

TECASON® P MT - Stock Shapes

Chemical Designation

PPSU (Polyphenylsulfone)

Colour

bone

Density

1.29 g/cm³

Main features

- resistant to autoclaving
- biocompatible
- compliant with cytotoxicity according to ISO 10993-5
- meets requirements for USP Class VI
- excellent impact strength

Target Industries

- medical technology
- pharmaceutical industry

Mechanical properties	condition	value	test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	340,000 psi	ASTM D 638	(1) Data obtained from public source
Tensile strength at yield	@ 73 °F	10,100 psi	ASTM D 638	(2) Data obtained from public source
Tensile strength at break	@ 73 °F	10,100 psi	ASTM D 638	1)
Elongation at yield	@ 73 °F	7.2 %	ASTM D 638	2)
Elongation at break	@ 73 °F	60 %	ASTM D 638	
Flexural strength	@ 73 °F	13,200 psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	350,000 psi	ASTM D 790	
Compression strength	10% Strain @ 73 °F	14,350 psi	ASTM D 695	
Compression strength	@ 1% strain	2,000 psi	ASTM D 695	
Compression modulus		250,000 psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	2.0 ft-lbs/in	ASTM D 256	
Rockwell hardness	@ 73 °F R Scale	123	ASTM D 785	
Thermal properties	condition	value	test method	comment
Vicat softening point		424 °F	-	1)
Deflection temperature	@264 psi	405 °F	ASTM D 648	2)
Deflection temperature	@ 66 psi	417 °F	ASTM D 648	3)
Service temperature	Intermittent	360 °F	-	(5) Injection molded data
Service temperature	Long Term	300 °F	-	4)
Thermal expansion (CLTE)		3.1*10 ⁻⁵ in/in/°F	ASTM D 696	5)
Specific heat		0.27 BTU/lb-F°	-	6)
Electrical properties	condition	value	test method	comment
Volume resistivity		1.0*10 ¹⁵ Ω*cm	ASTM D 257	1)
Dielectric strength		360 V/mil	ASTM D 149	2)
Dielectric constant	@ 60 Hz, 73 °F, 50% RH	3.44	ASTM D 150	3)
Other properties	condition	value	test method	comment
Moisture absorption	@ 24 hrs, 73 °F	0.37 %	ASTM D 570	(1) estimated
Moisture absorption	@ saturation, 73 °F	1.1 %	ASTM D 570	
Flammability (UL94)		V-0	-	1)

→ Resin specification:
 ASTM D 6394-10 SP0311
 Shapes specification:
 NONE

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