

TECATRON SE natural - Stock Shapes (rods, plates, tubes)

Chemical Designation

PPS (Polyphenylsulfide)

Colour

beige opaque

Density

1.36 g/cm³

Main features

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

Target Industries

- semiconductor technology

Mechanical properties	condition	value	test method	comment
Tensile strength	@73°F	13,980 psi	ASTM D 638	
Modulus of elasticity (tensile test)	@73°F	673,400 psi	ASTM D 638	
Tensile strength at break	@73°F	13,920 psi	ASTM D 638	
Elongation at break (tensile test)	@73°F	4.2 %	ASTM D 638	
Flexural strength	@73°F	22,040 psi	ASTM D 790	
Modulus of elasticity (flexural test)	@73°F	636,000 psi	ASTM D 790	
Compression strength	@ 10% strain	5,500 psi	ASTM D 695	
Compression strength	@ 1% strain	19,960 psi	ASTM D 695	
Compression modulus		484,200 psi	ASTM D 695	
Impact strength (Izod)	@73°F	0.55 ft-lbs/in	ASTM D 256	
Rockwell hardness	M scale	103.3	ASTM D 785	
Thermal properties	condition	value	test method	comment
Glass transition temperature		194 °F	DIN EN ISO 11357	1) (1) Found in public sources.
Melting temperature		536 °F	DIN EN ISO 11357	2) (2) Public source injection molding data
Deflection temperature	@ 65 psi	320 °F	ISO-R 75 Method B	3) (3) Public Source Injection molding data
Deflection temperature	@ 264 psi	239 °F	ISO-R 75 Method A	4) (4) Public Source Injection molding data
Service temperature	short term	500 °F	-	5) (5) Found in public sources.
Service temperature	long term	446 °F	-	Individual testing regarding application conditions is recommended.
Thermal expansion (CLTE)		2.8 *10 ⁻⁵ in/in/°F	ASTM E 831	6) (6) Public Source Injection molding data
Electrical properties	condition	value	test method	comment
Dissipation factor	@ 1 MHz	0.0011	DIN IEC 60250	1) (1) Public source injection molding data
Dielectric constant	@ 1 kHz	2.8	DIN IEC 60250	2) (2) Public source injection molding data
Dielectric constant	@ 1 MHz	4.6	DIN IEC 60250	3) (3) Public source injection molding data
Other properties	condition	value	test method	comment
Water absorption	@ 24 hrs	0.02 %	ASTM D 570	(1) + good resistance
Resistance to hot water/ bases		+	-	(2) - poor resistance
Resistance to weathering		-	-	(3) 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 recommended.
Flammability (UL94)	@ 3 mm	V0	-	(3)

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