

## TECASON™ S

PSU (Polysulfone)

TECASON™ S is a transparent engineering plastic known for its chemical resistance, rigidity, high-tempera-

ture performance, and its ability to operate in an autoclave environment. TECASON™ S is FDA and NSF com-

pliant and holds its excellent mechanical properties over a wide range of temperatures.

- **Autoclave resistance**  
TECASON™ S maintains dimensional stability and mechanical performance 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 temperature of 285°F.
- **Excellent hydrolytic stability**
- **High strength and rigidity**
- **Flame retardant**  
TECASON™ S is rated UL94 V-O

TECASON™ 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.

# TYPICAL PROPERTY VALUES

|                   | PROPERTIES                                 | ASTM Test Method | Units               | TECASON™S              |
|-------------------|--|------------------|---------------------|------------------------|
| <b>PHYSICAL</b>   | Density                                    | D792             | lbs/in <sup>3</sup> | 0.045                  |
|                   | Specific Gravity                           | D792             | -                   | 1.24                   |
|                   | Water Absorption, @24 hours, 73°F          | D570             | %                   | 0.30                   |
| <b>MECHANICAL</b> | Tensile Strength @ Break, 73°F             | D638             | psi                 | 10,200                 |
|                   | Tensile Modulus, 73°F                      | D638             | psi                 | 3.6 x 10 <sup>5</sup>  |
|                   | 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                   |
| <b>THERMAL</b>    | Deflection Temperature @ 66 psi            | D648             | °F                  | 358                    |
|                   | @ 264 psi                                  | D648             | °F                  | 345                    |
|                   | Maximum Temperature, Long Term             | -                | °F                  | 285                    |
|                   | Short Term                                 | -                | °F                  | 340                    |
|                   | Coefficient of Linear Thermal Expansion    | D696             | in/in/°F            | 3.1 x 10 <sup>-5</sup> |
| <b>ELECTRICAL</b> | 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 x 10 <sup>16</sup>   |

## MATERIAL AVAILABILITY

**Rods:** Diameters: 3/16" to 5"  
 Length: 3/16" to 4-3/4" – 10'  
 5" – 5'

**Plates:** 1/4" to 4" thickness inclusive are 2' x 4'

## Primary Specification (Resin) (Typical)

ASTM-D-6394SPO112

**Profiles, tubes, and special sizes are custom-produced on request.**



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