



## Snow Load Tolerances with the *SolaTrim* Solar Protection Barrier

Snow load build-up will occur behind solar panel systems with the SolaTrim protection barrier installed when used in North American regional climates with heavy seasonal snowfall. **SolaTrim** was engineered to withstand the “worst case” snow load scenario of wet snow/ice on a pitched roof with low surface tension.

Snow loads vary from dry snow (3 lbs/sqft) to wet snow/ice (21lbs/sqft)†. Tests have shown that **SolaTrim** solar protection barrier Model ST-001 can withstand 7.5 oz weight per square inch of surface\* or 67.5lbs/sqft.

When considering worst case conditions, the roof material with the least surface tension is a standing-seam metal roof (wood shingle, composition, and tile roofs are materials with high surface tension).‡ The highest pitched roof type provides the “worst case” equation, therefore a 12/12 pitch (45°) is used in calculating this tolerance.

Snow loads under these scenarios show a pressure of 2.5 oz/sq in\*\* on the SolaTrim panel, only 33% of the total **SolaTrim** Model ST-001 tolerance (7.5 oz/sq in.)

The 3M VHB adhesive tape used on **SolaTrim** Model ST-001 (applied as directed) provides a continuous weld between substrates and is rated for long term exposure at -40° Fahrenheit.††

This demonstrates that **SolaTrim** solar protection barrier Model ST-001 can withstand “worst case” snow load conditions on residential rooftop solar installations.

\* SolaTrim LLC testing of physical failure of Model ST-001 shows up to 7.5 oz. solid weight per square inch.

† FEMA “Snow Load Safety Guidelines” lists 3 lb. to 21 lbs. for snow load direct vertical weight.

‡ Engineering Edge “Sloped Roof Snow Load Calculations” lists ½ snow load factor at 45° pitch

\*\* Engineering Edge lists smooth metal roofs as slippery and not composition, wood or tile roofs.

†† 3M VHB Tapes Technical Data October 2014