

3M™ Scotchshield™ Film 17T

 UL Recognized Component

Features

- Conformable and flexible for ease of lamination
- Robust processing window for wrinkle-free lamination
- Excellent retention of interlayer adhesion after environmental aging
- Excellent UV stability
- Very low moisture vapor transmission rate
- Solvent-free process, no residual solvents
- Resilient, low flammability fluoropolymer
- No special packaging or storage required

Product Update

3M™ Scotchshield™ Film 17T has obtained UL Component Recognition status.

Introduction

3M™ Scotchshield™ Film 17T is a backside barrier film for photovoltaic solar modules. The outer surface is treated to facilitate the use of a broad range of adhesives, tapes and labels. Similar to other commercially available backside films, it utilizes a fluoropolymer layer as a key component. Fluoropolymers are well known to have excellent resistance to degradation from sources such as UV, heat and moisture. Their weatherability exceeds that of non-fluorinated materials.

3M™ Scotchshield™ Film 17T is designed for easy use by module manufacturers. It can be used as received with most existing production equipment and cycles, with no pre-treating required. During lamination, strong, stable, bonds are formed to standard peroxide curable EVA encapsulants.

Typical Properties (Data not for specification purposes)

Property	Test Method	Unit	Value	
Total Thickness (Fluoropolymer/PET/EVA)		mils (mm)	16 (0.4)	
Total Weight		g/m ²	480	
Tensile Strength	transverse	ASTM D882	MPa	38
	machine		MPa	34
Elongation	transverse	ASTM D882	%	99
	machine		%	134
Peel Strength	Fluoropolymer to PET	ASTM D1876 (180° peel, post lamination)	lbs/in (N/cm)	3.8 (6.7)
	PET to EVA		lbs/in (N/cm)	66 (116)
	EVA to EVA encapsulant		lbs/in (N/cm)	>86 (>150)
Dimensional Stability	transverse	ASTM D2305 (150°C/15 min)	%	<1
	machine		%	<1
Breakdown Voltage	ASTM D149	kV	24	
Partial Discharge	IEC 60664-1	VDC	>1100	
Moisture Vapor Transmission Rate	ASTM F1249 (23°C, 90% RH)	g/m ² d	0.8	

Environmental stability according to IEC 61215 (2000 h at 85°C, 85% RH) no delamination.

For more information on our solar manufacturing product line, contact 3M Renewable Energy at 800-755-2654 or visit us at www.3M.com/solar.

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