



VICTREX® PEEK FILM TECHNOLOGY

For Adhesive Tapes

Victrex APTIV® film is ideal for use as a high performance tape backing. It's a super-tough, strong film providing an excellent combination of friction and wear properties along with high heat resistance and excellent electrical properties.

APTIV film-backed tape can be coated on one side or both sides with a variety of adhesive systems including silicone or acrylic.

KEY FEATURES

- **High Temperature Resistance** — withstands continuous operating temperatures of up to 220°C (428°F) and even higher temperatures for short durations.
- **Wear Resistance** — over wide range of pressure, velocity, temperature and counterfacial roughness.
- **Hydrolysis Resistance** — retains mechanical properties and dimensional stability when exposed to water or steam at elevated temperatures and pressures.
- **Chemical Resistance** — excellent resistance to a wide range of chemical environments including solvents, acids, bases, fuels, and hydrocarbons even at elevated temperatures.
- **Electrical Properties** — maintained over a wide frequency, temperature and humidity range.
- **Radiation Resistance** — withstands over 10⁹ rads exposure without embrittlement.

APTIV FILM VS. POLYIMIDE

When compared to polyimide film, crystalline APTIV film offers:

- **Lower Moisture Absorption**
- **Improved Tear and Puncture Strength**
- **Better Abrasion Performance**
- **Better Chemical Resistance**
- **Comparable Properties** – crystalline APTIV film has comparable physical, electrical and thermal aging properties to polyimide.



APPLICATIONS

- Automotive gaskets and fuel system components
- Aerospace components
- Bearing surfaces
- Oil field equipment (down-hole) requiring abrasion and chemical resistance
- Electrical insulation
- Motor and transformer slot liners
- Semiconductor processing equipment
- Nuclear components
- Aerospace erosion protection
- Medical components
- Battery insulation
- High temperature masking tape

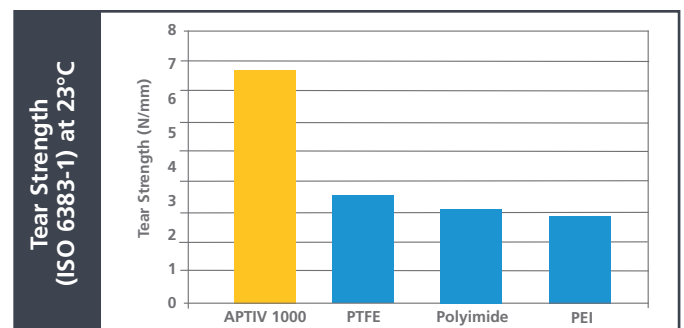
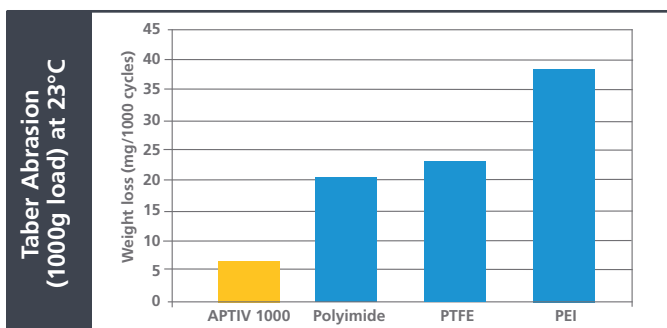
PRODUCT AVAILABILITY

APTIV film-backed tapes are available for sampling and sale in thicknesses of 25 microns (0.001") and above, in a range of widths. Silicone and acrylic adhesive systems are available.

MEETS APPROVALS/STANDARDS

APTIV film meets a variety of aerospace, automotive, food/water, medical/pharmaceutical and military/nuclear approvals and standards. Contact Victrex for more information.

Property	Test Method	Test Condition	Units	Crystalline PEEK (50 microns)
Specific Gravity	ISO 1183	23°C		1.30
Typical Crystallinity	DSC		%	30
Shrinkage	TM-VX-84	125°C	%	0.1
Shrinkage	TM-VX-84	200°C	%	<2
Water Absorption (50% RH)	ISO62	23°C, 24h	%	0.04
Tensile Modulus	ISO 527	23°C	GPa (kpsi)	2.8 (406)
Tensile Strength (at yield)	ISO 527	23°C	MPa (kpsi)	90 (13.1)
Tensile Elongation (at yield)	ISO 527	23°C	%	6
Tensile Strength (at break)	ISO 527	23°C	MPa (kpsi)	120 (17.4)
Tensile Elongation (at break)	ISO 527	23°C	%	>150
Puncture Strength	Def Stan 81-75	23°C	kJ/m2	26
Tear Strength	ISO 6383-1	23°C	N/mm	6.7
Folding Endurance	MIT	23°C		30,000
Glass Transition Temperature	DSC		°C (°F)	143 (289)
Melting Temperature	DSC		°C (°F)	343 (649)
Coefficient of Linear Thermal Expansion	ASTM D696	MD, <Tg	ppm	47
Dielectric Strength	ASTM D149	23°C, 1/4 inch electrode	kV/mm (V/mil)	190 (4826)
Volume Resistivity	ASTM D257	100V, 23°C	Ohm cm	4 x 10 ¹⁶
Dielectric Constant	ASTM D150	23°C, 10 MHz		3.5
Loss Tangent	ASTM D150	23°C, 10 MHz		0.002



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