

Polyphenylsulfone (PPSU) films Data Sheet

Polyphenylsulfone (PPSU) is an amorphous thermoplastic material that offers exceptional hydrolytic stability, and toughness superior to other commercially-available, high-temperature engineering films.

PPSU films have high deflection temperatures and outstanding resistance to environmental stress cracking.

Moreover, PPSU films are steam sterilizable with high retention of impact properties.

The polymer is inherently flame retardant, and also has excellent thermal stability – making films suitable for applications where very low shrink at high temperatures are needed – and good electrical properties.

PPSU films are widely used in different applications including electrical/electronic, aircraft interiors, automotive industry.

MANUFACTURING

PPSU films are extruded by Ajedium in a wide range of thicknesses, widths and lengths.

For further information on Polyphenylsulfone films produced by Ajedium Films, a division of Solvay Solexis, Inc. contact your Solvay Solexis representative or go to www.ajedium.com.

AJEDIUM PPSU FILM

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PPSU FILMS TYPICAL PROPERTIES*

	Test Method	Typical Values	
		SI Units	US Customary Units
Physical and Thermal Properties			
Glass Transition Temperature	ASTM D-3418	220 °C	428 °F
Water Absorption @ 50°C (122°F), 75%RH, 24 hrs	ASTM D-570	0.4 %	0.4 %
Yield	internal	770 m ² /kg/μm	21,308 in ² /lb/mil
Mechanical Properties		MD TD	MD TD
Stress at Yield @ 23 °C (73 °F)	ASTM D-882	68 MPa 59 MPa	9,900 psi 8,600 psi
Elongation at Yield @ 23 °C (73 °F)	ASTM D-882	9.2 % 6.8 %	9.2 % 6.8 %
Stress at Break @ 23 °C (73 °F)	ASTM D-882	92 MPa 70 MPa	13,400 psi 10,100 psi
Elongation at Break @ 23 °C (73 °F)	ASTM D-882	143 % 102 %	143 % 102 %
Modulus @ 23 °C (73 °F)	ASTM D-882	1,590 MPa 1,980 MPa	231 kpsi 287 kpsi
Dart impact	ASTM D-1709	538 g	1.18 lb
Tear Propagation	ASTM D-1922	10 gforce 9 gforce	0.022 lbf 0.020 lbf
Tear Resistance	ASTM D-1004	857 gforce 930 gforce	1.89 lbf 2.05 lbf
Electrical Properties			
Dielectric Strength	ASTM D-149		4,900 V/mil
Dielectric constant @ 1MHz	ASTM D-150	1.38	1.38

* Reported values were measured on a 25μm thick film

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