

TECASINT 6012 natural in Bearbeitung - Direct Forming

Chemical Designation

PI (Polyimide)

Colour

brown-beige

Density

1.35 g/cm³

Production process: direct forming

Main features

high thermal and mechanical capacity
 very high thermal and oxidative resistance
 low water absorption
 high creep resistance
 low outgassing
 good chemical resistance
 resistance against high energy radiation
 sensitive to hydrolysis in higher thermal range

Target Industries

semiconductor technology
 electrical engineering
 electronics
 mechanical engineering
 vacuum technology
 cryogenic engineering
 automotive industry

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Tensile strength	50 mm/min	115	MPa	DIN EN ISO 527-1	(1) Ensinger Standard
Modulus of elasticity (tensile test)	1 mm/min	4100	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)	50 mm/min	4.2	%	DIN EN ISO 527-1	
Flexural strength	10 mm/min	175	MPa	DIN EN ISO 178	
Modulus of elasticity (flexural test)	2 mm/min	4100	MPa	DIN EN ISO 178	
Elongation at break (flexural test)	10 mm/min	5.4	%	DIN EN ISO 178	
Compression strength	10 mm/min	410	MPa	EN ISO 604	
Compression strength	10mm/min, 10% strain	165	MPa	EN ISO 604	
Compressive strain at break	10 mm/min	54	%	EN ISO 604	
Shore hardness	Shore D	88		-	1)
<i>Thermal properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Glass transition temperature		285	°C	-	1)
Thermal expansion (CLTE)	50-200°C	3,2 / -	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	2)
Thermal expansion (CLTE)	200-300°C	4,6 / -	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	3)
<i>Electrical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
<i>Other properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Water absorption	24 h in water, 23°C	0,8	%	DIN EN ISO 62	(1) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	1)

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