

## TECASINT 1011 natural - halvfabrikat

### Kemisk beteckning

PI (polyimid)

### Färg

Svart

### Densitet

1.34 g/cm<sup>3</sup>

### Huvud egenskaper

- hög termisk och mekanisk kapacitet
- mycket god termisk stabilitet
- bra kemisk resistans
- mycket bra elektrisk isolering
- motstånd mot hög energi strålning
- högt kryp motstånd
- känslig för hydrolys i högre termiska intervall

### Målindustrier

- maskinteknik
- precisions teknik
- flygplan och rymdteknik
- kryogenteknik
- elektronik
- elektroteknik
- kärn- och vakuumteknik
- halvledarteknik

Mekaniska Egenskaper	parameter	värde	enhet	norm	anmärkning
Draghållfasthet	50 mm/min	116	MPa	DIN EN ISO 527-1	(1) eU
Elasticitetsmodul (dragprov)	1 mm/min	3600	MPa	DIN EN ISO 527-1	(2) eA
Brottförlängning	50 mm/min	3.8	%	DIN EN ISO 527-1	
Böjhållfasthet	10 mm/min	170	MPa	DIN EN ISO 178	
Elasticitetsmodul (böjningstest)	2 mm/min	3450	MPa	DIN EN ISO 178	
Kompressionsstyrka	10 mm/min	450	MPa	EN ISO 604	
Kompressionsstyrka	10mm/min, 10% strain	190	MPa	EN ISO 604	
Kompressionsmodul	1 mm/min	3647	MPa	EN ISO 604	
tryckhållfasthet vid brott	10 mm/min	45	%	EN ISO 604	
slagstyrka (charpy)	max 7.5 J	75.8	kJ/m <sup>2</sup>	DIN EN ISO 179-1	1)
Skårslahseghet (Charpy)	max 7.5 J	5	kJ/m <sup>2</sup>	DIN EN ISO 179-1	2)
Shore hårdhet	Shore D	90		DIN EN ISO 868	
Värmeledningsförmåga	parameter	värde	enhet	norm	anmärkning
Glasövergångstemperatur		383	°C	-	1)
värmeförvrängning stemperatur	1.85 MPa	368	°C	DIN 53 461	(1) DMA, maximum loss factor tan d
termisk expansion	50-200°C	4.3 / 4.3	10 <sup>-5</sup> K <sup>-1</sup>	DIN 53 752	(2) Thermal expansion XYZ axis
termisk expansion	200-300°C	5.3 / 5.3	10 <sup>-5</sup> K <sup>-1</sup>	DIN 53 752	(3) Thermal expansion XYZ axis
Specifik värme		1.04	J/(g*K)	-	
Värmeledningsförmåga	40°C	0.22	W/(K*m)	ISO 8302	
Elektriska egenskaper	parameter	värde	enhet	norm	anmärkning
Specifikt yt motstånd	23°C	> 10 <sup>15</sup>	Ω	DIN IEC 60093	
Specifikt volym resistans	23°C	> 10 <sup>15</sup>	Ω*cm	DIN IEC 60093	
Elektrisk styrka DC	23°C	> 35	kV*mm <sup>-1</sup>	ISO 60243-1	
Dielektrisk förlustfaktor	50 Hz	2.2*10 <sup>-2</sup>		DIN 53483-1	
Dielektrisk förlustfaktor	1 kHz	2.5*10 <sup>-3</sup>		DIN 53483-1	
Dielektrisk förlustfaktor	1 MHz	1.5*10 <sup>-2</sup>		DIN 53483-1	
Dielektrisk konstant	50 Hz	3.8		DIN 53483-1	
Dielektrisk konstant	1 kHz	3.9		DIN 53483-1	
Dielektrisk konstant	1 MHz	3.7		DIN 53483-1	
Övriga egenskaper	parameter	värde	enhet	norm	anmärkning
Vatten absorption	24 h in water, 23°C	1.3	%	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.
Vatten absorption	24 h in water, 80°C	3.8	%	DIN EN ISO 62	
Outgassing in high vacuum		passed		ECSS-Q-70-02	
Brandklassning (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	1)

→ TECASINT 1000 series show significant water uptake. Parts have to be pre-dried before fast heating to above 200 °C (drying process: 2 h per 3 mm wall thickness at 150 °C).

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