

IGNIS ENGINEERING ADVISORY NOTE

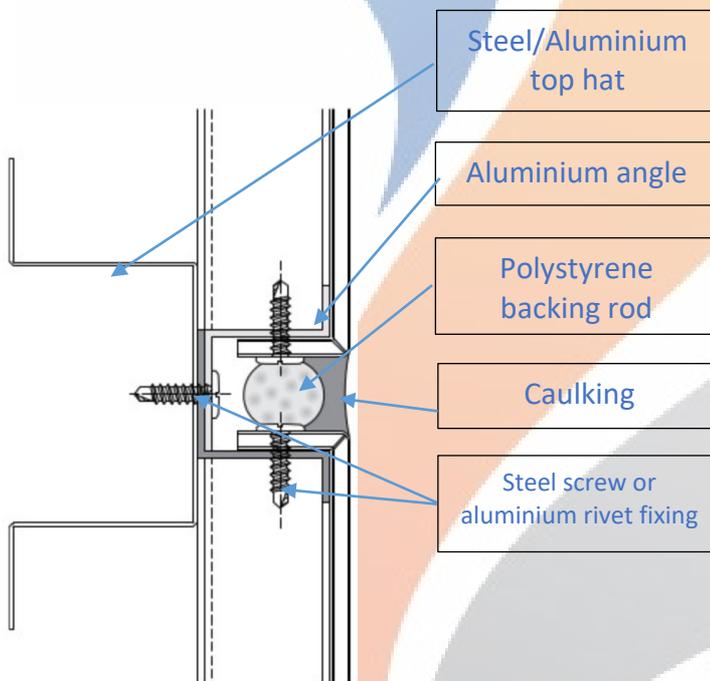
Evaluation No.IGNS-6081 Issue 02 Revision 01 [2018]

Fairview Cladding Cassette System NCC Compliance

1 Introduction

Ignis Solutions has been engaged by Fairview Architectural to evaluate the non-combustibility of the Cassette system as a dry and sealed joint system as well as the paints impact on the panels non-combustible status.

The cladding fixing system can be applied to a number of the Fairview products including Vitrabond FR, Vitracore G2, Vitracore Honeycomb or the Vitradual panel. The fixing system is used on a buildings façade and attached to the buildings frame, typically via steel or aluminium top hats. The composite panels are typically applied in a route and return process where an angle strip of the rear panel is routed such that the panel can be folded to a right angle. The panels are then fixed with screws or rivets to 'Z' angles which are then joined and screwed to the top hat. The 'Z' angles are typically made from aluminium. The system is fixed with aluminium rivets and steel screws. The angles and fixings are metal and deemed non-combustible.



Within the standard fixing system, a sealed system includes a polystyrene backing rod and caulking are installed over the joint. A dry joint system does not include these items.



2 Building Code of Australia (BCA) Compliance

The metal components detailed above are deemed non-combustible and maintains compliance with the requirements of the BCA. This is particularly applied to the dry joint system.

The polystyrene backing rod as well as the caulking are combustible elements.

There are three versions of the BCA currently under consideration. BCA 2016, BCA 2016 Amendment 1 as well as BCA 2019.

Building Code of Australia 2016

Within Clause C1.10(c)(vii)(C) of BCA 2016 details that fire hazard property requirements do not apply to caulking, sealing or the like. Therefore, whilst the materials are combustible, Clause C1.10(c)(vii)(C) provides a concession, exempting the backing rod and caulking from fire hazard compliance.

Building Code of Australia 2016 Amendment 1

Clause C1.9 of the BCA details the provision for non-combustible building elements. Sub-clause C1.9(a)(i) details that external walls, including all components incorporated in them including the façade covering, framing and insulation must be non-combustible.

The above detail for the framing, including the top hats, 'Z' angle, screws and rivets are all non-combustible.

The caulking and sealing including the backing rod are exempt from Clause C1.9 and the requirements of fire hazard properties by Clause C1.10(c)(vii)(C).

Clause C1.14 of the BCA details requirements for ancillary elements. The BCA under Clause A1.1 defines an ancillary element to mean an element that is secondary to and not an integral part of another element to which it is attached. Clause C1.14 provides details of ancillary elements being the likes of gutter, downpipes, flashing, grate or grille, electrical switch, socket-outlet, cover plate, light fitting, a required sign, an awning, sunshade, canopy, blind, shading hood or the like. Clause C1.14(m) details once again that caulking and sealants associated with these ancillary elements is exempt from the non-combustible requirement.

Building Code of Australia 2019

Clause C1.9(d)(i), (ii),(iii) provides a concession for Gaskets, Caulking and Sealants where when used on an external wall they need not be non-combustible.

3 Conclusion

Based on the information detailed above, the fixing system associated with the external elements and components of buildings framing, being the top hats, 'Z' angle, screws and rivets, are non-combustible. The use of caulking and sealants are considered exempt from requirements for non-combustibility and fire hazard properties.

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