

Dr. HANS WERNER CHEMIKALIEN®
EPE (EVA-POE-EVA) FILM
For Encapsulating Solar PV Panels
EPEU307 & EPET306 GRADES
PRODUCT SPECIFICATION



Excellent Anti PID Performance



High Insulation



Outstanding Adhesion



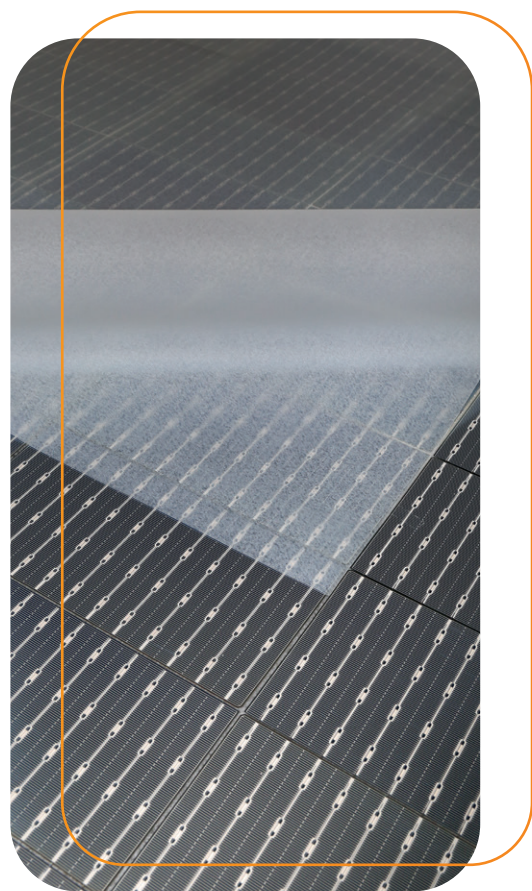
Excellent UV Protection



Better Cross-linking Speed



**Excellent Weatherability and
Long Term Reliability**



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EPE Film Encapsulate Technical Specification (Dr. HWC-EPEU307 - EPET306 Grades)

Properties	Unit	Test Method	Value	
			EPEU307	EPET306
Total Thickness (Tolerance: $\pm 0.05\%$)	mm	DR. HWC method	0.40 ~ 0.90	
Total Width	mm	Scale	Up to 1300	
Thermal Shrinkage (MD)	%	On solar glass (3 min, 125°C)	≤ 3	≤ 3
Thermal Shrinkage (TD)	%	On solar glass (3 min, 125°C)	≤ 1	≤ 1
Water Vapor Transmission	g/m ² /24h	ASTM F1249	≤ 5	≤ 5
UV Resistance (300kWh/m ²)	ΔYI	ASTM G154	≤ 4	≤ 4
Humidity and Heat Resistance	ΔYI	ASTM E313	≤ 4	≤ 4
Degree of Cross-linking (Gel Content)	%	Soxhlet Method Lamination (14 min, 145°C)	≥ 75	≥ 75
Adhesion to Glass (With Backsheet)	N/cm	ASTM D 903	≥ 80	≥ 80
Adhesion to Backsheet	N/cm	ASTM D 903	≥ 80	≥ 80
Ultimate Elongation (Cured)	%	ASTM D 638	≥ 600	≥ 600
Tensile Strength (Cured)	MPa	ASTM D 638	≥ 10	≥ 10
Optical Transmittance (380nm-1100nm)	%	ASTM D1003	≥ 91	≥ 91
UV Cut-off Wave Length	nm	DR.HWC method	340-360	UV transparent
CTI (Comparative Tracking Index)	Volt	IEC 60112	≥ 600	≥ 600
Component Power Loss	%	IEC G2804	≤ 5	≤ 5
Dielectric Strength	kV/mm	ASTM D149	≥ 25	≥ 25
Volume Resistivity (Cured)	$\Omega \cdot \text{cm}$	ASTM D 257	$\geq 1 \cdot 10^{15}$	$\geq 1 \cdot 10^{15}$
Refractive Index	-	ISO 489	1.48	1.48

Lamination Recipe

Lamination Parameters	Unit	First Chamber	Second Chamber
Temperature	°C	120 - 130	145 - 150
Vaccum Time	min	4 - 6	4 - 6
Lamination Time	min	8 - 12	8 - 12
Pressure	kPa	-70 -50 -25	-70 -50 -25

