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

Chemical Designation
PSU (Polysulfone)

Colour
light yellow transparent

Density
1.24 g/cm^3

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 heatijng rate 90 C/hr	370	°F	ASTM D 1525	1)	(1) Injection molded data from public sources (2) Publicly sourced data (3) Injection molded specimens (4) Injection molded specimens (5) Injection molded specimens
Glass transition temperature		365	°F	ASTM D 3418	2)	
Deflection temperature	@264 psi	345	°F	ASTM D 648	3)	
Deflection temperature	@ 66 psi	358	°F	ASTM D 648	4)	
Service temperature	Intermittent	340	°F	-		
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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Date: 2025/03/13
Version: A2