

Preliminary Product Information

VESTAKEEP® film 0FH81

Amorphous PEEK film

VESTAKEEP film 0FH81 is tailored to thin-walled, thermoformed PEEK film parts.

Processing a viscous melt to a flat film results in stresses in most plastic films, which may be relieved at elevated temperatures. Thus, upon melting conventional plastic films will withdraw from warmer to colder areas affecting the thickness tolerances of thermoformed parts.

These dimensional changes can significantly be reduced by using amorphous VESTAKEEP film 0FH81. The extrusion process for this grade was engineered to minimal internal stresses.

0FH81 and 0FH80 both are based on the same PEEK resin. It depends on the thermoforming process conduct if thermoformed parts are crystalline or amorphous. Crystallisation takes some time and can only occur while the material is above its glass transition temperature

$T_g = 150^\circ\text{C}$ (300°F). Rapid cooling will result in amorphous material.

By contrast, amorphous film 0FH81 will turn crystalline, when heated above T_g . This so called cold crystallisation is recognized by the film's appearance turning from transparent to matte.

Please refer to our product information for 0FH80 for properties of the crystallized film.

Thicknesses from 50µm up to 125µm are available. Standard thicknesses are 75 and 125µm. The standard width is 300mm. Please inquire for further thicknesses or widths.

Films are supplied in roll form with 3'' or 6'' core, as cut-to-size sheets or slit to tapes.

Please contact us for further information.

VESTAKEEP® film OFH81 – physical and mechanical

Property	Test method	Unit	VESTAKEEP OFH81 75µm	
Specific Gravity ^{*)}	23°C	ISO 1183	g/cm ³	1.29
Thickness Tolerance				+/-10%
Glass transition temperature T _g	DSC 2 nd heating	°C		~150°C
Cold crystallization		°C		>165°C
Tensile test	100mm/min	ISO 527-3		
Tensile Strength			MPa	120
Yield Strength			MPa	60
Strain at break				>150%

VESTAKEEP® film – dielectric strength comparison

	IEC 60243-1	25µm	50µm	75µm	125µm	190µm
VESTAKEEP OFH81 (amorphous)						
Breakdown Voltage	kV			13.5	17.5	
Dielectric Strength	kV/mm			190	140	
VESTAKEEP OFH80 (crystalline)						
Breakdown Voltage	kV	6.3	10	13	16	20
Dielectric Strength	kV/mm	250	190	170	124	103

VESTAKEEP® – bulk electrical properties

Property	Test method	Unit	VESTAKEEP resin
Relative permittivity	50 Hz 1 kHz 1 MHz	IEC 60250	2.8 2.9 2.8
Dissipation factor	1 kHz 1 MHz	IEC 60250	0.003 0.005
Comparative tracking index	CTI	IEC 60112	200
Test solution A	100 drops value		175
Volume resistance	IEC 60093	Ohm	10 ¹⁴
Volume resistivity	IEC 60093	Ohm · cm	10 ¹⁵
Surface resistance R _{0A}	IEC 60093	Ohm	10 ¹⁴
Spec. surface resistance	IEC 60093	Ohm	10 ¹⁵

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