

CS Hyde Company

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PRODUCT INFORMATION

37-__F

PEEK® FILM

Applications for PEEK® Film:

- Aircraft interiors
- Automotive gaskets
- Helicopter rotor blades (leading edge)
- Transformer slot liners
- Copy machine components
- Hot melt adhesives
- Reed fuel valves
- Disk polishing carriers

Advantages of PEEK® Film:

- Extremely high temperature resistance and continuous use temperature
- Excellent flexural and tensile properties
- Good abrasion and water erosion resistance
- Excellent chemical resistance
- Excellent electrical properties
- Hydrolytically stable
- FDA Approval / FDA 21 CFR 177.2415

DESCRIPTION:

PEEK™ film has extremely high temperature resistance combined with excellent mechanical, electrical, and chemical resistance making it a high performance semi-crystalline thermoplastic suitable for use in a wide variety of demanding applications.

TYPICAL PROPERTIES:

Electrical Properties at Various Thicknesses

ATSM D149, 23°C (73°F), 6.25mm (0.25in) electrode

Property	Units	1 mil.	2 mil.	5 mil.	10 mil.
Dielectric Strength	kV/mm (V/mil)	270 (6858)	190 (4826)	120 (3048)	70 (1778)
Breakdown Voltage	kV	6.75	9.5	15	17.5

Mechanical Properties at Various Thicknesses

ISO 527 at 23°C (73°F)

Property	Units	1 mil.	2 mil.	5 mil.	10 mil.
Tensile Modulus	GPa(kpsi)	2.8(4.6)	2.5(363)	2.3(334)	2.3(334)
Tensile Strength (at break)	MPa(kpsi)	120(17.4)	120(17.4)	120(17.4)	110(16.0)
Tensile Elongation (at break)	%	>150	>150	>150	>150

Properties Cont. (Based on 1 mil. Thickness)

Property	Test Method	Test Condition	Units	1 mil.
Tensile Modulus	ISO 527	23°C (73°F)	GPa (kpsi)	2.5 (363)
Tensile Strength (at break)	ISO 527	23°C (73°F)	MPa (kpsi)	120 (17.4)
Tensile Elongation (at break)	ISO 527	23°C (73°F)	%	>150
Puncture Strength	Def Stan 81-75	23°C (74°F)	kJ/m ² (cal/ft ²)	26 (577)
Tear Strength	ISO 6383-1	23°C (73°F)	N/mm (lb/in)	8 (45)
Shrinkage	TM-VX-84	200°C (392°F)	%	□0.5
Water Absorption (50% RH)	ISO 62	23°C (73°F), 24h	%	0.04
Specific Gravity	ISO 1183	23°C (73°F)		1.3
Coefficient of Linear Thermal Expansion	ASTM D696	MD, below T _g	ppm/°C	47
Dielectric Strength	ASTM D149 6.35mm (0.25in) electrode	23°C (73°F)	kV/mm (V/mil)	190 (4826)
Dielectric Constant	ASTM D150	23°C (73°F), 10 MHz		3.5
Loss Tangent	ASTM D150	23°C (73°F), 10 MHz		0.002
Volume Resistivity	ASTM D257	23°C (73°F), 100V	Ohm cm	4.00E +16

*The above values are "Typical Values" which have a nominal range about them and are not intended for specification purposes.

AVAILABILITY

Film Thicknesses:

½ mil., 1 mil., 2 mil., 3 mil., 5 mil., 10 mil., 15 mil., 20 mil, 30 mil., 40 mil, 60 mil.

Standard roll length- 24" wide

- 60 mil. PEEK available in 24" x 48" Sheets

CONVERTING SERVICES

- Custom Slit Roll Widths
- Custom Sheeting
- PEEK™ Film- PSA Adhesive Lamination
- Custom PEEK™ Film or Tape Die Cut Parts