



# Saflex® PA41 High Flow PVB Encapsulant

Thin gauge encapsulant reduces material usage by 33%!

As solar module manufacturers strive to realize cost structures meeting grid parity, Solutia introduces a new polyvinyl butyral (PVB) encapsulant that reduces material usage while maintaining lamination yields and module durability.

The new product, Saflex PA41, is a second generation product designed specifically for photovoltaic applications and reduces encapsulant thickness by 33% (from 1.14mm to 0.76mm). The formulation of the PVB was modified to incorporate 'high flow' characteristics which enable encapsulant thickness to be decreased while ensuring the finished module package continues to meet critical durability and performance requirements.

The new formulation of Saflex PA41 is also less viscous, compared to traditional PVB products, which improves the encapsulant flow around bus bars and other critical components.

To ensure long-term durability, a rigorous testing regimen was developed that included a series of natural and accelerated weathering tests that goes beyond photovoltaic industry standards. Plus, Solutia partnered with module



manufacturers to confirm that handling, processing and throughput of PA41 met or exceeded expectations compared to thicker gauge PVB encapsulants. Saflex PA41 also recently passed IEC 61646 certification testing and is UL recognized.

## PRODUCT OFFERING

Product	Thickness	Standard Widths*	Standard Lengths*	Colour	Form
PA41	0.76 mm	134, 264 cm	250, 450, 500 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® PA41 - 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	240	TMA

## CONTACT

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