

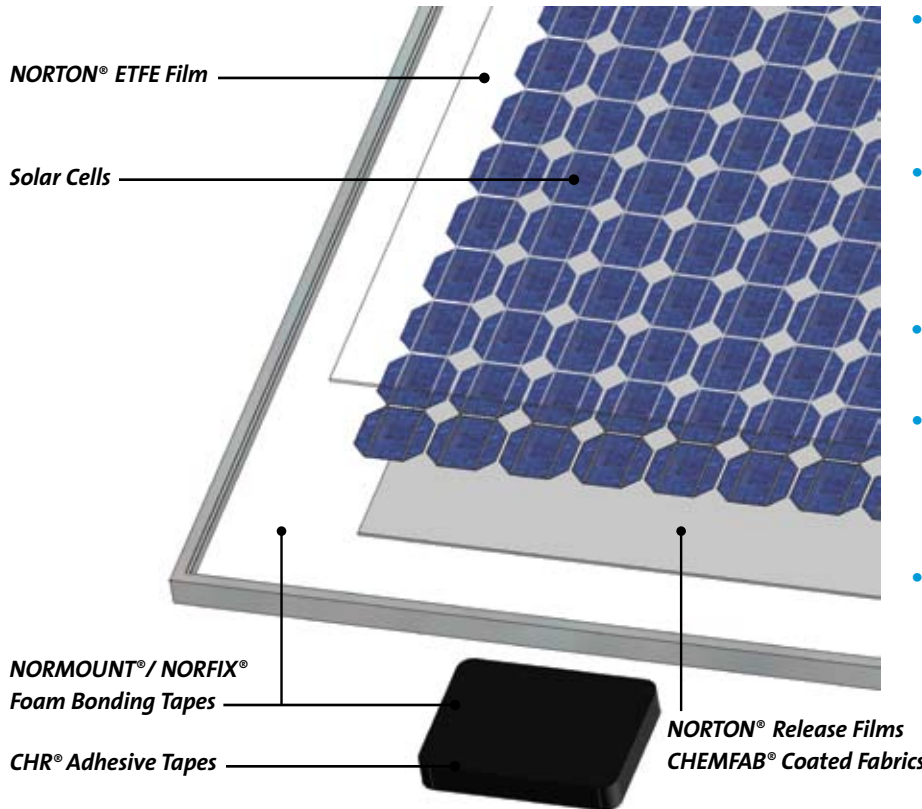
Saint-Gobain Performance Plastics— Composites



**Material
Solutions for
Photovoltaic
Module
Production**

Saint-Gobain Performance Plastics — Composites Material Solutions for Photovoltaic Module Production

Saint-Gobain—The World Leader in Providing the Broadest Range of Unique Engineered Products for Photovoltaic Solutions



- **NORTON® High Performance Extruded Films**
ETFE film for flexible, lightweight PV modules
- **NORTON® High Performance Release Films**
Extruded films, cast PTFE film and skived PTFE film
- **CHR® Pressure-sensitive Adhesive Tapes**
- **NORMOUNT®/NORFIX® High Performance Foam Bonding Tapes**
For frame and junction box
- **CHEMFAB® Specialty Coated Fabrics**
PTFE-coated glass fabrics as release sheet

NORTON® High Performance Extruded Films

NORTON® ETFE film is proven as front cover for flexible, lightweight PV modules; it provides high light transmission, excellent weatherability and UV resistance, and can offer superb adhesion to EVA adhesive systems.

Product Name	Tensile Strength ASTM D882	Elongation ASTM D882	Light Transmission (2 mil, 50µm film) ASTM D1003	Yield (2 mil, 50µm film)	Width
NORTON® ETFE Film	7000 psi (48 Mpa)	300%	94%	55 ft. ² /lb. (11.3 m ² /kg)	Customized up to 61" (1549mm)
NORTON® FEP Film	3500 psi (24 Mpa)	300%	97%	45 ft. ² /lb. (9.2 m ² /kg)	Customized up to 61" (1549mm)

NORTON® High Performance Release Films



Product Name	Gauges in. (mm)	Width in. (mm)
CHEMFILM® MR Release Film	0.001 (0.025), 0.002 (0.05)	48 (1219)
NORTON® FluoroLease® A Multi-layer Release Film	0.001 (0.025), 0.002 (0.05)	61 (1549)
NORTON® FEP Release Film	0.0005 (0.013), 0.001 (0.025), 0.002 (0.05)	48 (1219), 61 (1549)
NORTON® ETFE Release Film	0.0005 (0.013), 0.0006 (0.015), 0.0008 (0.02), 0.001 (0.025), 0.002 (0.05)	48 (1219), 61 (1549)
NORTON® PMP Release Film	0.0012 (0.03), 0.002 (0.05)	61 (1549)
NORTON® ECTFE Release Film	0.0005 (0.013), 0.001 (0.025)	48 (1219), 61 (1549)
T-100 Skived PTFE Release Film	0.001 (0.025), 0.002 (0.05), 0.003 (0.076)	up to 60 (1524)
NORTON® TH Series PI Film	0.001 (0.025), 0.002 (0.05), 0.003 (0.076)	61.8 (1570)

