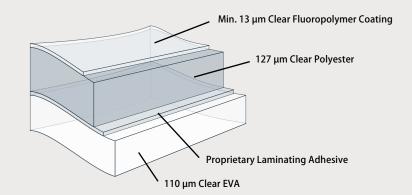


Madico's Transparent Backsheets for Bifacial Modules and BIPV

MATERIAL COMPOSITION

| TEST: | |
|-------------------------------|---------------------------|
| Thickness* | 255 μm |
| Width Range | 51 - 1700 mm |
| Weight | 310 g/m ² |
| Density | 1.18 g/cm ³ |
| Coating Color (air side) | Clear |
| EVA Color Options (cell side) | Clear |
| FLUOROPOLYM | ER COATING/PET/EVA |



TECHNICAL CHARACTERISTICS

| TEST: | TEST SPECIFICATION(S): | RESULTS: |
|------------------------------------|---|-----------------------------|
| Tensile Strength at Break (MD) | Internal Testing – Data Available | 100 MPa (MD) / 113 MPa (TD) |
| Elongation at Break (MD) | Internal Testing – Data Available | 140% (MD) / 130% (TD) |
| Dimensional Stability | 150°C for 30 min; Internal Testing – Data Available | ≤ 1% |
| EVA Peel Strength from Encapsulant | Internal Testing – Data Available | ≥ 40 N/cm |
| Peel Strength of Layers | PET / EVA | ≥ 5 N/cm |
| Relative Thermal Index (RTI) | Suitable for continuous use at 85°C | 105°C |

WEATHERABILITY TESTING PERFORMANCE

| TEST: | TEST SPECIFICATION(S): | RESULTS: |
|----------------------|-------------------------|--|
| Damp Heat Testing | 85°C, 85% RH; IEC 61215 | ≥ 1000 Hours |
| Heat Freeze Humidity | UL 1703; >10 cycles | >70% of initial mechanical properties retained |
| UV Stability | UL 746C | ≥ 2000 Hours |
| MVTR | ASTM F1249 | ≤ 2.5 g/m² per day |

ELECTRICAL INSULATION TESTING PERFORMANCE

| TEST: | TEST SPECIFICATION(S): | RESULTS: |
|----------------------------------|------------------------|------------|
| Partial Discharge | IEC-60664, IEC-61730 | ≥ 1000 VDC |
| Dielectric Strength | ASTM D149 | ≥ 18 kV |
| Comparative Tracking Index (CTI) | IEC 60112 | 600 Volts |

FLAME RESISTANCE TESTING PERFORMANCE

| TEST: | TEST SPECIFICATION(S): | RESULTS: |
|---------------------------------|------------------------|----------|
| Flame Spread Index | ASTM E162 | 85 |
| High-current Arc Ignition (HAI) | UL746A | PLC 1 |

OPTICAL CLARITY TESTING PERFORMANCE

| TEST: | TEST SPECIFICATION(S): | RESULTS: |
|----------------------------------|--|----------|
| Visible Light Transmission (VLT) | 400 nm-1200 nm; BYK Gardner HazeGuard plus | ≥ 90% |
| Haze | BYK Gardner HazeGuard plus | 7% - 12% |

^{*}Theoretical nominal

This product is covered by one or more U.S. patents and pending U.S. and other patent applications. Please see www.madico.com/patents Typical Data – Not Specification



TUV / VDE PD Cert.

Madico PhotoVoltaic Backsheets 64 Industrial Parkway Woburn MA, 01801 USA Phone: 1-800-633-0140 Fax: 1-781-935-6841 Email: InfoSF@madico.com www.madicopv.com