INSULATION REQUIREMENTS FOR COMMERCIAL BUILDINGS - METAL ROOF APPLICATIONS

Specification Guide for Thermal Insulation

Insulation, correctly specified and installed is one of the most critical products in improving energy efficiency.

PermaStop® glasswool blanket incorporates a factory laminated vapour barrier (*Facing FoilTM*) to protect against condensation. *PermaStop®* is to be used anywhere the building is, or may be at any time in the future, air-conditioned; where greater thermal performance is required; and/or where acoustic performance is required.

In non air-conditioned buildings correctly installed *Antiblaze®* sarking membranes will provide protection against heat gain, wind, dust, and rain.

Roof - Air-conditioned Buildings.

- 1. The material shall be *PermaStop®*, *R1.8*, *R2.5* or *R2.8* Blanket. The insulation material shall be dry when installed and kept dry.
- 2. a) For purlin spans up to 1200mm:

"Install wire mesh or the appropriate *Antiblaze*[®] as a support membrane across purlins. The support membrane shall be dished to maintain the insulation thickness to ensure insulation performance. The support membrane shall be fixed between purlins in accordance with the following:

PermaStop® R1.8 - dish minimum 75mm PermaStop® R2.5 - dish minimum 90mm PermaStop® R2.8 - Dish minimum 120mm

b) For purlins above 1200mm centres:

"Install supporting wire mesh as above. If specified *Antiblaze®* may also be installed *over* installed supporting wire mesh.

- 4. Roll out PermaStop[®] blanket on top of the installed supporting membrane. Lay PermaStop[®] with the Facing Foil[™] on upper (warmer) side. Firmly butt edges of glasswool insulation together ensuring there are no air gaps.
- 5. Seal Facing Foil[™] overlaps with *Vapastop*[®] 883 pressure sensitive aluminium tape applied in accordance with the manufacturers specifications.



Roof - Non Air-conditioned Buildings

Where a building is not air-conditioned and acoustic insulation is not considered necessary, the installation of *Antiblaze®* will provide protection against heat gain, wind, dust, and rain.

- 1. The insulation material shall be *Antiblaze*[®] 760, 990, or *Whitecap*[®] fire retardant building foil.
- 2. Where required install supporting wire mesh across purlins. The wire mesh shall be dished a minimum 40mm and fixed between purlins.
- 3. Lay Antiblaze® over supporting wire mesh starting at eaves and overlap each row a minimum 150mm.

Refer to AS/NZS 4200.2 if further installation details are required.



Manufactured by Tasman Insulation New Zealand Limited under an ISO9001 Certified Quality Management System Tasman Insulation New Zealand Limited

9-15 Holloway Place, Penrose, Auckland, New Zealand. Phone: +649 579 6789 Fax: +649 567 5130 www.tasmaninsulation.com info@tasmaninsulation.com





INSULATION REQUIREMENTS FOR COMMERCIAL BUILDINGS - METAL ROOF APPLICATIONS

Specification Guide for Acoustic Insulation

While *PermaStop*[®] will provide some acoustic insulation specialised acoustic products will give superior performance when installed as part of an acoustic system. Specialised products include *Noise Control Blanket™*, *Pink*[®] *Batts*[®] *Silencer*[®], and *Pink*[®] *Batts*[®] *Silencer*[®] *Mid floor.*

In metal deck roofing "rain drum" can be a serious problem, the installation of *Noise Control Blanket*TM can drastically reduce this unwanted noise.

Roof - Noise Control Blanket™

- 1. The material shall be *Noise Control Blanket™* 50mm, 75mm, 100mm. The insulation material shall be dry when installed and kept dry.
- 2. a) For purlin spans up to 1200mm:

"Install supporting wire mesh; or the appropriate *Antiblaze*[®] as a support membrane across purlins. Support membrane shall be dished and fixed between purlins in accordance with the following:

Noise Control Blanket 50mm - dish 45mm Noise Control Blanket 75mm - dish 70mm Noise Control Blanket 100mm - dish 90mm

b) For purlin spans above 1200mm:

"Install supporting wire mesh as above. If specified *Antiblaze®* may also be installed *over* installed supporting wire mesh.

- Roll out Noise Control Blanket[™] on top of the installed supporting membrane. Firmly butt insulation edges together ensuring there are no air gaps.
- 5. If building is air-conditioned add:

"Install Antiblaze® as a vapour barrier over Noise Control blanket overlapping edges 150mm and sealing overlaps with Vapastop® 883 aluminium tape."

NOTE

Noise Control Blanket[™] will also provides a level of thermal insulation and will add to any requirement for thermal insulation:

Noise Control Blanket 50mm:	R-Value 1.3
Noise Control Blanket 75mm:	R-Value 2.3
Noise Control Blanket 100mm:	R-Value 3.1

IMPORTANT: When calculating R-Values please consider that the Noise Control Blanket[™] must be held firmly against the metal deck roofing in order to absorb noise vibrations, this may result in a loss of material thickness and as a result R-Values may diminish.

NOTE: Vapour barriers shall be installed on warmer side of bulk insulation in tropical climates.



Walls - Air-conditioned buildings.

- 1. The material used shall be *PermaStop® R1.8, R2.5, or R2.8*; or the appropriate *Pink® Batts® product* in conjunction with an *Antiblaze®* vapour barrier.
- Install wire mesh and/or Antiblaze[®] as the supporting membrane against the outside of the girts allowing sufficient slack to accommodate the thickness of the glasswool insulation. (See roof specification for recommended sag allowances).
- Roll PermaStop[®] vertically down the outside of the supporting membrane with the Facing Foil[™] on the outer side. Firmly butt all glasswool edges together.
- 4. Seal all Facing Foil[™] laps, joins and penetrations with *Vapastop*[®] 883 self adhesive tape.
- 5. The external cladding shall then be installed over the insulation and secured to the girts in accordance with the manufacturers directions.

Walls - Non air-conditioned buildings.

- 1. Where only a radiant barrier is required install the appropriate *Antiblaze*[®] vertically around building with a minimum 150mm overlap.
- 2. The external cladding shall then be installed over the *Antiblaze®* and secured to the girts in accordance with the manufacturers directions.



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