

*Expanding Technology™*

## POLYGRID<sup>®</sup> EXPANDED APTIV<sup>®</sup> PEEK FILM FOR HIGH PERFORMANCE FILTRATION & SEPARATION

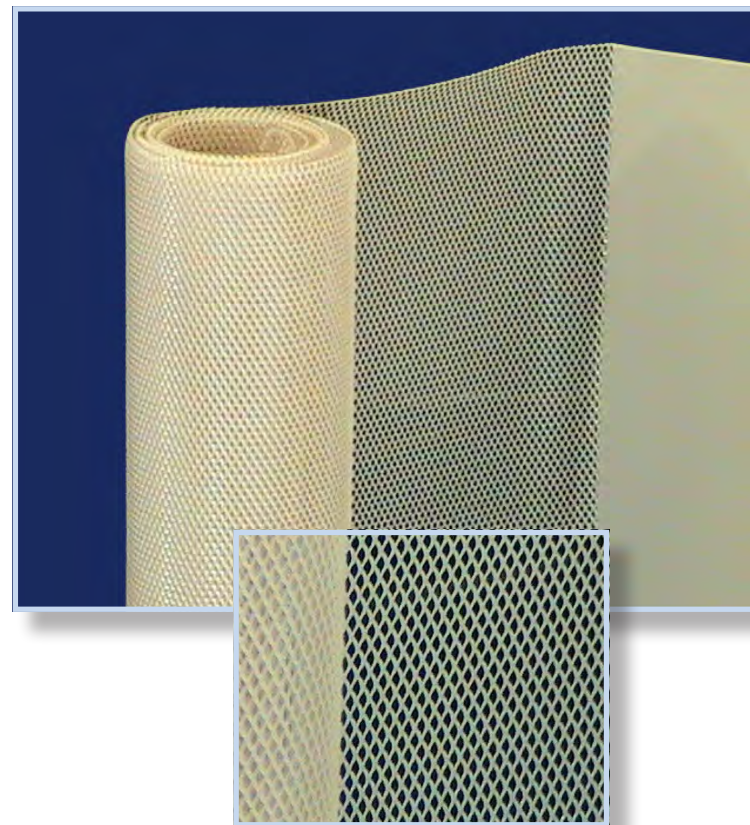
Expanded PEEK PolyGrid<sup>®</sup> is now available for critical filtration and separation applications where a high performance polymer is essential. Thin, versatile Victrex APTIV<sup>®</sup> films made with VICTREX<sup>®</sup> PEEK polymer provide a superior combination of mechanical strength, chemical and high temperature resistance. These characteristics make it the perfect choice for the next generation of high performance filters as a support membrane or backing material.

Applications requiring high temperatures to filter caustic gases or fluids, such as in the semiconductor, chemical processing, and petroleum/gas industries, typically utilize expanded polytetrafluoroethylene (PTFE), perfluoroalkoxy (PFA), and ethylene chlorotrifluoroethylene (ECTFE) as a support material. All these materials provide excellent temperature and chemical resistance but none match the mechanical strength provided by the expanded PolyGrid APTIV PEEK films.

With the continual increase in demands on filter performance, look to expanded PEEK PolyGrid, utilizing Victrex APTIV Films, to meet critical performance challenges. Our unmatched precision expanding process coupled with the exceptional material properties combine to enhance performance and increase functionality of your end product.

### Features

- ▲ Thickness from .050 mm (.002") to .750 mm (.0295")\*
- ▲ Pore sizes down to 25 micron and ability to achieve 1,300+ Openings/Cm2\*\*
- ▲ Widths available up to 610 mm (24 inches)



### Advantages

- ▲ Better dimensional stability on opening size under high flow, high pressure situations
- ▲ Increased strength essential to assuring media integrity and pleat spacing under dynamic flow
- ▲ Can utilize thinner support materials to increase the working surface area of the filter
- ▲ Low outgassing, low extractables as well as low moisture absorption.

\* Non-expanded APTIV films are available down to .00025" (6 Microns).

\*\* Pore sizes are dependent upon material thickness and width.

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# EXPANDED VICTREX® PEEK FILM TECHNOLOGY

Expanded APTIV film's versatility and high performance satisfy the increasing demand for higher temperature performance, lightweight, durability and eco-friendly application design in a broad range of markets including electronics, acoustics, aerospace, automotive, industrial, oil and gas and alternative energy.

Expanded APTIV film is available in several grades according to the specific needs of the end use application. Within each grade a broad range of thicknesses are available from 25 to 750 microns (1 to 30 mils). Thicknesses for non-expanded APTIV films are available down to .00025" (6 microns).

The standard width of expanded APTIV film is 610 mm (24 in), although some expanded films can be provided in widths up to 1450 mm (57 in). Matte/Gloss and Gloss/Gloss surface finishes are standard. Other surface finishes may be available upon request.

## Benefits

- ▲ Reduced weight: low specific gravity and very low thicknesses
- ▲ Thin: flexible format to facilitate miniaturisation
- ▲ Longevity: toughness, durability and reliability to enhance performance and extend application lifetime



## Key Features

- ▲ High Heat Resistance
- ▲ Excellent Wear Properties
- ▲ Low Moisture Absorption
- ▲ Purity
- ▲ Outstanding Acoustics Properties
- ▲ Broad Chemical Resistance
- ▲ Low Smoke & Toxic Gas Emission
- ▲ Environmentally-Friendly
- ▲ High Strength & Toughness
- ▲ Electrical Stability
- ▲ FDA Food Contact Certified
- ▲ Radiation Resistance
- ▲ Hydrolysis Resistance



APTIV Film - Comparison with Competitive Films	Mechanical Properties at 200°C (392°F)	Low Moisture Absorption	Chemical Resistance	Abrasion / Wear Resistance	Radiation Resistance	Low Outgassing & Extractables
Victrex APTIV Film	Very Good	Very Good	Very Good	Excellent	Excellent	Excellent
Polyimide (PI)	Very Good	Fair	Poor	Good	Very Good	Good
Polyetherimide (PEI)	Good	Fair	Fair	Fair	Good	Good
Polytetrafluoroethylene (PTFE)	Poor	Excellent	Excellent	Poor	Poor	Very Good

APTIV Film - Comparison with Competitive Films	Basic Character	Low Permeation Properties	Recyclable	Dielectric Properties	RTI Rating	Flame Resistance
Victrex APTIV Film	Melt Processable	Very Good	Yes	Very Good	220°C (428°F)	Very Good
Polyimide (PI)	Non Melt Processable	Very Good	No	Very Good	200°C (392°F)	Excellent
Polyetherimide (PEI)	Melt Processable	Fair	Yes	Good	180°C (356°F)	Excellent
Polytetrafluoroethylene (PTFE)	Limited Melt Processable	Good	Limited	Excellent	180°C (356°F)	Excellent

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