



KNACK ENERGY PVT. LTD.

Empowering the future...

Solar PV Encapsulant

KNACK 360 PFC

It is a fast cure PID and snail trails resistance, UV and weather stable EVA solar PV Encapsulant. It has wide process window, proven for single stage as well as short cycle multi stage lamination processes. This Encapsulant can be used for all Crystalline and many Thin-Film PV Modules. It has standard UV cut off wavelength.



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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 2
Surface type	Visual		Orange peel
Tensile Strength	ASTM D 882-18	MPa	15 \pm 3
Elongation	ASTM D 882-18	%	\geq 600
Shore Hardness	ASTM D 2240-15	Shore - A	70 \pm 5
Water Absorption	ISO 62 - 200805	%	\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	ISO11501 (160 $^{\circ}$ C, 5 min. on Glass Plate)	%	\leq 2
Optical Transmittance	ASTM E 424	%	\geq 91
UV Cut Off Wavelength	ASTM E 424	nm	360 \pm 30
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 ¹⁵
Gel Content	IEC 62788-1-6	%	\geq 80
Lamination Parameters	Single Stage	Double Stage (Stage 1)	Double Stage (Stage 2)
Evacuation Time (Minute)#	4 - 6	4 - 6	
Lamination Time (Minute)	8 - 12	2 - 4	6 - 9
Temperature ($^{\circ}$ C)*	135 - 150	135 - 150	135 - 150

*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: 150 meter
- No. of Rolls/Pallet: 9/12
- Total Linear Meters/Pallet: 1350/1800
- 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 24 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.