

Va-Q-vip

The va-Q-vip has not been tested to AS1530.1 (see extract below)

1.4 APPLICATION TO FIRE HAZARD ASSESSMENT

The test results relate only to the behaviour of the test specimens of the material under the particular conditions of the test, and are not intended to be the sole criteria for assessing the potential fire hazard of the material in use.

The test method is not applicable to products which are coated, faced or laminated. In such cases, tests may be carried out separately on the individual materials from which the product is formed and this shall be clearly stated in the test report.

NOTE: The performance of coated, faced or laminated products may be determined by other reaction to fire tests

Although the core is non-combustible and would likely pass AS1530.1, the vacuum panels by definition are a laminated product and thus can not be tested to AS1530.1

The route for compliance would be via C1.9 (e) (vii) show below.

To create the vacuum the core is wrapped in a foil product. To maintain integrity of the film and protect the vacuum the foil is faced with a plastic based protective film. Because of this the VIP panels will not meet the current deemed to satisfy requirements of the NCC 2016 Amendment 1.

The pathway for C1.9 (e) (vii) has been removed from the Draft of 2019 which if approved will mean no multi layer laminate products can be use as part of a its wall construction regardless.

Under the EUROCLASS rating these products are considered as (DIN 4102) B2 so a fire engineer may consider as part of an alternative solutions.

The only AS1530.1 compliant insulation products that are available and I am aware of are Rockwool and very few Glasswool type products such as DCT Terra Vento. <http://www.dctech.com.au/dct-vento-r/>

C1.9 Non-combustible building elements

- (a) In a building *required* to be of Type A or B construction, the following building elements and their components must be *non-combustible*:
- (i) *External walls* and *common walls*, including all components incorporated in them including the facade covering, framing and insulation.
 - (ii) The flooring and floor framing of lift pits.
 - (iii) *Non-loadbearing internal walls* where they are *required* to be *fire-resisting*.
- (b) A *shaft*, being a lift, ventilating, pipe, garbage, or similar *shaft* that is not for the discharge of hot products of combustion, that is *non-loadbearing*, must be of *non-combustible* construction in—
- (i) a building *required* to be of Type A construction; and
 - (ii) a building *required* to be of Type B construction, subject to C2.10, in—

C1.9

FIRE RESISTANCE

Deemed-to-Satisfy Provisions

- (A) a Class 2, 3 or 9 building; and
 - (B) a Class 5, 6, 7 or 8 building if the *shaft* connects more than 2 *storeys*.
- (c) A *loadbearing internal wall* and a *loadbearing fire wall*, including those that are part of a *loadbearing shaft*, must comply with **Specification C1.1**.
- (d) The requirements of (a) and (b) do not apply to gaskets, caulking, sealants and damp-proof courses.
- (e) The following materials may be used wherever a *non-combustible* material is *required*:
- (i) Plasterboard.
 - (ii) Perforated gypsum lath with a normal paper finish.
 - (iii) Fibrous-plaster sheet.
 - (iv) Fibre-reinforced cement sheeting.
 - (v) Pre-finished metal sheeting having a *combustible* surface finish not exceeding 1 mm thickness and where the *Spread-of-Flame Index* of the product is not greater than 0.
 - (vi) Bonded laminated materials where—
 - (A) each lamina, including any core, is *non-combustible*; and
 - (B) each adhesive layer does not exceed 1 mm in thickness and the total thickness of the adhesive layers does not exceed 2 mm; and
 - (C) the *Spread-of-Flame Index* and the *Smoke-Developed Index* of the bonded laminated material as a whole do not exceed 0 and 3 respectively.