



# Saflex® PG41 Solar PVB Encapsulant

New embossed thin-gauge encapsulant optimizes vacuum encapsulation processing

To improve solar panel throughput and yields, Solutia offers an encapsulant designed specifically for solar module manufacturers that use the vacuum encapsulation process. The new product, Saflex PG41, is an embossed PVB encapsulant and marks the latest addition to their fast growing PV encapsulant portfolio.

Embossing is a mechanical technology that creates ‘micro channels’ on the surface of the encapsulant (see inset). These channels provide a quick and efficient manner to remove air during the vacuum encapsulation process.

Solutia pioneered embossing technology during the 1990’s to improve the vacuum encapsulation process for automotive windscreens. Saflex is now leveraging this expertise to bring the benefits of embossing to solar module manufacturers.

Embossing also pulls more air out of the module which improves yields by reducing visual defects due to air bubbles trapped in the encapsulant. This may be especially important for aesthetical applications, including Building Integrated Photovoltaics (BIPV), where optical quality and appearance is a critical product attribute.

Saflex PG41 is based on proven 3G PVB chemistry which was first introduced in 1997. A key attribute of this breakthrough formulation is its retention of adhesion at very high moisture content and its ability to maintain that adhesion at its edges. Test results confirm Saflex 3G PVB to be less moisture sensitive which enables high adhesion especially at the edges, even as environmental conditions, including humidity, fluctuate.

## PRODUCT OFFERING

Product	Thickness	Standard Widths*	Standard Lengths*	Colour	Form
PG41	0.76 mm	111, 132 cm	250 m	Clear	Refrigerated or Interleaved

\* Custom widths and lengths are available.



## SOLUTIA EVA & PVB MANUFACTURING SITES

Solutia is a global leader in specialty chemicals and performance materials. The company focuses on providing solutions for a better life through a range of products used in architectural, automotive, and photovoltaic end markets.

In 2010, Solutia acquired Etimex Solar GmbH to become the world's only single-source supplier of both major encapsulation technologies branded as Vistasolar® EVA and Saflex® PVB. With 100 plus years of combined processing expertise, unmatched manufacturing scale, and a track record of rapid innovation, Solutia provides expert analysis and cutting-edge solutions to the world's leading solar energy companies.

Solutia's is headquartered in St. Louis, Missouri, USA and operates globally with approximately 3,400 employees in more than 50 locations.



## SAFLEX® PG41 - TECHNICAL DATA OVERVIEW

Property	Units	Typical Result	Test Method
Specific Gravity (25°C)	g/cm <sup>3</sup>	1.07	ASTM D792
Specific Heat (50°C)	J/kg·°C	2080	ASTM E1269
Thermal conductivity	W/m·K	0.20	ASTM D5930
Refractive Index	-	1.48	ASTM D542
Total Reflectance	%	---	AirMass 1.5 (400 - 1100nm)
Tensile Strength	kg/cm <sup>2</sup>	>200	JIS 6771
Elongation at Break	%	>200	JIS 6771
Tear Resistance	N	31	ASTM D1004
Adhesion	N/cm	>40	90° Peel Test
	N/mm <sup>2</sup>	>15	Compressive Shear
Bulk Resistivity (0.43% H2O)	Ω cm	1 x 10 <sup>12</sup>	ASTM D257
Surface Resistivity (0.43% H2O)	Ω/sq	2 x 10 <sup>13</sup>	ASTM D257
Coefficient of Thermal Expansion	1/K	1.7 X 10 <sup>-4</sup>	ASTM E831
Normalized Flow (135°C)	µm	160	TMA

## CONTACT

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