

## TECATRON - Stock Shapes

### Chemical Designation

PPS (Polyphenylensulfide)

### Colour

natural opaque

### Density

1.36 g/cm<sup>3</sup>

### Main features

- good heat deflection temperature
- good chemical resistance
- resistance against high energy radiation
- high strength
- high dimensional stability
- high stiffness
- high creep resistant

### Target Industries

- electrical engineering
- mechanical engineering
- vacuum technology
- chemical technology
- precision engineering

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1mm/min	4100	MPa	DIN EN ISO 527-2	1)
Tensile strength	50mm/min	102	MPa	DIN EN ISO 527-2	
Tensile strength at yield	50mm/min	100	MPa	DIN EN ISO 527-2	
Elongation at yield	50mm/min	4	%	DIN EN ISO 527-2	
Elongation at break	50mm/min	4	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10N	151	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	4000	MPa	DIN EN ISO 178	
Compression strength	1% / 2% 5mm/min, 10 N	20 / 38	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	3300	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	29	kJ/m <sup>2</sup>	DIN EN ISO 179-1eU	5)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		97	°C	DIN 53765	1)
Melting temperature		281	°C	DIN 53765	
Service temperature	short term	260	°C		2)
Service temperature	long term	230	°C		
Thermal expansion (CLTE)	23-60°C, long.	6	10 <sup>-5</sup> *K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	7	10 <sup>-5</sup> *K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	100-150°C, long.	12	10 <sup>-5</sup> *K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Specific heat		1.0	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.25	W/(K*m)	ISO 22007-4:2008	
Electrical properties	parameter	value	unit	norm	comment
Surface resistance		10 <sup>14</sup>	Ω	DIN IEC 60093	
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	<0.01 / 0.01	%	DIN EN ISO 62	1)
Resistance to hot water/ bases		+			
Resistance to weathering		-			
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	2)

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