

## Ensinger TECASINT 4011 Polyimide, Yellow (PI)

Category : Polymer , Thermoplastic , Polyimide, Thermoplastic

### 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: Very high thermal and oxidative resistance, high creep resistant, good radiation-resistance, high toughness, very good chemical resistance, very low absorption of water, low outgassing, good electrical insulating, easily machined, sensitive to hydrolysis in higher thermal range, flame retardant according to UL94 V-0 Applications:

Mechanical engineering, precision engineering, semiconductor, electronics, conveyor technology, electrical engineering Preferred Fields:

Valve seating, seals, insulators, lead backer, carriage, test sockets Information Provided by Ensinger Sintimid

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Ensinger-TECASINT-4011-Polyimide-Yellow-PI.php](http://www.lookpolymers.com/polymer_Ensinger-TECASINT-4011-Polyimide-Yellow-PI.php)

Physical Properties	Metric	English	Comments
Density	1.416 g/cc	0.05116 lb/in <sup>3</sup>	DIN 53 479
Water Absorption	0.16 %	0.16 %	24 hours in water; EN ISO 62
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.60 %	0.60 %	24 hours in water; EN ISO 62
	@Temperature 80.0 °C	@Temperature 176 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	88	88	DIN 53 505
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Strength	124 MPa	18000 psi	EN ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	4.5 %	4.5 %	EN ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Yield	7.5 %	7.5 %	Flexural Elongation; EN ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	3.90 GPa	566 ksi	EN ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	197 MPa Metric	28600 psi English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	4.316 GPa	626.0 ksi	EN ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Yield Strength	185 MPa	26800 psi	EN ISO 604
	@Strain 10.0 %, Temperature 23.0 °C	@Strain 10.0 %, Temperature 73.4 °F	
Compressive Strength	570 MPa	82700 psi	EN ISO 604
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Modulus	2.36 GPa	342 ksi	EN ISO 604
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	7.20 J/cm <sup>2</sup>	34.3 ft-lb/in <sup>2</sup>	EN ISO 179
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compression Set	70 %	70 %	Compression at Break; EN ISO 604
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	45.0 µm/m-°C	25.0 µin/in-°F	DIN 53 752
	@Temperature 50.0 - 200 °C	@Temperature 122 - 392 °F	
CTE, linear, Transverse to Flow	57.0 µm/m-°C	31.7 µin/in-°F	DIN 53 752
	@Temperature 50.0 - 200 °C	@Temperature 122 - 392 °F	
Specific Heat Capacity	1.04 J/g-°C	0.249 BTU/lb-°F	
Thermal Conductivity	0.400 W/m-K	2.78 BTU-in/hr-ft <sup>2</sup> -°F	ISO 8302
	@Temperature 40.0 °C	@Temperature 104 °F	
Glass Transition Temp, Tg	260 °C	500 °F	DSC

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Surface Resistivity per Square	1.00e+16 ohm	1.00e+16 ohm	IEC 60093
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Electrical Properties	18.0 kV/mm Metric	457 kV/in English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	

## 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