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

<i>Chemical Designation</i> PPS (Polyphenylensulfide) <i>Colour</i> beige opaque <i>Density</i> 1.36 g/cm ³ The compound is in the phase of validation. The characteristic values of this product may change		Main features → good heat deflection → good chemical res → resistance against → high strength → high dimensional s → high stiffness → high creep resistan	on tempera istance high energ tability nce	ature gy radiation	Target Industries → semiconductor ter	chnology
Mechanical properties	condition	value	unit	test metho	nd c	comment
Tensile strength	@ 73 °F	14 200	nei	ASTM D 63	18 (1)

	@ 10 1	14,200	psi	AS IN D 000		(1)	
Modulus of elasticity (tensile test)	@ 73 °F	597,800	psi	ASTM D 638	1)	(2)	
Tensile strength at yield	@ 73 °F	15,120	psi	ASTM D 638			
Elongation at break (tensile test)	@ 73 °F	4.98	%	ASTM D 638			
Flexural strength	@ 73 °F	22,400	psi	ASTM D 790			
Modulus of elasticity (flexural test)	@ 73 °F	596,800	psi	ASTM D 790			
Compression strength	10% strain	20,560	psi	ASTM D 695			
Compression strength	1% strain	4,376	psi	ASTM D 695			
Compression modulus	@ 73 °F	429,400	psi	ASTM D 695	2)		
Impact strength (Izod)	@ 73 °F	0.58	ft-lbs/in	ASTM D 256			
Shore hardness	D scale	85.2	_	ASTM D 2240	-		
Rockwell hardness	M scale	103.9	-	ISO 2039-1			
Thermal properties	condition	value	unit	test method		comment	
Glass transition temperature		341	°F	-		(1) Found in public sources.	
Melting temperature		543	°F	-		Individual testing regarding application conditions is	
Service temperature	short term	500	°F	-	1)	"mandatory. (2) Found in public sources.	
Service temperature	long term	446	°F	-	2)	Individual testing to	
Thermal expansion (CLTE)	73-140 °F, long.	3.33	*10 ⁻⁵ in/in/°F	DIN EN ISO 11359-1;2		···· application recommended	
Thermal expansion (CLTE)	73-212 °F, long.	3.89	*10 ⁻⁵ in/in/°F	DIN EN ISO 11359-1;2			
Thermal expansion (CLTE)	212-302 °F, long.	6.67	*10 ⁻⁵ in/in/°F	DIN EN ISO 11359-1;2			
Specific heat		0.239	BTU/lb-F°	ISO 22007-4:2008	_		
iermal conductivity		1.74	BTU-in/hr-ft ² -°	F ISO 22007-4:2008			
Electrical properties	condition	value	unit	test method	_	comment	
surface resistivity		10 ¹⁴	Ω	DIN IEC 60093			
volume resistivity		10 ¹⁴	Ω*cm	DIN IEC 60093			
Other properties	condition	value	unit	test method		comment	
Water absorption	24 hr immersion	0.01	%	ASTM D 570		(1) + good resistance	
Resistance to hot water/ bases Resistance to weathering		+		-	1) 2)	 (2) - poor resistance (3) Corresponding means no listing at UL (yellow card). The information might be taken 	
		-		-			
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	3)	from resin, stock shape or estimation. Individual testing	

regarding application conditions is mandatory.

This information reflects the current state of our knowledge and is intended only to assist and advise. It is given without obligation or liability. It does not assure or guarantee chemical resistance, quality of products or their suitability in any legally binding way. Values are not minimum or maximum values, but guidelines that can be used for comparative purposes in material selection. They are within the normal range of product properties and do not represent guaranteed property values. Testing under individual application circumstances is always recommended. Data is obtained from extruded shapes material unless otherwise noted. References to FDA compliance refer to the resins from which the products were made unless otherwise noted. All trade and patent rights should be observed. All rights reserved. Data sheet values are subject to periodic review, the most recent update can be found at www.ensingerplastics.com.

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