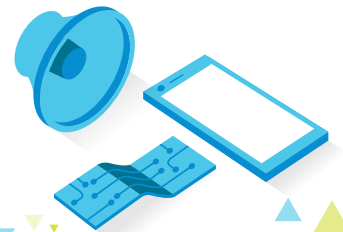
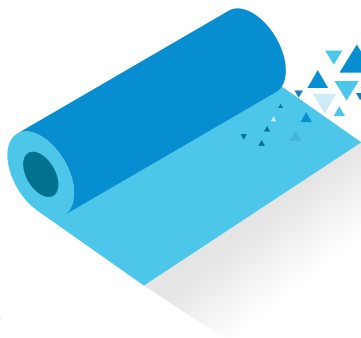


# MATERIALLY BETTER

VICTREX APTIV™ FILMS FOR ADVANCED  
PERFORMANCE IN NEXT-GENERATION  
ELECTRONIC APPLICATIONS



# SHAPING FUTURE PERFORMANCE IN ELECTRONICS



Consumer demands for the latest electronics devices, coupled with emerging RF technologies like 5G, are creating a constant pressure for more innovation. To stay ahead of the competition your products must offer more functionality, more durability, faster and more powerful performance all at an acceptable cost. Crucial to this is choosing the right material. Victrex APTIV™ Film technology provides the versatility and high performance you need. Now you can have the design freedom to meet today's challenges and deliver the next generation of electronics.

## DESIGN MATERIALLY BETTER PRODUCTS

APTIV Films provide all the benefits of VICTREX™ PEEK Polymer in a thin-film format, giving you the freedom to reimagine the design of electronic components and devices.

USED IN

**4 BILLION+**  
**MOBILE DEVICES**

APTIV Film technology provides superior sound performance and reliability.

RANGE OF

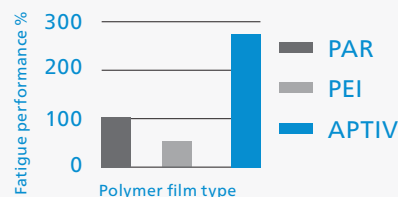
**3–650**  $\mu\text{m}$   
**THICKNESS**

UP TO

**1,445**  $\text{mm}$   
**WIDTH**

APTIV Films can meet specific needs of different electronics applications from ultra thin to thick for wear and insulation.

UP TO  
**3X**  
MORE DURABLE



APTIV Films have around three times the lifetime of other polymers such as PAR or PEI films.

## LOWER MOISTURE ABSORPTION VS. POLYIMIDE

APTIV Films provide more stable electrical properties, especially at higher (RF) frequencies.

## MORE DUCTILE, LESS BRITTLE VS. LIQUID-CRYSTAL POLYMER

APTIV Films have similar high (RF) frequency electrical and mechanical properties, but are more ductile and less brittle (e.g. in injection moulding processes).

# THE BENEFITS OF USING APTIV FILMS



## Enhanced reliability

Proven resistance to a broad range of chemicals, along with excellent wear resistance, low moisture absorption, and excellent hydrolysis resistance.

Can withstand very high temperatures and lead-free solder processing temperatures of up to 300°C (572°F).



## Design freedom

As a high performing semi-crystalline thermoplastic film, APTIV Films can be processed using all necessary downstream processing techniques without limitation, including thermoforming, adhesion, printing, thermal lamination (adhesiveless), metallisation and laser welding & cutting.



## Electrical stability

Very stable dielectric properties (Dk, Df) over a wide range of temperatures, humidities, and frequencies to support 5G.



## Secure supply

Dedicated facilities with 7,150 tons polymer capacity, two APTIV Film production lines with ability to slit to width and surface treat to promote adhesion, and a fully integrated supply chain guaranteeing material quality, supply, consistency and performance by the #1 PEEK expert.



## Very low toxicity

High purity, low outgassing and low extractables reducing risk of exposure to toxins.

## APPLYING THE APTIV FILMS ADVANTAGE

Applications taking advantage of the high performance, light weight, and durability of APTIV Films include:

- ▶ Small space acoustics – microspeaker diaphragms
- ▶ Flex circuits – 5G RF antenna substrates
- ▶ Semicon & display manufacturing – LCD glass polishing frames, wafer carriers and transport tapes
- ▶ Flexible heaters
- ▶ Electric vehicle battery insulation
- ▶ Biocompatible electronic devices
- ▶ Dielectrics for capacitors, stencils
- ▶ Micro-motor thrust washers

**We'll support you all the way – from initial concepts through to end product – as we have done with our PEEK-based innovations over 40 years. As the first to commercialise PEEK, Victrex has the material and application know-how to help you create leading-edge components for electronic devices.**

To find out how we can help you create materially better, next-generation electronic devices:

Contact: [electronics@victrex.com](mailto:electronics@victrex.com)

Visit: [victrex.com/electronics](http://victrex.com/electronics)

## VICTREX™ PEEK OFFERS YOU

Great fatigue performance  
High creep resistance  
High temperature performance  
Great chemical & hydrolysis resistance

Meets flammability requirements  
Environmentally friendly – RoHS compliant, halogen free etc  
High purity, low outgassing, low extractables  
Electrical stability  
FDA compliant  
Strong and tough



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### **About Victrex**

Victrex is an innovative world leader in high performance polymer solutions, focussed on the strategic markets of automotive, aerospace, energy (including manufacturing & engineering), electronics and medical. Every day, millions of people use products and applications, which contain our materials – from smart phones, aeroplanes and cars to oil and gas operations and medical devices. With over 40 years' experience, we develop world leading solutions in PEEK and PAEK-based polymers, semi-finished and finished parts which shape future performance for our customers and our markets, and drive value for our shareholders. Find out more at [www.victrex.com](http://www.victrex.com)

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