

## TECASON ® P - Stock Shapes

### Chemical Designation

PPSU (Polyphenylsulfone)

### Colour

black

### Density

1.29 g/cm<sup>3</sup>

### Main features

- high strength
- high thermal and mechanical capacity
- very resistant to autoclaving
- high dielectric strength
- good machinability

### Target Industries

- medical technology
- electronics
- food processing
- process engineering

Mechanical properties	condition	value	test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	340,000 psi	ASTM D 638	(1) 10% strain
Tensile strength at yield	@ 73 °F	10,100 psi	ASTM D 638	
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	@ 73 °F	14,350 psi	ASTM D 695	1)
Impact strength (Izod)	@ 73 °F	13 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) (1) Injection molded sample
Deflection temperature	@264 psi	420 °F	ASTM D 648	(2) Data obtained from public source
Deflection temperature	@ 66 psi	428 °F	ASTM D 648	
Service temperature	Intermittent	360 °F	-	
Service temperature	Long Term	300 °F	-	2)
Thermal expansion (CLTE)		1.7* 10 <sup>-5</sup> in/in/°F	ASTM D 696	
Specific heat		0.27 BTU/lb-F°	-	
Thermal conductivity		1.74 BTU-in/hr-ft <sup>2</sup> -°F	*** new ***	
Electrical properties	condition	value	test method	comment
Volume resistivity		1*10 <sup>15</sup> Ω*cm	ASTM D 257	1) (1) injection molded sample
Dielectric strength		360 V/mil	ASTM D 149	
Dielectric constant	@ 60 Hz, 73 °F, 50% RH	3.44	ASTM D 150	
Other properties	condition	value	test method	comment
Moisture absorption	@ 24 hrs, 73 °F	0.37 %	ASTM D 570	(1) injection molded sample
Moisture absorption	@ saturation, 73 °F	1.1 %	ASTM D 570	thickness greater than 0.790 mm
Flammability (UL94)		V-0	-	1)

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

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