APTIV® 2100

Polyetheretherketone

Victrex plc

Message:

APTIV® 2100 series films are the mineral filled amorphous 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 2100 has a unique combination of properties providing high temperature performance, light weight, mechanical strength, durability, excellent radiation, hydrolysis and chemical resistance, electrical insulation, wear and abrasion resistance, 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 2100 series provides a higher modulus over the APTIV 2000 series amorphous films. This grade is tailored towards thermoforming of thin wall parts with higher modulus, such as speaker diaphragms. Please note - APTIV 2100 will crystallize if taken above the Tg (143°C, 289°F) in either secondary processes or end use application. The crystallization is not reversible back to the amorphous phase without re-melting the material. Consideration of the temperature range during processing and end use application needs to be included if selecting APTIV 2100.

General Information	
Filler / Reinforcement	Mineral
Features	Amorphous
	Barrier Resin
	Clean/High Purity
	Durable
	Electrically Insulating
	Excellent Printability
	Flame Retardant
	Good Abrasion Resistance
	Good Chemical Resistance
	Good Processability
	Good Toughness
	Good Wear Resistance
	Halogen Free
	Heat Sealable
	High Heat Resistance
	High Strength
	Hydrolysis Resistant
	Low Moisture Absorption
	Low Smoke Emission
	Low Toxicity
	Metallizable
	Radiation (Gamma) Resistant
	Recyclable Material
	Weldable

Uses	Diaphragms Electrical/Electronic Applications Film Insulation Laminates Thin-walled Parts
Agency Ratings	EU 2002/72/EC EU 2004/19/EC FDA 21 CFR 177.2415
RoHS Compliance	RoHS Compliant
Forms	Film
Processing Method	Coating Laminating Thermoforming

Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.42	g/cm³	ISO 1183
Shrinkage [1]			
MD : 200°C, 50.0 µm	< 0.50	%	
TD : 200°C, 50.0 µm	< 0.50	%	
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Recommended / Available	100 to 125 µm		
Tensile Modulus			ISO 527-3
MD : 23°C, 100 µm	3500	MPa	
TD : 23°C, 100 µm	3000	MPa	
MD : 23°C, 130 µm	3000	MPa	
TD : 23°C, 130 µm	3000	MPa	
Tensile Stress			ISO 527-3
MD : Break, 23°C, 100 µm	100	MPa	
TD : Break, 23°C, 100 µm	90.0	MPa	
MD : Break, 23°C, 130 µm	100	MPa	
TD : Break, 23°C, 130 µm	80.0	MPa	
Tensile Elongation			ISO 527-3
MD : Break, 23°C, 100 µm	> 150	%	
TD : Break, 23°C, 100 µm	> 150	%	
MD : Break, 23°C, 130 µm	> 150	%	
TD : Break, 23°C, 130 µm	> 150	%	
Thermal	**Nominal Value**	**Unit**	
Glass Transition Temperature	143	°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**

Volume Resistivity [2] (23°C, 0.0500 mm)	1.0E+16	ohms·cm	ASTM D257

NOTE	
1.	TM-VX-84
2.	100 V

Recommended distributors for this material

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