

3M™ Solar Encapsulant Film EVA9100

Ethylene Vinyl Acetate Encapsulant for Photovoltaic Modules

Introduction

3M™ Solar Encapsulant Film EVA9100 is specially designed for the purpose of easy PV module manufacturing and high PID resistance. It is compatible with most existing lamination machines and processes and can provide strong, stable sealing and bonding properties.

Features

- Superior PID resistance protection for solar modules.
- Durable bonding strength with both glass and back sheet.
- Excellent UV and damp heat stability.
- High light transmission.

Storage

Shelf life is 6 months under proper storage conditions. The product should be stored indoor with the temperature controlled between 0°C–30°C and relative humidity below 60%, avoiding direct sunlight. The product should not be placed near any heating equipment or exposed in a dusty place. Check the package box of stored product before unfolding. The product should be used up as soon as possible after the package is opened. The unused product should be properly sealed with original package or similar package.



Typical Physical Properties (data not for specification purposes)

Items		Test Method ¹	Units	Typical Value	
Physical	Thickness (w/O pattern Uncured)	ASTM F2251	mm	0.4-0.65	
	Density (Uncured)	ASTM D792	g/cm ³	0.92	
	Tensile (Cured)	MD	ASTM D882	MPa	18
		TD		MPa	16
	Elongation (Cured)	MD	%	960	
		TD	%	810	
Adhesion to Glass		ASTM D903	N/cm	100	
	Water Absorption (Cured)	ASTM D750	wt%	0.12	
Electrical	Volume Resistivity (Cured)	ASTM D257	Ω·cm	1.1 × 10 ¹⁵	
Optical	Transmittance (Cured)	ASTM D1003	%	93	
	UV-Cut Off (Cured)	–	nm	360	
Thermal	CTE (Cured) ¹	ASTM E831	μm/m°C	280	
Durability	UV Resistance (32kWh/m ²)	Internal TM	Δb*	1.4	
	UV Resistance (32kWh/m ²)		ΔT%	0.33	
	Damp Heat Resistance (85% RH, 85°C 1000h)	Internal TM	Δb*	1.0	
			ΔT%	1.8	

¹Contact 3M for additional information on test methods.

Precautionary Information

Refer to Material Safety Data Sheet for health and safety information before using this product. For additional health and safety information, visit www.3M.com/msds or call 1-800-364-3577 or (651) 737-6501.

Gel % of 3M Solar Encapsulant Film EVA9100 after Lamination at 145°C at 300 Seconds Evacuation (or Pump) and 300, 420, 500, 660, 780, 900 Seconds Press.

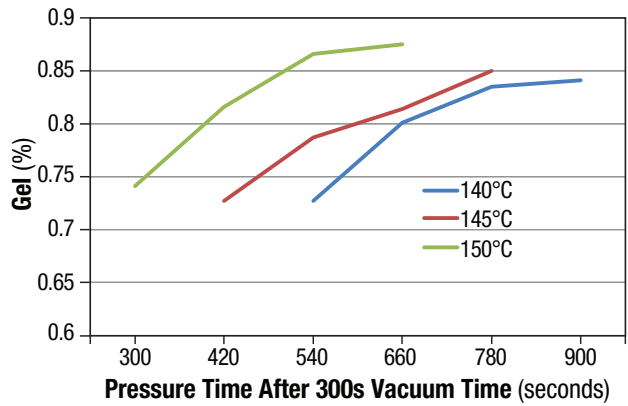


Figure 1: Lamination Conditions vs. Gel

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Spain
34 91 3216000

France
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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

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81 3 3709 8283

Malaysia
603 78062888

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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/solar.

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