

ALISHAN EPE ENCAPSULANT



GREEN ENERGY PVT. LTD.

Alishan EPE is multilayer coextruded film of EVA-POE manufactured by Alishan Green Energy with the cutting edge manufacturing facility. Alishan EPE is suitable for TopCon, PERC and HJT technologies for M10 or G12 configurations. Alishan EPE ensures acid free environment inside the module and hence provides excellent suitability with any metal grid.

Product	Alishan EPE			
Linear meter	Up to 300 meters			
Width	Up to 1350 mm			
Thickness	Up to 0.80 mm			
Properties	Description	Standard	UOM	Alishan EPE
Physical properties	Tensile strength	ASTM D 638	MPa	12 ± 3
	Elongation		%	≥ 600
	Adhesion with Glass	ASTM D 903	N/cm	≥ 75
	Adhesion with Backsheet		N/cm	≥ 75
Thermal Property	Thermal Shrinkage	160 Deg C / 5 min	%	MD ≤ 3
				TD ≤ 1
Water Ingress	WVTR	ASTM F 1249	g/m².day	< 5
Electrical Property	Volume resistivity	ASTM D257-14	Ohm. cm	>1×10 ¹⁵
Gel content		ASTM D 2765	%	> 75
Optical Properties	Transmittance	ASTM E 424	%	≥ 91
	Yellowness Index		-	< 2
Lamination Parameters			UOM	Values
	Vacuum / Evacuation Time		Minutes	5 – 8
	Lamination / Pressing Time		Minutes	10 – 14
	Lamination Temperature		°C	120 – 150



RELIABILITY DATA OF ALISHAN EPE

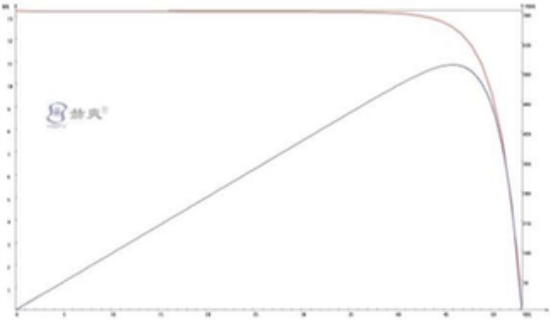
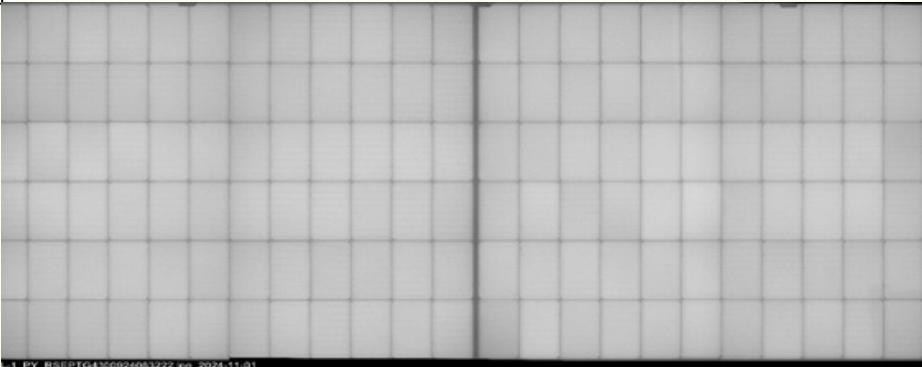
Ageing	Standard	Parameters	Value
DH 3000 hours 85% RH, 85°C	IEC 62788-2	Peel strength with Glass	> 50 N/10 mm
		Peel strength with Backpro-KPC	> 50 N/10 mm
		Peel strength with Backpro-KPC-T	> 40 N/10 mm
		Transmittance	> 91 %
		Yellowness Index	< 3
UV 180 kWh/m ²	IEC 62788-2	Peel strength with Glass	> 60 N/10 mm
		Peel strength with Backpro-KPC	> 50 N/10 mm
		Peel strength with Backpro-KPC-T	> 40 N/10 mm
		Transmittance	> 91 %
		Yellowness Index	< 2
PID Resistance	IEC 62804	Power degradation	<2%

RELIABILITY DATA OF ALISHAN EPE

(PID performance with Topcon cells)



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3rd Cycle Results – ElectricalParameter & Electroluminescence (EL) Images					
Voc (V)	53.24	FF (%)	81.92		
Isc (A)	13.23	Efficiency (%)	22.34		
Vmp (V)	45.61	Rseries / Rshunt (Ohm)	0.27/535.81		
Imp (A)	12.65	Cal. ID (& Power)	RSEPT2060224003193 (576.65 Watt)		
Pmax (W)	576.78	Control ID (& Power)	RSEPT2060224000792 (577.51 Watt)		
IV Curve		Electroluminescence (EL) Image			
File Name: RSEPTG4300924083222.PDF Date Created: 08-11-2024 HSPV Solar Simulator Version 11 					
Visual Inspection Result after 3rd Cycle: No defects found.					
Wet Leakage Test Data – Final					
Measured Value	6033 MΩ	Pass Criteria	≥ 40 MΩ.m^2	Result	PASS
Power degradation after PID test					
Total Power Degradation in Watt : 3.60 Watt in % : 0.62 %				Criteria	Result
				≤ 5 %	PASS

Packing

The EPE rolls are wound a standard 3 inches (inner diameter) paper core, the standard length of EPE film in a roll is up to 300 meters. Each roll was wrapped in polyethene film and placed in a carton box and 9 boxes are placed in a pallet.

Storage

Must be stored in a dry and temperature of $\leq 30^\circ\text{C}$ and humidity $\leq 60\%$, the shelf life of this product is 5 months from the date of manufacturing.

