

Victrex® APTIV® 1103-050 Polyetheretherketone (PEEK) Polymer Film, Semi-Crystalline, Mineral Filled (Unve

Category : Polymer , Film , Thermoplastic , Polyketone , Polyetheretherketone (PEEK)

Material Notes:

Description: APTIV® 1100 series films are the mineral filled semi-crystalline films made from VICTREX® PEEK polymer. The film provides a material solution for engineers in ultra-high performance applications. APTIV films are a comprehensive range of versatile, high-performance films, the use of which can facilitate reduced systems costs, improved performance and enhanced design freedom. APTIV 1100 has a unique combination of properties providing high temperature performance, mechanical strength, durability, excellent radiation, hydrolysis and chemical resistance, electrical insulation, excellent barrier properties with high purity, good flammability without the use of flame retardants, low toxicity of combustion products, and low moisture absorption in a film format. Inherently halogen free and ease of processing makes APTIV films a technology enabler for our customers and end users. APTIV 1100 series provides a higher modulus and lower coefficient of linear thermal expansion over the APTIV 1000 series. Applications:Electrical insulation Printed circuit substratesHigh temperature labelsFlexible surface heatersPressure sensor membranesAcoustic speaker diaphragms and voice coilsProven temperature resistance to use of lead free soldersCertification: APTIV film is FDA and EU approved for food contact and is RoHS compliant.Features:High heat resistanceBroad chemical resistanceExcellent barrier propertiesLow moisture absorptionHigh strength and toughnessStable, excellent electrical insulation propertiesGood flammability performance without use of flame retardant additivesInherently halogen freeRadiation resistanceLow smoke and toxic gas emissionExcellent hydrolysis resistanceExcellent acoustic propertiesHigh purityLight weightRecyclableEasy to process – can be laminated to other materials, thermoformed, metallised, coated, printed, stamped and die cut, welded and heat sealed and coated.Improved thermal conductivity over APTIV 1000 filmSurface Finishes: Standard surface finish is matte/matte. Typical Ra values can be supplied on request.Custom Finishing (Slitting and Surface Treatment): The slitter capability in the APTIV film facility allows custom lengths and widths down to 45 mm to be produced. Widths below 45 mm are available on request. Surface treatment by atmospheric plasma process of the film is also available by request taking the surface energy of the treated APTIV film surface to greater than 55 dynes per cm. Compliance: APTIV 1100 film is approved for Food Contact Use:APTIV 1100 film is compliant with the compositional requirements of FDA 21 CFR 177.2415.APTIV 1100 film is compliant with the framework regulation (EC) No. 1935/2004/EC and commission directive 2002/72/EC and the amendments up to 2005/79/EC. APTIV 1100 film complies with the requirements of RoHSEuropean Directive 2002/95/EC and can be used to manufacture products compliant with the same directive.APTIV 1100 film is inherently halogen free in accordance with IEC61249-2-21.Secondary Processes: APTIV 1100 film can easily be subjected to a range of secondary process operations, which allow designers and engineers to obtain the benefits of APTIV film properties in a variety of forms.Surface treatment SlittingAdhesionDie cutting and stampingCoatingsThermal laminationHeat welding and heat sealingThermoformingMetallisationPrintingLaser marking and machiningInformation provided by Victrex

Order this product through the following link:

http://www.lookpolymers.com/polymer_Victrex-APTIV-1103-050-Polyetheretherketone-PEEK-Polymer-Film-Semi-Crystalline-Mineral-Filled-nbspUnve.php

Physical Properties	Metric	English	Comments
Density	1.54 g/cc	0.0556 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.090 % @Time 86400 sec	0.090 % @Time 24.0 hour	50% RH; ISO 62

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	96.0 MPa	13900 psi	ISO 527
Elongation at Break	14 %	14 %	ISO 527
Tensile Modulus	5.80 GPa	841 ksi	ISO 527
Tear Strength	5.40 kN/m	30.8 pli	ISO 6383-1

Thermal Properties	Metric	English	Comments
CTE, linear	18.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	10.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	MD, below Tg; ASTM D696
Thermal Conductivity	0.610 W/m-K	4.23 BTU-in/hr-ft ² -°F	Through Plane; ASTM E-1461
	1.30 W/m-K	9.02 BTU-in/hr-ft ² -°F	In-Plane; ASTM E-1461
Shrinkage	$\leq 1.0\%$	$\leq 1.0\%$	TM-VS-84
	@Temperature 200 °C	@Temperature 392 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	100V
Dielectric Constant	3.5	3.5	ASTM D150
	@Frequency 1.00e+7 Hz	@Frequency 1.00e+7 Hz	
Dielectric Strength	200 kV/mm	5080 kV/in	1/4 in electrode; ASTM D149
Dissipation Factor	0.0010	0.0010	ASTM D150
	@Frequency 1.00e+7 Hz	@Frequency 1.00e+7 Hz	

Descriptive Properties	Value	Comments
Puncture Strength	3.6 (kJ/m ²)	Def Stan 81-75

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