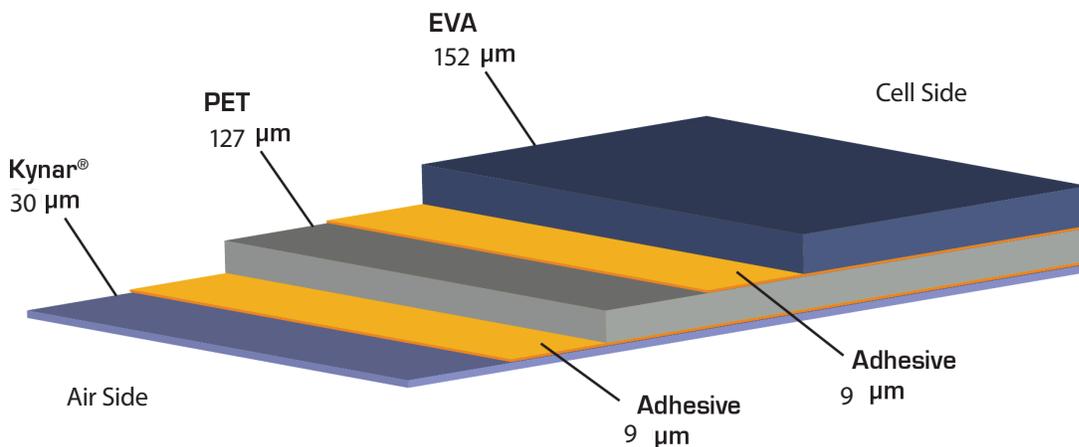


FLEXcon multiGUARD® KPE 12 Backsheet Series

FLEXcon multiGUARD® KPE W12 • FLEXcon multiGUARD® KPE WB12



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 stringent industry standards and regulations.

FLEXcon multiGUARD® KPE 12 Series are multi-layered backsheet laminates – Kynar®** / PET / EVA – available in two color options: W12 (White) and WB12 (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**. KPE 12 Series has excellent laminate bond strength and is designed to maintain a superior bond to encapsulants. KPE W12 is featured on Spire’s newly recommended BOM that is composed of high quality and readily available materials. Following a recommended BOM helps fast track UL certification, cutting time and cost.

This construction is a 12.0 mil backsheet that offers the unique performance advantage of Kynar film for ultimate protection against weather. It features a polyester inner layer which provides optimum electrical insulation and promotes ease of handling through the module manufacturing process, and an EVA layer which provides optimum adhesion to 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.

*Kynar® is a registered trademark of Arkema Inc.

**FLEXcon UL File #318502.

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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	20.93 kV	IEC 60243-1
Bond Strength Internal	> 5 N/cm	ASTM D903; D1876
Bond Strength Encapsulant ¹	> 40 N/cm	ASTM D903
MVTR	2.0 g/m ² /day	ASTM F1249 (38°C/90% RH)
Thickness (Total Laminate)	328µm ± 10%	ASTM D1593
Specific Gravity	1.2	ASTM D1505
Tensile Strength	MD 73 N/mm ² TD 81 N/mm ²	ASTM D882
Tensile Elongation	MD 367% TD 193%	ASTM D882
Tensile Modulus	MD 641 N/mm ² TD 760 N/mm ²	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.

¹ Results may vary based on encapsulant



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