

APTIV™ FILMS 2100

General Information

Product Description

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.

Material Properties

Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.42	g/cm ³	ISO 1183
Shrinkage MD ¹ (200°C, 50.0 µm)	< 0.50	%	
Shrinkage TD ¹ (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, 125 µm	3000	MPa	
TD : 23°C, 125 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, 125 µm	100	MPa	
TD : Break, 23°C, 125 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, 125 µm	> 150	%	
TD : Break, 23°C, 125 µm	> 150	%	
Thermal	Nominal Value	Unit	
Peak Crystallization Temperature (DSC)	143	°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity ² (23°C, 50 µm)	1.0E+16	ohms·cm	ASTM D257

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Notes

¹ TM-VX-84

² 100 V

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