

ETFE FILMS

ETFE-E2 FLUOROPOLYMER FILM

ETFE-E2 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 165°C (330°F). 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® ETFE-E2*



FEATURES AND BENEFITS

- Superior release properties
- Excellent weatherability
- Performance from -200°C (-328°F) to 165°C (330°F)
- Excellent chemical and mechanical properties
- Thermoformable
- High light transmittance
- High strength to weight performance

AVAILABILITY

- Product thickness from 0.0005" (12.7 µm) to 0.010" (254 µm)
- Width up to 60" (1,524 mm)
- Blue, red and custom colors available
- Available with C-Treatment on one or both sides (cementable and bondable)

*Pictures shown are for illustration purpose only.



APPLICATIONS

Weatherable Applications

ETFE-E2 Film offers excellent mechanical properties and tear resistance. When combined with its high light transmission (up to 95%), ETFE-E2 Film provides excellent superior 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

ETFE-E2 Film offers a low surface energy, making it an excellent choice for release applications up to 232°C (450°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 and high mechanical strength of ETFE-E2 also can be utilized in applications such as wall coverings and anti-graffiti protection for high traffic areas.

Fabrication Capabilities

ETFE-E2 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.

TYPICAL PROPERTIES

General	Value	Unit	Test Method
Standard Widths	1,524	mm	-
	60	inches	
Specific Gravity	1.70 - 1.76	-	ASTM D-792
Yield (1 mil)	22.5	m ² /kg	-
	110	ft ² /lb	
Water Absorption, 24 hr.	< 0.03	%	-
Mechanical	Value	Unit	Test Method
Tensile Strength @ Break (RT)	48	MPa	ASTM D-882
	7,000	psi	
Elongation @ Break (RT)	400	%	ASTM D-882
Tensile Modulus (RT)	1,100	MPa	ASTM D-882
	160,000	psi	
Propagating Tear Strength, 1 mil	> 2.9	N	ASTM D-1922
	> 0.65	lb _f	
Electrical	Value	Unit	Test Method
Dielectric Strength, 1 mil	215	kV/mm	ASTM D-149
	5,500	V/mil	
Dielectric Constant, 1 kHz	2.6	-	ASTM D-150
Dissipation Factor, 1 kHz	< 0.0008	-	ASTM D-150
Thermal	Value	Unit	Test Method
Flammability	V-0	-	UL 94
Melting Point	250 - 270	°C	ASTM D-3418
	482 - 518	°F	
Continuous Service Temperature	165	°C	-
	300	°F	
Specific Heat	2,000	J/(kg•°K)	-
	0.46	BTU/(lb•°F)	
Coefficient of Thermal Conductivity	0.238	W/(m•°K)	-
	1.65	BTU•in (hr•ft ² •°F)	
Limiting Oxygen Index	31	%	ASTM D-2863
Optical	Value	Unit	Test Method
Refractive Index	1.4	-	ASTM D-542

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

IMPORTANT: It is the user's responsibility to ensure the suitability and safety of Saint-Gobain products for all intended uses and that the materials to be used comply with all applicable regulatory requirements. Saint-Gobain assumes no responsibility for any product failures that occur due to your actions or inactions, including your use, design, fabrication or application of the products into which the materials are incorporated.

WARRANTY: This document should not be considered a warranty or a guarantee. The descriptions of the Product provided hereinabove may vary based on specifications requested and testing protocols. Typically, Saint-Gobain warrants that product(s) will meet mutually agreed specifications at delivery and Saint-Gobain honors any breach of warranty claims for six (6) months from delivery of the products. If a product is determined to be nonconforming with its warranty, Saint-Gobain's sole obligation is, at its option, to either replace the nonconforming products or reimburse the purchase price for the same.

The only obligation under any applicable product warranty will be to replace any portion proving defective, or at our option, to refund the purchase price thereof. **SAINT-GOBAIN DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE.**

Form #1919 | © Saint-Gobain February 2025 | All the mentioned trademarks are registered trademarks of Saint-Gobain Tape Solutions or affiliates, part of Saint-Gobain group.


TAPE SOLUTIONS

North America | South America
Europe | Asia

For more information, please visit
tapesolutions.saint-gobain.com