

Plasti-Fab Design Manual

Sloped Roofing Insulation





PlastiSpan™ Insulation

Sloped Roof Insulation

Plasti-Fab PlastiSpan sloped roof insulation provides the required positive slope to drain while retaining the structural and economic advantages provided by a flat roof deck. PlastiSpan sloped insulation board can be used for new and maintenance roofing projects of all sizes and is suitable for use with all types of roofing systems. Because PlastiSpan sloped insulation board is an expanded polystyrene (EPS) insulation, design thermal resistance values provided are not subject to thermal drift.

Calculation of Thermal Resistance for Sloped Insulation

The average thermal resistance for a sloped insulation layout is calculated as the value for the average insulation thickness over the entire roof. The average thermal resistance value provides a reasonable estimate of the thermal performance of the insulation component in the roof assembly.

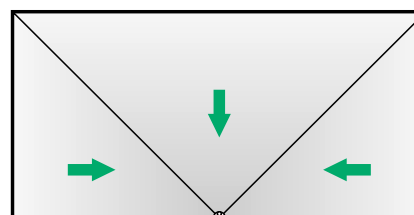
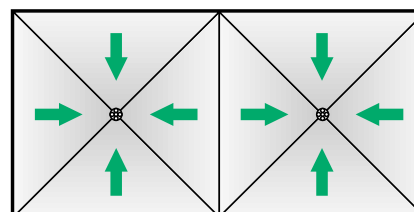
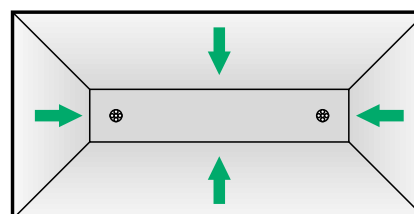
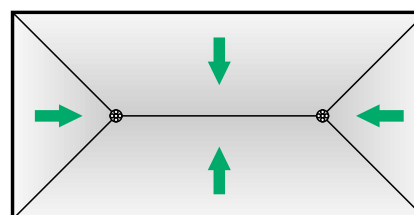
Slope to Drain

PlastiSpan sloped roof insulation is available with slopes of 1/2%, 1%, 1-1/2%, 2%, 3%, 4%, and 8% per metre (per foot). Normally, ridges and valleys necessary to provide correct drainage are supplied at 45° increments to the horizontal, however, custom angles can also be provided, if necessary.

Insulation boards are laid in a predetermined pattern using 1200 mm x 1200 mm (4 ft x 4 ft) boards to provide slope to interior drains or scuppers at the edges of the building. Even the prefabricated corners for the change of slope are provided using 1200 mm x 1200 mm (4 ft x 4 ft) boards in order to maintain uniformity in the layout.

Computer Designed Sloped Insulation Layouts

As a service to its customers, Plasti-Fab will provide sloped insulation layouts designed on a customized computer program. The Plasti-Fab computerized design process allows alternate insulation slope and drain layouts to be quickly evaluated, thus ensuring the most efficient and cost effective sloped insulation layout is provided.



Typical Drainage Patterns

Application

General application recommendations can be found in the PlastiSpan brochure "Roof & Deck Insulation: Selection, Application and Specification."

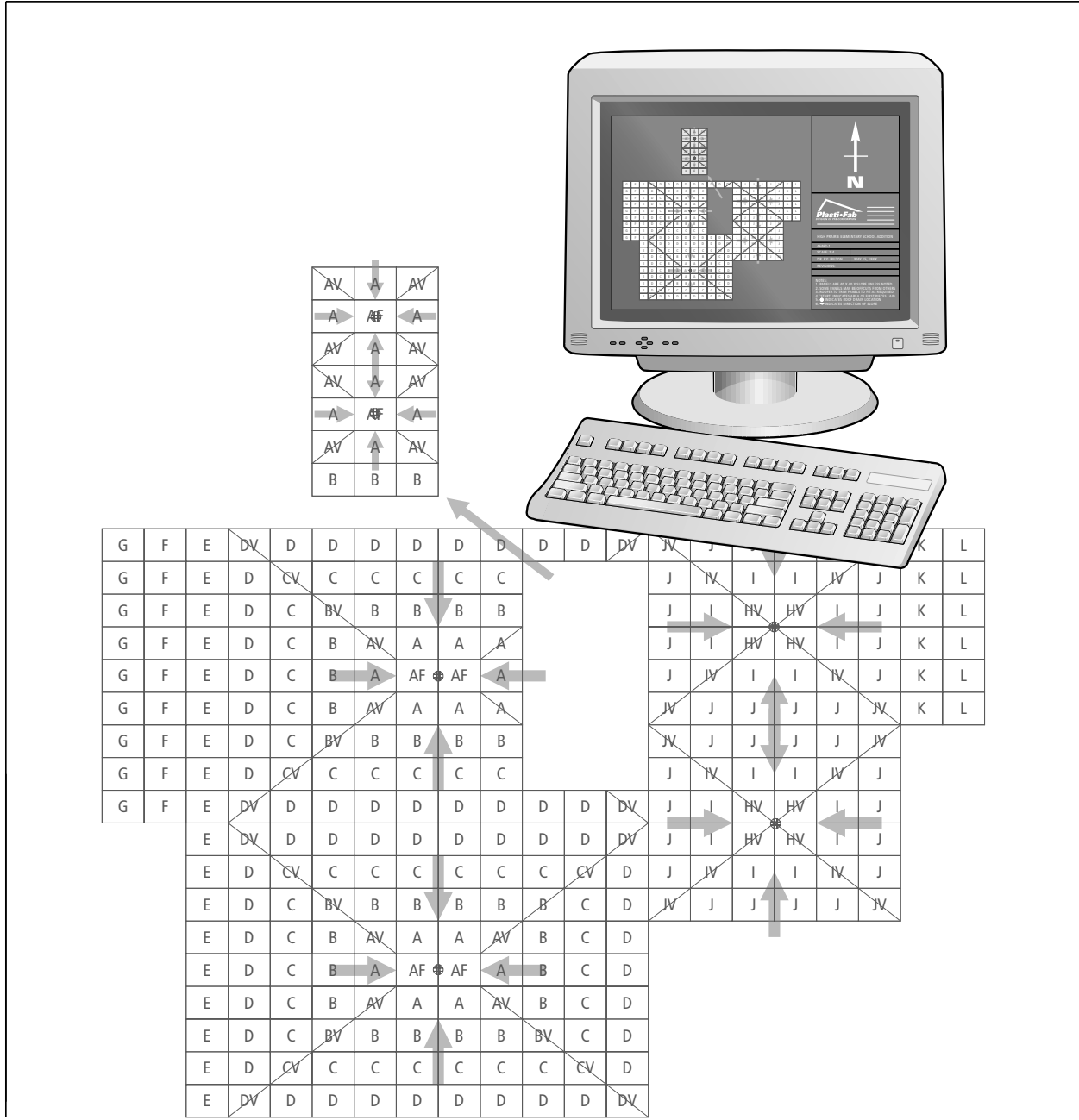
A minimum slope of 2% or 20 mm per metre (1/4" per foot) is recommended to provide adequate drainage.

Specification

An outline for a recommended specification section can be found in the PlastiSpan brochure "Roof & Deck Insulation: Selection, Application and Specification."

PlastiSpan roofing insulation can be supplied as sloped boards. Plasti-Fab will supply layouts for each sloped insulation project to assure proper slope of the membrane. Insulation is to be sloped to provide drainage as shown on drawing. Sloped insulation layout drawings are to be approved prior to installation.

PlastiSpan Sloped Insulation Design System



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