



## CHEMFILM® Textured ETFE Fluoropolymer Film

### Functional and Permanent Surface Texture

#### High Yield Fluoropolymer Film

CHEMFILM® ETFE fluoropolymer film is manufactured from a copolymer of ethylene and tetrafluoroethylene resin. This material offers the outstanding performance of fluoropolymer film over a temperature range from cryogenic to 330°F (165°C). Its resistance to chemicals and weathering, low flammability and stress crack resistance make this film an excellent candidate for a wide variety of applications.

#### Weatherable Applications

CHEMFILM ETFE film offers excellent mechanical properties and tear resistance. When combined with its excellent mechanical and chemical properties, the high light transmission (>95%) of CHEMFILM ETFE film provides excellent performance in architectural roofing designs and greenhouses. This film also is an excellent choice in solar collector applications due to its outstanding physical properties and high coverage factor resulting from its low density.

#### Low Surface Energy Applications

CHEMFILM ETFE film offers a low surface energy, making it an excellent choice for release applications up to 350°F process temperature. The low density of this material (compared to CHEMFILM FEP film) provides greater coverage per pound for composite molding release film applications. The low surface energy of CHEMFILM ETFE also can be utilized in applications such as wall coverings and anti-graffiti protection for high traffic areas.

#### Fabrication Capabilities

This ETFE film offers processors excellent dimensional stability for secondary processing such as thermoforming and welding. Products utilizing Saint-Gobain's surface treatment technologies, such as C-treatment, improve bondability characteristics for metalizing processes and adhesive coating.

### Advantages

- Superior release properties
- Excellent weatherability
- Performance from -328°F (-200°C) to 330°F (165°C)
- Excellent chemical and mechanical properties
- Thermoformable
- Product thickness from 0.0015 in. (0.0127 mm) to 0.004 in. (0.305 mm)
- Width up to 60 in. (1524 mm)
- Blue, red and custom colors available



Excellent performance in architectural roofing designs



ETFE release film yields 19% more per pound than FEP

## CHEMFILM® Textured ETFE Typical Physical Properties\*

Typical Properties	Test Method	ETFE-E2 RA Texture	ETFE-E4 RA Texture	Unit
<b>General</b>				
Specific Gravity	ASTM D792	1.72-1.76	1.75-1.79	
Yield (1 mil)		22.5 (110)	22.5 (110)	m2/kg (ft2/lb)
Surface Roughness(RA)	ISO 1997	2.5+/-0.5	2.5+/-0.5	µm
Surface Roughness(RZ)	ISO 1997	<15	<15	µm
<b>Thermal</b>				
Melt Index	ASTM D3159	9.0-16.0	4.0-8.0	g/10 min
Melting Point	ASTM D3418	250-270 (482-518)	249-259 (480-495)	°C (F)
Heat Shrinkage (MD)	177 °C @ 30 min	+/-3 max.	+/-3 max.	%
Heat Shrinkage (TD)	177 °C @ 30 min	+/-3 max.	+/-3 max.	%
<b>Optical</b>				
Gloss at 60	ASTM D2457	>10	>10	Gu
Haze	ASTM D523	>55	>55	%
Luminous transmission D65/10	ASTM D1003	>85	>85	%
<b>Mechanical</b>				
Tensile Strength	ASTM D882	48 (7,000)	51 (7,400)	Mpa (PSI)
Elongation	ASTM D882	>400	>400	%
<b>Availability</b>				
Thickness		.0015 to .004	.0015 to .004	Inch mm (in)
Widths		up to 1524 (60)	up to 1524 (60)	

\*Represent typical performance properties and should not be used for specification purposes

Contact your Saint-Gobain Performance Plastics representative for more information.



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