

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
Deflection temperature	@264 psi	345	°F	ASTM D 648	1) (1) Injection molded specimens
Deflection temperature	@ 66 psi	358	°F	ASTM D 648	2) (2) Injection molded specimens
Service temperature	Intermittent	340	°F	-	3) (3) Injection molded specimens
Service temperature	Long Term	285	°F	-	
Thermal expansion (CLTE)		3.1*10 ⁻⁵	in/in/°F	ASTM D 696	3)
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	
Flammability (UL94)		V0		-	

→ Resin specification:
ASTM D 6394-10 SP0112
Shapes specification:
NONE

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.

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: 2016/01/29

Version: A0