Technical Specification Sheets

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Chemical Designation
PI (Polyimide)

Colour
brown

Density
1.68 g/cm^3

Fillers
glass fibres

Main features
- electrically static dissipative
- high thermal and mechanical capacity
- low thermal expansion
- high creep resistance
- resistance against high energy radiation

Target Industries
- electronics
- semiconductor technology
- cryogenic engineering
- electrical engineering
- mechanical engineering
- nuclear and vacuum technology

Mechanical properties	parameter	value	unit	norm		comment
Tensile strength	50 mm/min	93	MPa	DIN EN ISO 527-1		(1) eU
Modulus of elasticity (tensile test)	1 mm/min	7000	MPa	DIN EN ISO 527-1		
Elongation at break (tensile test)	50 mm/min	1.5	%	DIN EN ISO 527-1		
Flexural strength	10 mm/min	127	MPa	DIN EN ISO 178		
Modulus of elasticity (flexural test)	2 mm/min	6900	MPa	DIN EN ISO 178		
Elongation at break (flexural test)	10 mm/min	2.7	%	DIN EN ISO 178		
Compression strength	10 mm/min	260	MPa	EN ISO 604		
Compressive strain at break	10 mm/min	20	%	EN ISO 604		
Impact strength (Charpy)	max 7.5 J	16.1	kJ/m^2	DIN EN ISO 179-1	1)	
Shore hardness	Shore D	93		DIN EN ISO 868		
Rockwell hardness	M	119		ISO 2039/2		
Thermal properties	**parameter**	**value**	**unit**	**norm**		**comment**
Glass transition temperature		329	°C	DIN EN ISO 11357		(1) Found in public sources. Individual testing regarding application conditions is mandatory. (2) Thermal expansion XY axis (3) Thermal expansion XY axis (4) Thermal expansion XY axis
Heat distortion temperature	1,8 MPa	347	°C	DIN 53 461		
Service temperature	short-term	300	°C	-	1)	
Thermal expansion (CLTE)	23-100°C	2.6	10^{-5} K^{-1}	DIN 53 752	2)	
Thermal expansion (CLTE)	100-150°C	2.9	10^{-5} K^{-1}	DIN 53 752	3)	
Thermal expansion (CLTE)	50-200°C	2.9	10^{-5} K^{-1}	DIN 53 752	4)	
Specific heat		1.04	J/(g*K)	DIN EN 821		
Thermal conductivity	40°C	0.34	W/(K*m)	DIN EN 821		
Electrical properties	**parameter**	**value**	**unit**	**norm**		**comment**
surface resistivity	23°C	10^6 - 10^8	Ω	DIN EN 61340-2-3		
volume resistivity	23°C	10^6 - 10^8	Ω*cm	DIN EN 61340-2-3		
Other properties	**parameter**	**value**	**unit**	**norm**		**comment**
Water absorption	24 h in water, 23°C	0.63	%	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)	