

## Solvay Specialty Polymers Ajediumâ, ¢ Films -- Udel® PSU P-1700 NT-11 Polysulfone (PSU)

Category: Polymer, Film, Thermoplastic, Polysulfone (PSU)

## **Material Notes:**

Udel® P-1700 polysulfones are tough, high-strength thermoplastics that are suitable for continuous use up to 300°F (149°C). Udel Film is resistant to oxidation and hydrolysis and withstand prolonged exposure to high temperatures and repeated sterilization. Udel® P-1700 polysulfone films are highly resistant to mineral acids, alkali and salt solutions. Their resistance to detergents and hydrocarbon oils is good, but they will be attacked by polar solvents such as ketones, chlorinated hydrocarbons, and aromatic hydrocarbons. Electrical properties of Udel® PSU films are stable over a wide temperature range and after immersion in water or exposure to high humidity. Features: Acid Resistant; Alkali Resistant; E-beam Sterilizable; Food Contact Acceptable; Good Sterilizability; Good Toughness; High Heat Resistance; High Strength; Hydrolysis Resistant; Oxidation Resistant; Radiation (Gamma) ResistantUses: Appliance Components; Automotive Electronics; Batteries; Electrical Parts; Electrical/Electronic Applications; Food Service ApplicationsAdditional Properties: Area Factor - 158 ft²/lb/mil; Tear Resistance - ASTM D1004 945 J/cmInformation provided by Solvay Specialty Polymers.

Order this product through the following link: http://www.lookpolymers.com/polymer\_Solvay-Specialty-Polymers-Ajedium-Films-Udel-PSU-P-1700-NT-11-Polysulfone-PSU.php

Physical Properties	Metric	English	Comments	
Density	1.24 g/cc	0.0448 lb/in³	ASTM D792	
Water Absorption	0.30 %	0.30 %	ISO 62	
	@Time 86400 sec	@Time 24.0 hour		
Thickness	30.0 microns	1.18 mil	As Tested	

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	68.0 MPa	9860 psi	ASTM D882
Film Tensile Strength at Yield, TD	63.7 MPa	9240 psi	ASTM D882
Film Elongation at Break, MD	53 %	53 %	ASTM D882
Film Elongation at Break, TD	35 %	35 %	ASTM D882
Film Elongation at Yield, MD	5.5 %	5.5 %	ASTM D882
Film Elongation at Yield, TD	5.1 %	5.1 %	ASTM D882
Secant Modulus, MD	2.30 GPa	334 ksi	ASTM D882
Secant Modulus, TD	2.37 GPa	344 ksi	ASTM D882
Dart Drop Test	<b>400</b> g	0.882 lb	ASTM D1709
Film Tensile Strength at Break, MD	58.3 MPa	8460 psi	ASTM D882



Mechanical Properties	56.8 MPa Metric	8240 psi English	Comments Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	56.0 Âμm/m-°C	31.1 Âμin/in-°F	
Deflection Temperature at 1.8 MPa (264 psi)	174 °C	345 °F	Unannealed; ASTM D648
Oxygen Index	26 %	26 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.00e+16 ohm-cm	3.00e+16 ohm-cm	ASTM D257
Dielectric Constant	3.04	3.04	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	ASTIVIDI30
Dielectric Strength	130 kV/mm	3300 kV/in	ASTM D149
Dissipation Factor	0.0060	0.0060	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	ASTM D150

Compliance Properties	Metric	English	Comments
FDA	Yes	Yes	
NSF	Yes	Yes	

Descriptive Properties	Value	Comments
Agency Ratings	FDA 21 CFR 177.1655	
Availability	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Amber; Natural	
RoHS Compliance	RoHS Compliant	

## **Contact Songhan Plastic Technology Co.,Ltd.**

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