



# Saflex® PA27 Radiant White PVB Encapsulant

## 'Ultra thin' encapsulant increases solar module efficiency

Solutia offers a breakthrough solar encapsulant that helps increase the efficiency of the solar module while reducing material usage. The new product, called Saflex® Radiant White PA27, represents a new class of value-added encapsulants designed to help module manufacturers advance the goal of grid parity.

Traditionally, the role of encapsulants is to ensure long term durability and performance of solar panels by protecting critical electrical components from rain, heat, and humidity. The new Saflex Radiant White PA27 continues to provide long term performance while increasing module efficiency by reflecting light back through the module that is not initially absorbed by the active layers.

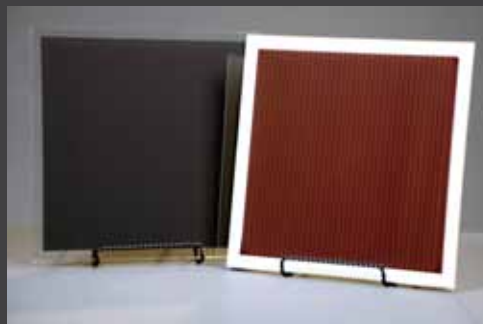
Currently, most solar modules utilize a reflective metallic stack or reflective white coat to redirect light back through the film for improved energy conversion. Saflex PA27 incorporates the reflective benefits provided by these more traditional methods into the encapsulant giving module man-

ufacturers a cost effective solution to increase solar panel efficiency and simplify the manufacturing process.

In addition to its reflective benefits, Saflex PA27 ushers in a new era of electrical insulation with a two-order-of-magnitude increase in bulk resistivity. This equates to significant improvements in the wet insulation resistance of the mod-

ule, resulting in a reduction in current losses to ground and an increase in the power collected from each module.

Saflex PA27 is manufactured to an ultra-thin thickness of 0.51mm compared to standard encapsulants which typically range from 0.76mm to 1.14mm in thickness. Respectively, this equates into a material reduction of 33% to 55%.



Standard Encapsulant      NEW Saflex® Radiant White PA27

Saflex PA27 is based on proven 3G PVB chemistry first introduced in 1997. 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. Saflex PA27 is also IEC certified, UL recognized and RoHS approved. To learn more, please visit [www.saflex.com/PA27](http://www.saflex.com/PA27).

### PRODUCT OFFERING

Product	Thickness	Standard Widths*	Standard Lengths*	Colour	Form
PA27	0.51mm	110 cm	350 m	White	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® PA27 - TECHNICAL DATA OVERVIEW

Property	Units	Typical Result	Test Method
Specific Gravity (25°C)	g/cm <sup>3</sup>	1.16	ASTM D792
Specific Heat (50°C)	J/kg·°C	1950	ASTM E1269
Thermal conductivity	W/m-K	0.20	ASTM D5930
Refractive Index	-	---	ASTM D542
Total Reflectance	%	93.5	AirMass 1.5 (400 - 1100nm)
Tensile Strength	kg/cm <sup>2</sup>	>240	JIS 6771
Elongation at Break	%	>200	JIS 6771
Tear Resistance	N	29	ASTM D1004
Adhesion	N/cm	>70	90° Peel Test
	N/mm <sup>2</sup>	>25	Compressive Shear
Bulk Resistivity (0.43% H2O)	Ω cm	1 x 10 <sup>14</sup>	ASTM D257
Surface Resistivity (0.43% H2O)	Ω/sq	2 x 10 <sup>14</sup>	ASTM D257
Coefficient of Thermal Expansion	1/K	1.6 X 10 <sup>-4</sup>	ASTM E831
Normalized Flow (135°C)	µm	185	TMA

## CONTACT

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