Tecason® S (Polysulfone)

Tecason S is a transparent engineering plastic known for its chemical resistance, rigidity, high-temperature performance, and its ability to operate in an autoclave environment. Tecason S is FDA and NSF compliant and holds its excellent mechanical properties over a wide range of temperatures.

- Autoclave resistance - Tecason S maintains dimensional stability through repeated autoclaves.
- Excellent electrical properties
- Good chemical resistance - Tecason S performs well in mineral acids, alkali, salt solutions, and hydrocarbons.
- Superior resistance to creep
- FDA and NSF compliant
- High-temperature performance - Tecason S has a heat deflection temperature of 345°F and a long-term continuous use temp of 285°F.
- Excellent hydrolytic stability
- High strength and rigidity
- Flame retardant - Tecason S is rated UL94 V-O

Tecason S's unique combination of chemical and hydrolytic resistance, high-temperature performance, good mechanical properties, and agency approvals make it an excellent choice for applications in the pharmaceutical, medical, food service equipment, semiconductor processing, and electronic equipment industries.

Primary Specification (Resin) (Typical)
ASTM-D-6394SPO112

Property	ASTM Test Method	Units	Tecason® S
Physical			
Density	D792	lbs/in^3	0.045
Specific Gravity	D792	-	1.24
Water Absorption, @24 hours, 73°F	D570	%	0.30
Mechanical			
Tensile Strength @ Break, 73°F	D638	psi	10,200
Tensile Modulus, 73°F	D638	psi	3.6×10^5
Elongation @ Break, 73°F	D638	%	50 - 100
Flexural Strength, 73°F	D790	psi	15,400
Flexural Modulus, 73°F	D790	psi	390,000
Izod Impact Strength, Notched, 73°F	D256	ft-lbs/in	1.3
Rockwell Hardness	D785	"R" Scale	120
Coefficient of Friction, 40 psi, 50 fpm	-	Dynamic	0.37
Thermal			
Deflection Temperature @ 66 psi @ 264 psi	D648 D648	°F °F	358 345
Maximum Temperature, Long Term Short Term	- -	°F °F	285 340
Coefficient of Linear Thermal Expansion	D696	in/in/°F	3.1×10^{-5}
Electrical			
Dielectric Strength	D149	V/mil	425
Dielectric Constant, @ 60 Hz, 73°F, 50% RH	D150	-	3.1
Dissipation Factor, @ 60 HZ, 73°F	D150	-	0.001
Volume Resistivity, 73°F	D257	ohm-cm	5×10^{16}

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. All values at 73°F (23°C) unless otherwise noted.