

TECASON® S natural - Stock Shapes (rods, plates, tubes)

Chemical Designation

PSU (Polysulfone)

Colour

light yellow transparent

Density

1.24 g/cm³

Main features

- high thermal and mechanical capacity
- good chemical resistance
- high creep resistance
- high strength
- autoclavable

Target Industries

- medical technology
- electronics
- pharmaceutical industry
- semiconductor technology
- food engineering
- food processing

Mechanical properties	condition	value	unit	test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	375,000	psi	ASTM D 638	(1) Injection molded specimens
Tensile strength at break	@ 73 °F	11,800	psi	ASTM D 638	
Elongation at break (tensile test)	@ 73 °F	50	%	ASTM D 638	
Flexural strength	@ 73 °F	18,500	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	375,000	psi	ASTM D 790	
Compression strength	@1% strain, 73 °F	1,800	psi	ASTM D 695	
Compression strength	@ 73 °F, 10% strain	13,000	psi	ASTM D 695	
Compression modulus	@ 73 °F	245,000	psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	1.3	ft-lbs/in	ASTM D 256	
Rockwell hardness	@ 73 °F, M scale	120		ASTM D 785	
Coefficient of friction	Dynamic, 40 psi, 50 fpm	0.37		ASTM D 3702	1)
Thermal properties	condition	value	unit	test method	comment
Vicat softening point	2.2 lb load heating rate 90 C/hr	370	°F	ASTM D 1525	1) (1) Injection molded data from public sources
Glass transition temperature		365	°F	ASTM D 3418	2) (2) Publicly sourced data
Deflection temperature	@264 psi	345	°F	ASTM D 648	3) (3) Injection molded specimens
Deflection temperature	@ 66 psi	358	°F	ASTM D 648	4) (4) Injection molded specimens
Service temperature	Intermittent	340	°F	-	5) (5) Injection molded specimens
Service temperature	Long Term	285	°F	-	
Thermal expansion (CLTE)		3.1*10 ⁻⁵	in/in/°F	ASTM D 696	5)
Electrical properties	condition	value	unit	test method	comment
volume resistance	@ 73 °F	5*10 ¹⁶	Ω*cm	ASTM D 257	
Dielectric strength		425	V/mil	ASTM D 149	
Dissipation factor	@ 60 Hz, 73 °F	0.001		ASTM D 150	
Dielectric constant	@ 60 Hz, 73 °F, 50% RH	3.1		ASTM D 150	
Other properties	condition	value	unit	test method	comment
Moisture absorption	@ 24 hrs, 73 °F	0.30	%	ASTM D 570	(1) 4.5 mm thickness
Flammability (UL94)		V0		-	1)

→ Resin specification:
ASTM D6394-21 SP0112 & ASTM D6394-21 SP0110S1
Shapes specification:
none

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Ensinger Inc. Headquarters 365 Meadowlands
Boulevard Washington, PA 15301, USA

Phone 800-243-3221 Sales Phone 800-869-4029
Technical Fax 724-746-9209
sales@ensingerusa.com

Date: 2025/03/13

Version: A2