

# Ajedium™ Films -- Veradel® PES 201 NT polyethersulfone

Veradel® PES 201 NT polyethersulfone is a tough, high-strength thermoplastics that are suitable for continuous use up to 356°F (180°C).

Veradel® film is resistant to oxidation and hydrolysis and withstand prolonged exposure to high temperatures and repeated sterilization. Veradel® 201 NT polyethersulfone 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 Veradel® PES films are stable over a wide temperature range and after immersion in water or exposure to high humidity.

The film is transparent, a light amber color.

## General

Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• Latin America • North America
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) Resistant
Uses	• Appliance Components • Automotive Electronics • Batteries	• Electrical Parts • Electrical/Electronic Applications • Food Service Applications
Agency Ratings	• FDA 21 CFR 177.1655	• NSF Unspecified Rating
RoHS Compliance	• RoHS Compliant	
Appearance	• Amber	

Physical	Typical Value	Unit	Test method
Density / Specific Gravity	1.37		ASTM D792
Water Absorption (24 hr)	0.50	%	ASTM D570

Mechanical	Typical Value	Unit	Test method
Tear Resistance	7.5	cN	ASTM D1004

Films	Typical Value	Unit	Test method
Film Thickness - Tested			
--	50	µm	
-- 1	50	µm	
-- 2	125	µm	
Secant Modulus			ASTM D882
MD	2100	MPa	
TD	2090	MPa	

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Films	Typical Value	Unit	Test method
Tensile Strength			ASTM D882
MD : Yield	71.3	MPa	
TD : Yield	71.4	MPa	
MD : Break	66.3	MPa	
TD : Break	65.8	MPa	
Tensile Elongation			ASTM D882
MD : Yield	7.7	%	
TD : Yield	7.5	%	
MD : Break	140	%	
TD : Break	140	%	
Dart Drop Impact	630	g	ASTM D1709
Elmendorf Tear Strength - MD	120	g	ASTM D1922
Area Factor	142	ft <sup>2</sup> /lb/mil	

Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	220	°C	
CLTE - Flow	5.6E-5	cm/cm/°C	ASTM D696

Electrical	Typical Value	Unit	Test method
Volume Resistivity	1.0E+17	ohms·cm	ASTM D257
Dielectric Strength	180	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	3.50		ASTM D150
Dissipation Factor (1 kHz)	1.0E-3		ASTM D150

Flammability	Typical Value	Unit	Test method
Oxygen Index	39	%	ASTM D2863

## Additional Information

### Standard Thicknesses and Widths

- Widths are available from 22" (559 mm) to 56" (1422 mm).
- Products with widths <22 inches or >56 inches are available upon request.
- Tolerances for widths are +/- 4mm.
- For PES film, the standard thicknesses are 25 microns (1 mil) to 1016 microns (40 mil).

### Surface Finishes

- Standard surface finish is P/M (polished / matte).
- Custom finishes of P/P (polished / polished) and M/M (matte / matte) are available.

### Packaging

- Film is supplied in a roll form of high quality, cardboard core of 3" (76mm) or 6" (152mm).
- PVC cores are available upon request in 3" and 6" sizes.

### Labeling

- Products are labeled to comply with national and international standards.
- Labels include product grade, unique batch number, roll length, roll width, product thickness, and net weight.

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## Notes

Typical properties: these are not to be construed as specifications.

<sup>1</sup> Impact properties

<sup>2</sup> Tear properties



Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

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