

ETFE FILMS

# TEXTURED ETFE FLUOROPOLYMER FILM



**HIGH-YIELD FLUOROPOLYMER FILM**

**Norgard**® ETFE Fluoropolymer Film is manufactured by **Saint-Gobain**® Performance Plastics Corporation, Tape Solutions business, and comes with 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.

*\*Previously known as*  
**CHEMFILM® TEXTURED ETFE**



**FEATURES AND BENEFITS**

- Superior release properties
- Excellent weatherability
- Performance from -328°F (-200°C) to 330°F (165°C)
- Excellent chemical and mechanical properties
- Thermoformable

**AVAILABILITY**

- Product thickness from 0.0015" (0.0381 µm) to 0.004" (0.1524 µm)
- Width up to 60" (1,524 mm)
- Blue, red and custom colors available
- Available in cementable (surface treated) form

**APPLICATIONS**

**Weatherable Applications**

**Norgard** Film offers excellent mechanical properties and tear resistance. When combined with its excellent mechanical and chemical properties, the high light transmission (>95%) of **Norgard** 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**

**Norgard** 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 **Norgard** FEP Film) provides greater coverage per pound for composite molding release film applications. The low surface energy of **Norgard** 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** surface treatment technologies, such as C-treatment, improve bondability characteristics for metalizing processes and adhesive coating.

\*Pictures shown are for illustration purpose only.

## TYPICAL PROPERTIES

General	ETFE-E2 RA Texture	Unit	Test Method
Standard Widths	1,524	mm	-
	60	inches	
Thickness	0.0015 to 0.006	inches	
Specific Gravity	1.72 - 1.76	-	ASTM D-792
Yield (1 mil)	22.5	m <sup>2</sup> /kg	-
	110	ft <sup>2</sup> /lb	
Surface Roughness (RA)	2.5 ± 0.5	µm	ISO 1997
Surface Roughness (RZ)	< 15	µm	ISO 1997
Mechanical	ETFE-E2 RA Texture	Unit	Test Method
Tensile Strength	48	MPa	ASTM D882
	7,000	psi	
Elongation	> 400	%	ASTM D882
Thermal	ETFE-E2 RA Texture	Unit	Test Method
Melting Point	250 - 270	°C	ASTM D3418
	482 - 518	°F	
Heat Shrinkage (MD)	± 5 max.	%	177°C @ 30 min
Heat Shrinkage (TD)	± 5 max.	%	177°C @ 30 min
Optical	ETFE-E2 RA Texture	Unit	Test Method
Gloss at 60	> 10	Gu	ASTM D2457
Haze	> 55	%	ASTM D1003
Luminous transmission D65/10	> 85	%	ASTM D1003

The values presented are typical values and should not be used for specification purposes. Contact your **Saint-Gobain** Tape Solutions representative for more information.



### TAPE SOLUTIONS

North America | South America  
Europe | Asia

For more information, please visit  
[tapesolutions.saint-gobain.com](https://tapesolutions.saint-gobain.com)

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