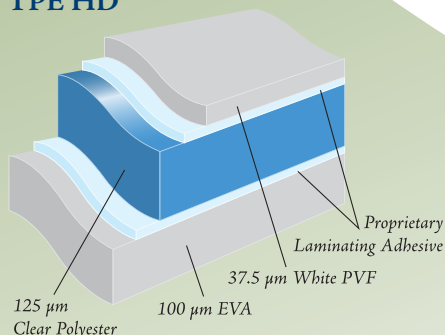


# Madico TPE HD

## TPE HD



## Advantages of TPE HD

- Superior dielectric strength
- Exceeds IEC 60664-1 specification
- Improved aesthetics

## Material Composition

### PVF/PET/EVA

Thickness	277 ± 42 µm
Width Range	25 - 1,830 mm
Weight	330 g/m <sup>2</sup>
Density	1.2 g/cm <sup>3</sup>
PVF Colors	Clear, White, Charcoal, Custom
EVA Colors	Clear, Bright White, Blue, Black, Custom

## Stability Characteristics

### Tensile Strength at:

Break (MD)	92 MPa
Break (TD)	108 MPa
Elongation at Break (MD/TD)	144%/110%
Dimensional Stability (MD/TD)*	<1%
EVA Peel Strength from	
EVA Encapsulant	≥70 N/cm
MVTR	≤4 g/m <sup>2</sup> x day <sup>*2</sup>
Partial Discharge	≥1000 VDC <sup>*3</sup>

\* 150C for 30 min

<sup>\*2</sup> ASTM F1249

<sup>\*3</sup> IEC 60664-1

Typical Data – Not Specification

## Description

TPE HD is a multi-layered laminate designed as a backing sheet for photovoltaic solar panels. The lamination acts as a durable barrier for panel shaped electronics that undergo heat and vacuum lamination. The HD designation represents high dielectric performance. TPE HD exhibits superior partial discharge and electrical insulative properties. Specifically, it exceeds 1,000 volts in the IEC partial discharge test as measured by TUV Management Service. In addition, the design maintains a high bond strength to the encapsulant.

## Available in our patented Bright White Power Boosting Technology

The bright white characteristic of the EVA layer is proven to reflect a portion of light which falls into the spaces between the cells back onto the cell for conversion. The EVA compound with white pigments and fluorescent agents allow for the 1-5% boost in panel power.

## Dielectric Bond Technology



Madico has pioneered a more cost-effective and higher performing backsheet construction we call Dielectric Bond Technology (DBT) which eliminates the interior layer of PVF. Compared to the standard PVF/Polyester/PVF design, our innovative construction dramatically increases the laminate's bond strength, power output and insulation against electrical discharge.



64 Industrial Parkway, Woburn, MA 01801  
P: 800 633 0140 / 781 935 7850  
F: 781 935 6841  
[www.MadicoPV.com](http://www.MadicoPV.com)



The performance representations and suitability in this Data Sheet are based on testing accomplished by Madico or its agents. Since only the manufacturer of the panel is aware of the specific manufacturing processes and conditions which the product will undergo during assembly of the PV solar panels, and of the specific conditions in which the product will be ultimately be used, it is the manufacturer's responsibility to determine whether the product is suitable for its intended end-use.

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