ETFE Film-EC Series Product

TECHNICAL DATA

ETFE film-EC series product,is a composite material composed of ETFE film and adhesive.And ETFE film is produced from ETFE resin by a melt extrusion casting process.This composite material has all the excellent properties of fluorine materials.

ETFE Film-EC series Product Characteristics

- Excellent low-temp resistance：Direct exposure to -150 ℃ environment and long time work in low-temp environments
- Excellent high-temp resistance：Withstand 220 ℃ for a short time and work in 165 ℃ environment for a long time
- Good thermal insulation performance：K value can reach 2.0W/㎡.k
- Easy to clean: Unique anti stick surface and high resistance to dirt; Rainwater can remove the main dirt
- Excellent corrosion resistance：Not affected by most chemicals
- Outstanding dielectric properties:Keep excellent electrical performance over a wide range of frequencies and temperatures
- Aging resistance:Radiation resistance and low permeability ; long-term exposure to the atmosphere, its surface and performance remain unchanged
- Flame retardancy: Meet UL94 standard V-0 flame retardant level

ETFE Film-EC series Product Specifications

- Thickness range from50μm~500μm
- Standard width up to1600mm
- Any syncopated widths available upon request

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FEL-WHL128-EC Typical Performance			ETFE Film-EC series Product
General Properties	**Unit**	**Test Method**	
Density		ASTM D792	1.85-1.95
Area yield（mil）	㎡/kg		20.7
Flammability		UL 94	V-0
Water Absorption	%	ASTM D570	0.03
Oxygen Index（7mil）	%	ASTM D2863	35
Mechanical Properties			
Tensile Strength	MPa	ASTM D882	40
Elongation At Break	%	ASTM D882	300
Tensile Modulus	MPa	ASTM D882	960
Initial Tear Strength (50μm)	g	ASTM D1004	500
Propagation Tear Strength (50μm)	g	ASTM D1922	75
Folding Resistance（MIT）	Times	ASTM D2176	>50000
Thermal properties			
Continuous Use Temp	°C	UL-746 B	165
Melt Point	°C	ASTM D3418	260
Thermal Shrinkage	°C	ASTM D2732	≤5
Thermal Expansion coefficient	In/in	ASTM D696	$4*10^{-5}$
Electrical property			
Dielectric Strength/mil	v/mil	ASTM D149	5500
Dielectric Constant /1kHZ		ASTM D150	2.6
Dielectric Loss/1kHZ		ASTM D150	0.0008
surface property			
Roughness （Ra）	μm	ANSI B46.1	0.8-1.0
Contact angle	°	ISO 15989	98
Roll-off angle(50ul)	°	ISO 19403-7	22
Roll-off angle(50ul)	°	ISO 19403-7	35
PSA Peeling force/15min	N/25	ASTM D3330	11
PSA Peeling force/24h	N/25	ASTM D3330	18
Glossiness	GU	ASTM D2457	14-20
Pencil hardness test	GU	ASTM D2457	< 14B
Product composition			
Film Thickness	μm	FEL-WHL128-EC	60
Backing Thickness	μm	FEL-WHL128-EC	40
Total Thickness	μm	FEL-WHL128-EC	100

Represent typical performance properties and should not be used for special purposes.
Contact PLUSXTECH Performance Plastics representative for appropriate values.