

Sulfones

Wire insulations and coatings

Datasheet

Sulfone polymers are high-heat plastics with a clear advantage. These amorphous thermoplastics offer more toughness, strength and hydrolytic stability than many other transparent plastics. They withstand prolonged exposure to water, chemicals and temperatures – handling a broad range of end-use temperatures from -40°C to 204°C (-40°F to 400°F).

We have developed proprietary processing techniques to allow the application of these materials on our alloy offerings; they can be applied at thicknesses as thin as 2.5 microns. Sulfones are traditionally applied using extrusion or injection molding, and application of thicknesses below 1 mil are atypical of these processing methods. In-house processing capability of these resins has also been developed, allowing very thin layers of polymer to be applied, yet still retaining the polymer's unique characteristics.

PSU

A tough thermoplastic allowing continuous use up to 300 °F (149 °C). It's resistant to oxidation and hydrolysis and can withstand prolonged exposure to high temperatures and repeated sterilization. Typical properties are found below.

Tensile Strength: 70.3 MPa

Tensile Elongation (Break): 50-100%

Flexural Modulus: 2690 MPa

PES

A tough thermoplastic allowing continuous use up to 270 °F (132 °C). Desirable properties include thermal stability and its inherent flame resistance. Typical properties are found below.

Tensile Strength: 88.9 MPa

Tensile Elongation (Break): 50-100%

Flexural Modulus: 2620 MPa

PPSU

PPSU delivers the highest performance of the sulfone polymers available, offering better impact resistance and chemical resistance than PSU and PES.

Tensile Strength: 69.6 MPa

Tensile Elongation (Break): 60%

Flexural Modulus: 2410 MPa

Disclaimer:

Recommendations are for guidance only, and the suitability of a material for a specific application can be confirmed only when we know the actual service conditions. Continuous development may necessitate changes in technical data without notice. This datasheet is only valid for Alleima materials.