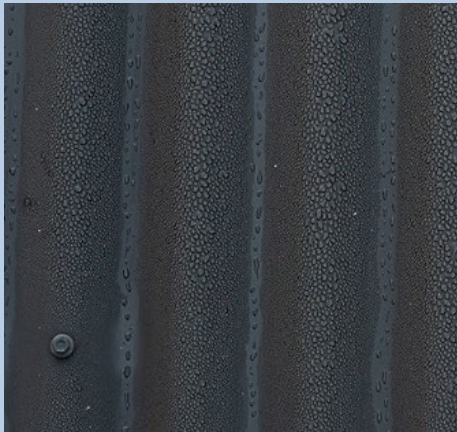


Blanket and Foil insulation in METAL ROOFING

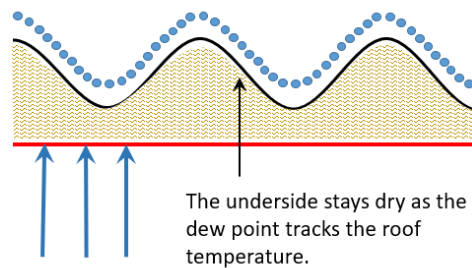
This Factsheet is *INFORMATIVE*, describing principles for managing condensation risk in roofing.



Blanket-and-foil products can provide a valuable insulation solution for metal roofing. They are best known for their ability to provide thermal benefits, resulting in more comfortable, energy efficient buildings and protection from condensation. Blanket-and-foil also moderates the extremes of attic temperature, improving the efficiency of ducted air-conditioning systems. It provides acoustic benefits by reducing rain, thermal and outdoor noise, and is an effective roofing element to aid in resilience to bushfire.

The blanket provides thermal insulation between the roof sheet and the foil protects against condensation forming on the foil beneath. To stop moisture reaching the underside of the roof sheet and the blanket getting wet, the foil must be impermeable to stop internal water vapour from reaching the roof sheet.

On this cold clear still night condensate freely forms upon the roof as its temperature dips well below the outdoor air dew point.

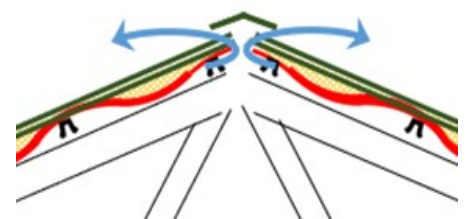


Impermeable foil restricts moisture above the membrane keeping the blanket dry.

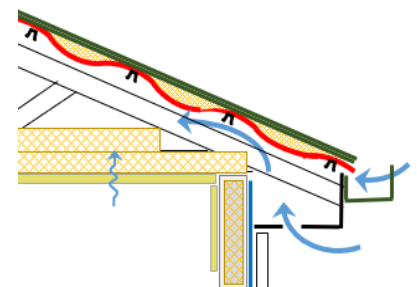
The blanket should be installed above battens against the underside of the metal roofing. This stops air flow above the blanket, keeping it dry from external moisture and is also a requirement in order to achieve its acoustic benefits.

Practices that restrict attic ventilation can result in trapping of internal water vapour and subsequent moisture related issues in metal roofs.

The blanket-and-foil should be installed to avoid accumulation of internal moisture in the attic space. This may be achieved through natural ventilation in accordance with the standard and guidance such as HB39^{1,2}, or augmented with a roof space ventilator.



Ventilation at or near ridge



Ventilation at eave/fascia

¹ Installation in accordance with AS4200:2017

² Special consideration of ventilation requirements in bushfire zones, marine and or cold climates may be necessary