PI.php](http://www.lookpolymers.com/polymer_Ensinger-TECASINT-1061-Polyimide-15-Graphite-10-PTFE-Filled-PI.php)

Physical Properties	Metric	English	Comments
Density	1.48 g/cc	0.0535 lb/in <sup>3</sup>	DIN 53 479
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Filler Content	10 %	10 %	PTFE
	15 %	15 %	Graphite
Water Absorption	2.3 %	2.3 %	3 week saturation; EN ISO 62
	@Temperature 80.0 °C	@Temperature 176 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	85	85	DIN 53 505
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength, Yield	77.0 MPa	11200 psi	EN ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	2.9 %	2.9 %	EN ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Yield	3.6 %	3.6 %	Flexural; EN ISO 178
	120 MPa	17400 psi	

Flexural Strength Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	EN ISO 178 Comments
Compressive Yield Strength	227 MPa	32900 psi	10% Strain; EN ISO 604
Compressive Strength	227 MPa @ Temperature 23.0 °C	32900 psi @ Temperature 73.4 °F	EN ISO 604
Izod Impact, Notched (ISO)	27.0 kJ/m <sup>2</sup>	12.8 ft-lb/in <sup>2</sup>	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	51.0 μm/m-°C @ Temperature 50.0 - 200 °C	28.3 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 Gleamy	
DIN-Abbreviation	PI CS15 TF10	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China