

# Ajedium™ Films -- Aurum PL450C P/M

## thermoplastic polyimide

TPI is a thermoplastic polyimide film that has excellent thermal, chemical, electrical and physical properties. With a continuous use temperature to

240°C (465°F), TPI films offer superior radiation resistance, excellent wear performance and resistance to chemicals.

### General

Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• Latin America • North America
Features	• Chemical Resistant • Flame Retardant • Good Electrical Properties	• High Heat Resistance • Radiation (Gamma) Resistant
Uses	• Aircraft Applications • Automotive Applications • Electrical/Electronic Applications	• Industrial Applications • Medical/Healthcare Applications • Oil/Gas Applications
RoHS Compliance	• RoHS Compliant	
Appearance	• Orange	

Physical	Typical Value	Unit	Test method
Density / Specific Gravity	1.23		ASTM D792
Water Absorption (24 hr)	1.0	%	ASTM D570

Films	Typical Value	Unit	Test method
Film Thickness - Tested	100	µm	
Secant Modulus - MD	3050	MPa	ASTM D882
Tensile Strength - MD (Break)	104	MPa	ASTM D882
Tensile Elongation - MD			ASTM D882
Yield	7.0	%	
Break	190	%	
Dart Drop Impact	400	g	ASTM D1709
Area Factor	145	ft <sup>2</sup> /lb/mil	

Thermal	Typical Value	Unit	Test method
Glass Transition Temperature	245	°C	ASTM D3418
Melting Temperature			ASTM D3418
--	386	°C	
--	388	°C	

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Electrical	Typical Value	Unit	Test method
Surface Resistivity	6.1E+16	ohms	ASTM D257
Volume Resistivity	2.4E+17	ohms·cm	ASTM D257
Dielectric Strength (0.100 mm)	160	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
1 kHz	2.69		
1 MHz	2.63		
Dissipation Factor			ASTM D150
1 kHz	3.0E-3		
1 MHz	3.9E-3		

Flammability	Typical Value	Unit	Test method
Oxygen Index	47	%	ASTM D2863

Optical	Typical Value	Unit	Test method
Light Transmittance	82.3	%	ASTM D1003
Haze	72.6	%	ASTM D1003

### Additional Information

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#### 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 PI 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.

## Notes

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

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