



# Weatherproofing of projections through metal roof surfaces

**This technical note provides building practitioners with information on how to comply with the relevant Australian Standards when installing projections through metal roof surfaces, such as pipes, ducts and chimneys, to ensure compliant flashing is provided.**

It appears common practice when installing projections through roofs to rely totally on silicon sealant to provide weatherproofing on the high side of roof flue penetrations (exhaust fans) through metal roof sheeting, installed between the underside of the flashing and the upper surface of the roof sheeting. This is particularly prevalent with corrugated metal sheeting.

## What are the minimum requirements?

Where service penetrations are made through roof cladding they are required to be arranged so that adequate provision is made for the drainage of all pans or corrugations (refer to AS1562.1–1992 *Design and installation of sheet roof and wall cladding*).

Ponding of water upon the roof sheeting will cause deterioration of the sheet coating, which will lead to perforation. Additionally, manufacturers of silicone sealants advise that these types of products are used to bond metal surfaces together and not used as a filler of voids.

Sealants primarily provide a seal between two metal surfaces and are used in conjunction with fasteners. The sealant providing the optimum properties relating to metal roofing is neutral-cure silicone rubber.

Where a penetration blocks one or more of the sheet drainage channels, flashing around the high side of the penetration to divert run-off water is required.

The sheeting on the high side of the penetration should be cut back by an adequate amount to allow water to be diverted around the penetration so that adequate provision is made for drainage of all pans and corrugations.



*Flue tray not adequately flashed to prevent water penetration and inadequate provision made for drainage.*



*Adequate provision for drainage provided.*

The common practice of securing the apron or collar flashing to the apex of the corrugated sheets and filling the valleys of the sheets with a silicone sealant is contrary to Australian Standard SAA HB39–2015 *Installation code for metal roofing and wall cladding* and metal sheeting manufacturers' installation recommendations and is assessed as faulty and unsatisfactory.

### Alternative flashing methods

Where the position of the penetration is located close to a ridge capping or other flashing units, an alternative flashing method would be to fit a simple flat tray water shed over the top of the corrugations or pans blocked by the projection, extending from the ridge capping down and around the roof penetration.

Manufacturers of metal roof flues can provide profiled trays to suit the contours of the roof sheeting, which can assist in the satisfactory sealing of the tray flashing to the roof sheeting. These types of flashings can be used where the pitch of the roof is steep enough to avoid ponding of water around the flue.

### Are synthetic rubber collar flashings acceptable?

The Building Commission accepts that synthetic rubber collar flashings are typically used to flash pipe penetrations and are deemed a suitable flashing method for corrugated roof penetrations, as any water held in the valley of the sheet generally ponds on the rubber collar and not the roof sheet surface.



*Acceptable collar flashing.*

### Further information

For further information on inspection methods contact the Building Commission Technical Services Manager on 1300 489 099.

#### Disclaimer

The information in this technical note cannot be relied upon with respect to the application of all regulations, standards and codes relevant to this topic. The information is of general application only. Registered building service providers must ensure that they consider the specific circumstances of each installation and ensure that it complies with all relevant regulations and standards.

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