

3M™ EPE Film D300

UL recognized component (file #E316895)

Product Description

3M™ EPE Films are a multi-layer film product consisting of an EVA layer bonded to both sides of a polyester film. 3M EPE Films can be easily incorporated into the laminated stack of materials in a photovoltaic module. 3M EPE Films can be used with crystalline silicon and thin film solar cells in rigid and flexible modules. Applications include providing electrical insulation between components and serving as a cosmetic mask to provide consistent appearance for solar modules.

Features

- Provides excellent dielectric properties when used as an insulator
- Excellent UV resistance
- Excellent adhesion to metals, bus wires and solar cells
- Variety of constructions available to meet the needs of dielectric and cosmetic applications
- Compatible with conventional/UV transparent encapsulant, providing strong, durable bonds

Typical Properties

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Storage and Shelf Life

The product should be stored indoors at temperatures between 0°C and 40°C with relative humidity below 60%. Avoid direct sunshine. Do not store near heating instruments. Avoid exposure to dust. This product has a shelf life of 1 year from the date of manufacture when stored under recommended conditions in the original, unopened package.



Figure 1 – Solar module without (a) and with (b) 3M EPE Film D300 used as a cosmetic mask.

Product	Unit	Test Method	D300
Color			White
EVA Thickness	µm		100
PET Thickness	µm		100
Total Thickness	µm		300
Breakdown Voltage	kV	ASTM D149	19
Max Tensile Load - MD	N/0.5 inch	ASTM D882	260
Max Tensile Load - TD	N/0.5 inch	ASTM D882	280
Elongation at Break - MD	%	ASTM D882	130
Elongation at Break - TD	%	ASTM D882	110
Shrinkage - MD	%	15 min @ 150°C	<2
Shrinkage - TD	%	15 min @ 150°C	<1
Interlayer Adhesion (EVA/PET) after Lamination	N/cm	3M Method	10
Adhesion to EVA Encapsulant	N/cm	ASTM D903	Film substrate break
Bare Film UV Resistance (32 kWh/m ² , UVA-340nm)	YI	ASTM G154	<5



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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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