



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 models 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 tolerance** (7.5 oz/sq in.)

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

Additionally, it is advised that **SolaTrim** panels be installed ¼” to ½” *below* level to the solar panel systems top edge, allowing accumulated snowfall to freely move over the edge of the panels without added tension placed on the adhesion point of the SolaTrim panel to the system.

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

* SolaTrim LLC testing of physical failure 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