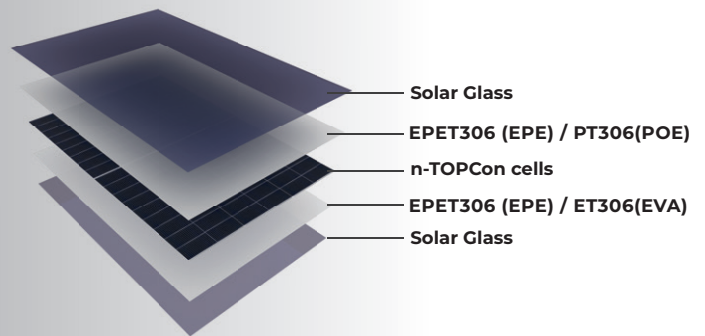
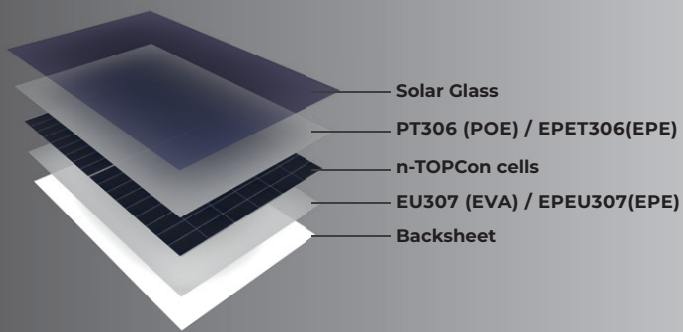
Note 1: In the actual lamination process, the crosslinking degree reaches the design value and the component yield is high as a guide, which is adjusted according to the actual working condition onsite.

Note 2: It is recommended to use it up within 48 hours after opening of the original packing.

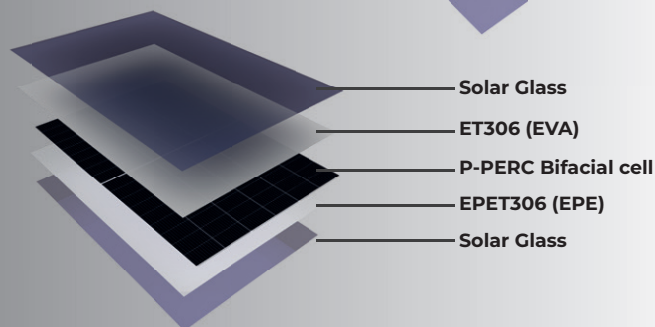
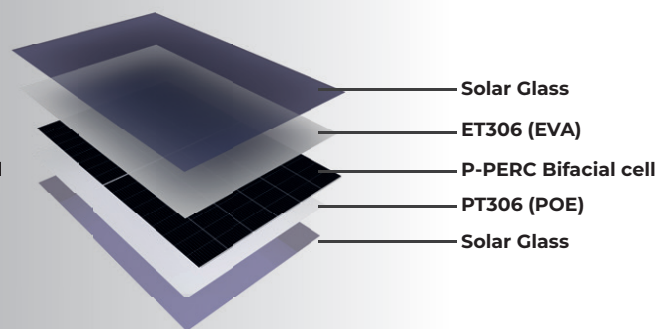
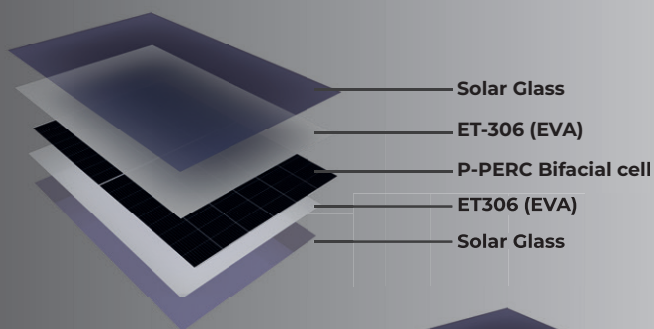
Note 3: These are typical laboratory values that may change depending on the cure conditions as well as the test conditions and methods.

UL Certification File Number: E531674

N-Topcon Modules



P-PERC Bifacial Glass-Glass Modules



P-PERC Bifacial Glass-Backsheet Modules