ADHESIVE SYSTEMS

CHR® Pressure-sensitive Adhesive Tapes

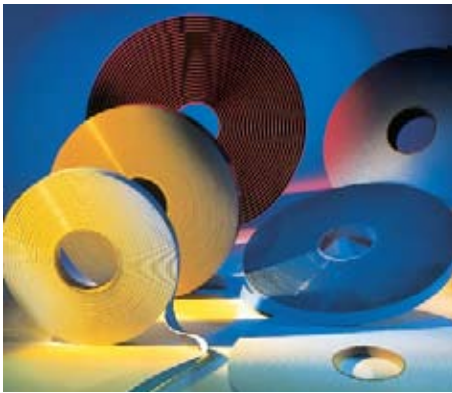
CHR® pressure-sensitive adhesive tapes comprise a full range of products for dielectric insulation and masking functions.



Substrates	Service Temperature	RUBBER	SILICONE	ACRYLIC
		-20°F to +325°F (-29°C to +164°C)	-100°F to +500°F (-73°C to +260°C)	-40°F to +375°F (-40°C to +188°C)
Polyester	-100°F to +350°F (-73°C to +177°C)	M851, M852, M855	M832, M824	NA
Polyimide	-100°F to +500°F (-73°C to +260°C)	NA	K201, K202	NA
Skived PTFE	-100°F to +500°F (-73°C to +260°C)	NA	2045-2, -3, -5, -10	2042-2, -3, -5, -10
High Modulus PTFE	-100°F to +500°F (-73°C to +260°C)	2250-2	2255-2, HM350 (low elongation)	2253-2
Extruded PTFE	-100°F to +500°F (-73°C to +260°C)	NA	2285-2, 7962	2283
Silicone Sponge Strip-N-Stick®	-100°F to +500°F (-73°C to +260°C)	NA	100S	100A, 512AF
PTFE Coated Fabric	-100°F to +500°F (-73°C to +260°C)	NA	SG25-03, -05	SG23-03, -05

NORMOUNT®/NORFIX® High Performance Foam Bonding Tapes

NORMOUNT® and NORFIX® are sealing tapes used to fix the frame onto the panel, but also can be used as mounting tapes to bond the junction box to the backsheet. They create an instant watertight seal with no curing time. The installation is simple and economical due to elimination of residue cleaning, use of spacers and control of sealant mixture.



Saint-Gobain Part Number	Description	Gauges in. (mm)	Color
NORMOUNT® V8800 V9000	Polyurethane Foam Bonding Tape	0.030 to 0.062 (0.8 to 1.6)	Black Off-white
NORMOUNT® Acrylic A-Series	Acrylic Foam Bonding Tape	0.020 to 0.062 (0.5 to 1.6)	Gray, White and Clear
NORFIX® V7700	Polyethylene Foam Bonding Tape	0.030 to 0.060 (0.8 to 1.5)	Black

CHEMFAB® Specialty Coated Fabrics

CHEMFAB® PTFE-coated fabrics provide easy release in the lamination process; they are offered in a wide range of glass patterns and high temperature capabilities for process customization.



Saint-Gobain Part Number	Description	Gauges in. (mm)	Widths in. (mm)
CF210-2 AS	Release Sheet	0.0093 (0.235)	102 (2600)
CF210-1	Release Sheet	0.0093 (0.235)	80 (2032)
CF210-2	Release Sheet	0.0093 (0.235)	102 (2600)
CF214-1	Release Sheet	0.0126 (0.320)	102 (2600)



PERFORMANCE PLASTICS

THE AMERICAS

Saint-Gobain Performance Plastics
150 Dey Road
Wayne, NJ 07470-4699 USA
Tel: (800) 526-7844
Fax: (973) 696-4056
www.fff.saint-gobain.com

Saint-Gobain Performance Plastics
One Sealant Park
Granville, NY 12832 USA
Tel: (800) 724-0883
Fax: (518) 642-2793
www.nortonfoam.com

ASIA

Saint-Gobain Performance Plastics
1468 Kun Yang Road
Minhang Development Zone
Shanghai, 200245
China
Tel: 86 (2) 1-5472-1568
Fax: 86 (2) 1-5472-2378

Saint-Gobain Performance Plastics
10801-5 Haramura Suwa-Gun
Nagano, 391-0106
Japan
Tel: 81 (2) 266-79-6400
Fax: 81 (2) 266-70-1001

Saint-Gobain Performance Plastics
Suite 1203, No. 147
Chienkwo North Road Section 2
Taipei Taiwan, 104
Taiwan
Tel: 886 (2) 25034201
Fax: 886 (2) 25034202

EUROPE

Saint-Gobain Performance Plastics
Avenue du Parc 18
B-4650 Chaineux, Belgium
Tel: (32) 87-32-20-11
Fax: (32) 87-32-20-51

Saint-Gobain Performance Plastics
Delmenhorster Strasse 20b
D-50735 Köln, Germany
Tel: (49) 221-971408-19
Fax: (49) 221-971408-35

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