



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, composition, and tile roofs are not considered slippery).‡ This 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 indicate pressure of 2.5 oz/sq in** on the SolaTrim panel, less than 33% of the total SolaTrim Model ST-001 tolerance (7.5 oz/sq in.)

The 3M VHB adhesive tape used on Model ST-001 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