



**KNACK ENERGY Pvt. Ltd.**

Empowering the future...

## **Solar PV Encapsulant**

### **KNACK POE**

**It is a PID and snail trails resistance, UV and weather stable POE solar PV Encapsulant. It has wide process window, proven for glass to glass solar modules. It can be used for single stage as well as short cycle multi stage lamination processes**

 **UL File No - E527726**



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# KNACK POE

## PROPERTIES

Particulars	Test Method	Unit	Values
Thickness	ASTM D 6988 - 21	mm	0.45 to 0.8 $\pm$ 5%
Width	Scale	mm	Up to 1400
Melting Point	ISO 11357 - 3	$^{\circ}$ C	70 $\pm$ 5
Surface type	Visual		Orange peel
Tensile Strength	ASTM D 882-18	MPa	12 $\pm$ 3
Elongation	ASTM D 882-18	%	$\geq$ 500
Shore Hardness	ASTM D 2240-15	Shore - A	70 $\pm$ 5
Water Absorption	ISO 62 - 2008	%	$\leq$ 0.1
Adhesion to Glass	ASTM D 903	N/cm	$\geq$ 75
Adhesion to Back sheet	ASTM D 903	N/cm	$\geq$ 75
Thermal Shrinkage	ISO1150 (160 $^{\circ}$ C, 5 min. on Glass Plate)	%	$\leq$ 2
Optical Transmittance	ASTM E 424	%	$\geq$ 90
UV Cut Off Wavelength	ASTM E 424	nm	UV Transparent
Refractive Index	ISO 489		1.48
Dielectric Strength	ASTM D149	kV/mm	$\geq$ 25
Volume Resistivity	IEC 62788-1-2	Ohm.cm	$\geq$ 1 $\times$ 10 <sup>16</sup>
Gel Content	IEC 62788-1-6	%	$\geq$ 70
<b>Lamination Parameters</b>	<b>Single Stage</b>	<b>Double Stage (Stage 1)</b>	<b>Double Stage (Stage 2)</b>
Evacuation Time (Minute)#	4 - 6	4 - 6	
Lamination Time (Minute)	8 - 15	2 - 4	6 - 9
Temperature ( $^{\circ}$ C)*	145 - 165	145 - 165	145 - 165

\*Temperature and #Vacuum to be uniformly maintained across the laminator. #Vacuum to be applied at -760 mm Hg, Periodic calibration of the machine input parameters to be done by Machine user.

### Packing:

- Length/Roll: 130/150meter
- No. of Rolls/Pallet: 9/12
- Total Linear Meters/Pallet: 1560/1800
- Each roll is sealed in a protective bag in corrugated box
- Boxes are strapped on suitable pallets

### Storage Condition and Shelf Life:

- Store in undamaged original packaging, temperature between 20 $^{\circ}$ C- 30 $^{\circ}$ C and humidity between 40-60% RH
- Recommended use within 9 months from date of manufacture
- Consume within 12 hrs. once opened from original packing

**Note:** The above technical information represents the typical range of properties and is believed to be correct as on date. We recommend the user to carry out intensive trials to test suitability of this product and module laminating conditions. Knack gives no warranty and assumes no liability in connection with any use of this information.