

dnpSolar Back Sheet: **VEW15**



dnpSolar Back Sheet materials are designed to provide long lifetime to photovoltaic modules. The dnpSolar Back Sheet PV-BS VEW15 is a laminated film composite made of a layer of hydrolysis & UV resistant PET and a layer of Olefin.

This sandwich results in a good quality product in terms of reliability and UV stability

Photovoltaic modules laminated with dnpSolar Back Sheet's materials have been successfully tested by several module manufacturers and satisfy with external certification institutes.

| PV-BS VEW15 | Test method | Unit | Test Conditions | Value |
|--|--|------------------------------|---------------------------------|-----------------------------|
| > Material Properties Material Composition | | | | HR-PET/Olefin |
| > Basic Properties Colour Thickness | JIS-K7130 | mm | | White 0,23 |
| > Physical Properties Tensile Strength | UL746A + ISO 527-3 JIS-K7127 + ASTM D 882-09 | MPa | | 92 |
| Tensile Elongation | UL746A + ISO 527-3 JIS-K7127 ASTM D 882-09 | % | | 90 |
| Water Vapor Permeability Thermal Shrinkage | JIS-K7129 JIS-C2151 | g/(m ² *day) % | 40°C , 90% RH 150°C, 30 min. | 1.80 MD = 0,8 / TD = 0,4 |
| > Electrical Properties Breakdown Voltage | ASTM D 149 + IEC60243-1 | kV | | 20,7 |
| Partial Discharge Voltage | IEC60664-1 | VDC | | 1010 |
| > Adhesion Properties Adhesion Strength to (EVA) | UL746A + ISO 527-3 JIS-K7127 + ASTM D 882-09 | N/15mm | 150°C, 15 min. | ≥ 100 |
| > Flameability Properties Maximum Flame Spread Index | ASTM E 162a | | | Passed test |
| > UV Properties UV Resistance | UL746C | | | Passed test |

This information does not represent a specification.

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dnpSolar is a business unit within dnp denmark focussing on servicing the European market for Solar energy. dnpSolar is thus a part of Dai Nippon Printing Co. Ltd. (DNP), the worlds largest general printing company and the direct link to the DNP Energy Division where all development and manufacturing of materials for solar cells take place. Established in 1876, with more than 40.000 employees and with net-sales of more than 14 billion EUR, DNP has a proven track record of constant development and ground braking innovations in multiple business areas. Within recent years DNP has invested heavily in the development of components for green energy manufacturing including high-tech plastic sheets for solar cells. dnpSolar will market these product on the European market on behalf of DNP.