Ajedium™ Films -- High Mw PEEK
polyetheretherketone

High Mw PEEK film is thermoplastic film that is characterized by a distinct combination of properties, which include excellent wear resistance, best-in-class fatigue resistance, high purity, and excellent chemical resistance to organics, acids, and bases. These properties make it well-suited for applications in aerospace, electronics, chemical processing, healthcare, transportation, and other industrial uses.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific • Europe	• Latin America • North America
Features	• Chemical Resistant • Ductile • Fatigue Resistant • Flame Retardant • Good Dimensional Stability	• Good Impact Resistance • Good Sterilizability • High Heat Resistance • Radiation (Gamma) Resistant
Uses	• Aircraft Applications • Automotive Applications • Electrical/Electronic Applications	• Industrial Applications • Medical/Healthcare Applications • Oil/Gas Applications
RoHS Compliance	• Contact Manufacturer	
Appearance	• Translucent	

Physical	Typical Value	Unit	Test method
Density / Specific Gravity	1.30		ASTM D792
Water Absorption (24 hr)	0.50	%	ASTM D570

Mechanical	Typical Value	Unit	Test method
Tear Resistance (125.0 µm)	10.0	cN	ASTM D1004

Films	Typical Value	Unit	Test method
Film Thickness - Tested			
--	25	µm	
--[1]	50	µm	
--[2]	130	µm	
Secant Modulus			ASTM D882
MD : 25 µm	2050	MPa	
MD : 150 µm[3]	2680	MPa	
TD : 25 µm	2000	MPa	
TD : 150 µm[3]	2540	MPa	

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Films	Typical Value	Unit	Test method
Tensile Strength			ASTM D882
MD : Yield, 25 µm	75.8	MPa	
MD : Yield, 150 µm [3]	74.5	MPa	
TD : Yield, 25 µm	72.4	MPa	
TD : Yield, 150 µm [3]	71.7	MPa	
MD : Break, 25 µm	109	MPa	
MD : Break, 150 µm [3]	124	MPa	
TD : Break, 25 µm	95.8	MPa	
TD : Break, 150 µm [3]	123	MPa	
Tensile Elongation			ASTM D882
MD : Yield, 25 µm	6.8	%	
MD : Yield, 150 µm [3]	5.5	%	
TD : Yield, 25 µm	6.7	%	
TD : Yield, 150 µm [3]	5.4	%	
MD : Break, 25 µm	150	%	
MD : Break, 150 µm [3]	190	%	
TD : Break, 25 µm	170	%	
TD : Break, 150 µm [3]	210	%	
Dart Drop Impact (50 µm)	1300	g	ASTM D1709B
Area Factor	149	ft²/lb/mil	
Tear Propagation Resistance (125.0 µm)	320	gf	ASTM D1922
Water Vapor Transmission Rate - (50 µm)	16.9	g/m²/bar/24 hr	ASTM F1249

Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load [4]			ASTM D648
1.8 MPa, Annealed, 3.20 mm	157	°C	
Glass Transition Temperature	150	°C	ASTM D3418
Peak Melting Temperature	340	°C	ASTM D3418
CLTE - Flow (-50 to 50°C)	4.3E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.24	W/m/K	ASTM E1530

Electrical	Typical Value	Unit	Test method
Surface Resistivity	> 1.9E+17	ohms	ASTM D257
Volume Resistivity	2.6E+16	ohms·cm	ASTM D257
Dielectric Strength (0.0500 mm)	150	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	3.10		ASTM D150

Flammability	Typical Value	Unit	Test method
Oxygen Index	37	%	ASTM D2863

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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 PEEK film, the standard thicknesses are 8 microns (0.3 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

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

[1] Impact properties, water vapor transmission rate

[2] Tear properties

[3] 51 mm/min

[4] 2 hours at 200°C

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