



## 3M™ Scotchshield™ Film 17

UL Recognized Component and Certified by TÜV

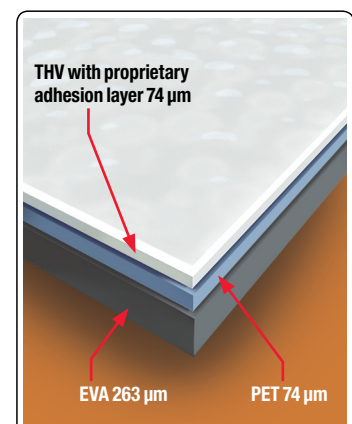
3M™ Scotchshield™ Film 17 is a backside barrier film for crystalline silicon photovoltaic solar modules. Made with a unique solvent-free manufacturing process, 3M™ Scotchshield™ Film 17 is constructed with a durable outer layer of THV fluoropolymer bonded to PET, with an added layer of EVA to provide excellent adhesion to typical module encapsulants.

### Performance Features

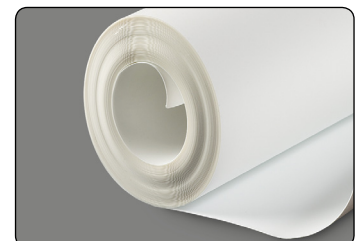
- Excellent retention of interlayer adhesion after environmental aging
- Outstanding UV stability
- Low moisture vapor transmission rate
- Excellent reflectivity
- Exceptional compatibility with encapsulants for strong, durable bonds

### THV shows excellent thermal stability

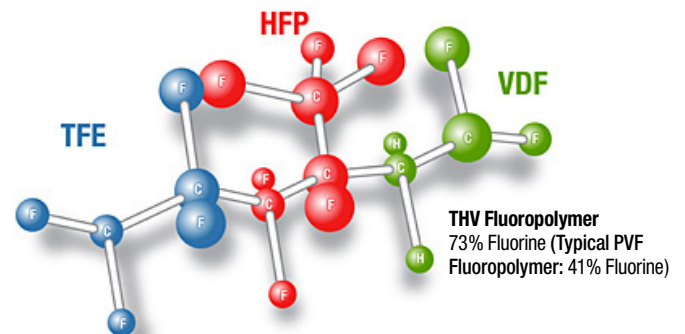
3M fluoropolymers have been under continuous product development and improvement since the 1950s. This advanced material has an extensive record of long-term weathering, low MVTR and UV resistance.



**3M™ Scotchshield™ Film 17**  
Total Thickness: 0.41 mm



	THV
<b>UL-94 Burn Rating</b>	V-0, VTM-0
<b>UL-746B RTI</b> (Relative Thermal Index Mechanical and Electrical @ 1 mil, 25 µm)	150°C
<b>Radiant Panel Test</b> ASTM E162 For Entire Backsheet	RP75



*Gigawatts of field installation worldwide.*



### Typical Properties (data not for specification purposes)

	Value	Test Method
<b>Electrical Properties</b>		
Breakdown Voltage	25kV	ASTM D149
Partial Discharge	>1100VDC	IEC60664-1
<b>Mechanical/Physical Properties</b>		
Tensile Strength		
Machine Direction	33 MPa (4.8 kpsi)	ASTM D882
Transverse Direction	39 MPa (5.6 kpsi)	
Elongation		
Machine Direction	116%	ASTM D882
Transverse Direction	83%	
Shrinkage		
Machine Direction	<1.2%	ASTM D2305 (150°C, 15 min)
Transverse Direction	<1.0%	
Adhesion		
Outer Layer to PET	7.0 N/cm (4.0 lbs/in)	3M Internal Method (Post Lamination)
Inner Layer to PET	Substrate Failure	
Backsheet to EVA Encapsulant	Substrate Failure	
<b>Barrier Properties</b>		
Moisture Vapor Transmission Rate	4.0 g/m <sup>2</sup> -day	ASTM F1249 (37.8°C/100%RH)

Indicated tensile and elongation values are for the PET layer. The outer THV layer remains intact beyond 500% elongation, helping to maintain a durable outer skin on the module.

Substrate Failure: The bond between film layers is stronger than the strength of the bonded films—one or more of the bonded films fail, rather than the adhesive bond.

### Processing Features

- Conformable and flexible for ease of lamination
- Robust processing window for wrinkle-free lamination
- Solvent-free manufacturing process, no residual solvents
- No special packaging or storage required

### Shelf Life

This product has a shelf life of two years from the date of manufacture when stored under normal conditions in the original, unopened package.

Normal storage conditions are defined as 4°C to 38°C (40°F to 100°F) and 0-95% relative humidity. The optimum storage conditions are 22°C (72°F) and 50% relative humidity.

#### United States

3M Renewable Energy Division  
800 755 2654

#### Germany

49 2131 144450

#### Denmark

45 43 480100

#### Spain

34 91 3216000

#### France

33 1 30316161

#### United Kingdom

44 1344 858000

#### Italy

39 02 70351

#### Singapore

65 6450 8888

#### China

86 21 62753535

#### Korea

82 2 3771 4043

#### India

91 80 22231414

#### Canada

800 364 3577

#### Brazil

0800 13 23 33

#### Mexico

52 55 52702250

#### Taiwan

886 933 896752

#### Japan

81 3 3709 8283

#### Malaysia

603 78062888

#### Other Areas

800 755 2654

For more information on our solar manufacturing product line, contact 3M Renewable Energy at 800 755 2654 or visit us at [www.3M.com/scotchshieldfilm](http://www.3M.com/scotchshieldfilm).

**Technical Information:** The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

**Product Use:** Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

**Warranty, Limited Remedy, and Disclaimer:** Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

**Limitation of Liability:** Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.



#### Renewable Energy Division

3M Center, Building 235-1S-67  
St. Paul, MN 55144-1000  
800 755 2654  
[www.3M.com/scotchshieldfilm](http://www.3M.com/scotchshieldfilm)

Please recycle. Printed in USA.  
© 2012 All rights reserved.  
Issued: 3/12 8554HB  
98-0150-0008-0

Scotchshield and 3M  
are trademarks of 3M.  
Used under license by  
3M subsidiaries and affiliates.