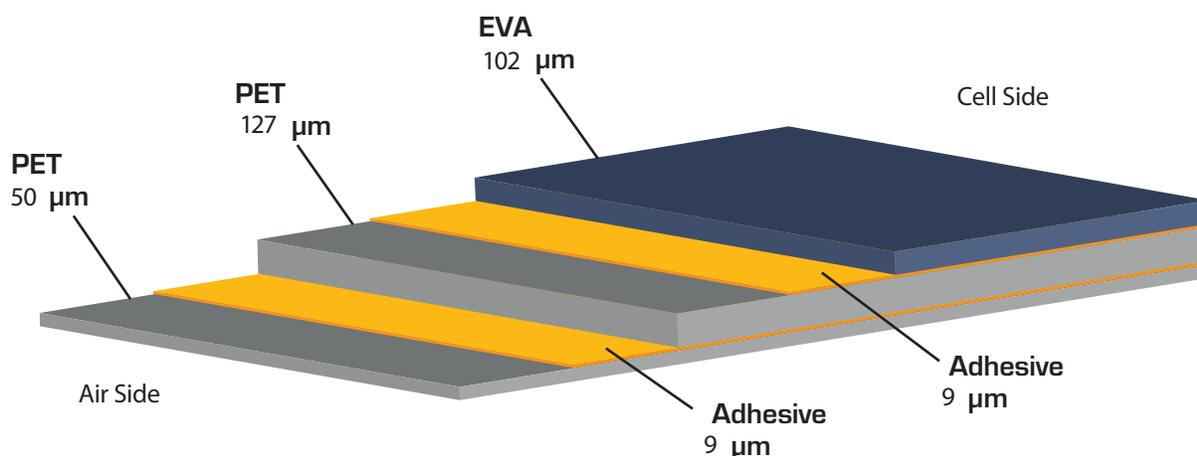


## FLEXcon multiGUARD® PPE 11 Backsheet Series

FLEXcon multiGUARD® PPE W11 • FLEXcon multiGUARD® PPE WB11



FLEXcon's multiGUARD® brand, a range of backsheets for photovoltaic modules, stands for multiple guarding properties – engineered to protect against moisture and humidity and provide superior partial discharge and high voltage insulation for proper functioning of the module. FLEXcon's line of backsheet products are designed to meet required standards and regulations.

FLEXcon multiGUARD® PPE 11 Series are multi-layered backsheet laminates– PET / PET / EVA - available in two color options: W11 (White) and WB11 (White/Black), that exceed 1,000 volts in the IEC partial discharge test as measured by TÜV and are UL recognized according to the QIHE2 standard\*. The PPE 11 Series constructions have excellent laminate bond strength and are designed to maintain a superior bond to most standard fast- and ultra-fast cure encapsulants.

FLEXcon is an innovator in wide-web, roll-to-roll coating, laminating and finishing of polymeric materials with expertise in bonding, barrier, electronics and graphics. We are an ISO 9001:2008 and NEN-EN-ISO 9001:2008 certified manufacturer. Our manufacturing, distribution and warehousing facilities in Europe and North America allow us to offer an uninterrupted supply of backsheet protective laminates and complimentary pressure-sensitive products of all types.

\*FLEXcon UL file number E318502.

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Physical Properties	Value	Test Method
Damp Heat Exposure	> 2000hrs	IEC 61215 (85°C/85% RH)
Maximum System Voltage	> 1000 VDC	IEC 61730-2; IEC 60664-1
Breakdown Voltage	19.63 kV	IEC 60243-1
Bond Strength (Internal)	> 5 N/cm	ASTM D903; D1876
Bond Strength to Encapsulant <sup>1</sup>	> 40 N/cm	ASTM D903
MVTR	1.8 g/m <sup>2</sup> /day	ASTM F1249 (38°C/90% RH)
Thickness (Total Laminate)	297µm ± 10%	ASTM D1593
Specific Gravity	1.25	ASTM D1505
Tensile Strength	MD 81 N/mm <sup>2</sup> TD 107 N/mm <sup>2</sup>	ASTM D882
Tensile Elongation	MD 110% TD 93%	ASTM D882
Tensile Modulus	MD 742 N/mm <sup>2</sup> TD 858 N/mm <sup>2</sup>	ASTM D882
Shrinkage	MD < 1.5% TD < 1.0%	ASTM D1204 (150°C/30min)

We strongly recommend thoroughly testing the backsheet under the actual application conditions, including adhesion of the junction box to the backsheet.

<sup>1</sup> Results may vary based on encapsulant



Precisely Right.



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