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Heat Shield Villaboard® Lining 9mm

GENERAL

It is a common practice to install fire places (heating appliances) in New Zealand to internally heat the living spaces. Using heating appliances within houses adds another dimension to fire safety provisions needed for a building. In order to comply with the NZBC Clause - 'Protection from Fire' certain types of solid heating burning appliances using controlled combustion with other fixings around them can be used. The lining material that get used around the installation of solid burning appliances are required to be tested as per AS/NZS 2918, Appendix-C in order to determine their classification as 'Heat-Resistant' or 'Heat-Tolerant' material.

James Hardie Villaboard® Lining is manufactured to comply with AS/NZS 2908.2 using natural ingredients such as Portland cement, silica, cellulose and water. Due to the inherent properties of the raw materials used and testing completed, Villaboard Lining is classified as non-combustible material. It has also been tested to AS/NZS 2918 'Domestic Solid Fuel Burning Appliances Installation' standard and is classified as 'Heat-Resistant' wall lining. A heat resistant material is suitable for use as 'Heat-Shield' as per this standard to reduce the safety clearances around solid fuel burning appliances.

When installing a fire place close to a wall lining, there is minimum 'Safety Clearance' as per Section 3.2.2 of AS/NZS 2918 that must be maintained between a burning appliances and wall lining to avoid fire spread.

For reference, the minimum clearances as per AS/NZS 2918 for an appliance installation which has not been tested are given below;

Vertically – 1500mm

Horizontally – 1200mm

Where the appliance has been tested, use the safety clearances supplied by the appliance manufacturer. With the use of a 'Heat-Shield' material e.g. Villaboard Lining 9mm as per Figure 1, the minimum clearances specified above can be reduced depending upon the construction method followed. The minimum clearance is determined by multiplying the 'Safety Clearance Distance' with 'Clearance Factor' given below as per Table 3.1 of AS/NZS 2918;

Table: Constructions and Clearance Factors for Solid Burning Appliance Heat Shields

Heat Shield Construction*	Minimum air gap mm	Clearance Factor
Single layer of continuous Villaboard Lining 9mm	18	0.40
Single layer of continuous Villaboard Lining 9mm	25	0.30
Two spaced layers of continuous Villaboard Lining 9mm	12 + 12	0.20

*Where heat-shield is used to reduce appliance clearance dimensions, additional flue shield may also be required. Refer to Clause 4.5.3 of AS/NZS 2918 for further information.

Refer to Figure 1 regarding the installation of Heat-Shield using Villaboard Lining. The lining is fixed through 2 x 9mm thick Villaboard strips minimum 50mm wide. This gives 18mm air circulation gap behind the heat shield. There must also be an opening provided at the top and bottom of heat shield. This opening must be equal to half the depth of air gap i.e. when there is a gap of 18mm behind the shield, a gap of 9mm is required. Refer to Figure 1.

The specifier or other party responsible for the project must ensure that the information/details published in this technical supplement are appropriate for the intended application.

In case you need any further information ,

Ask James Hardie™ 0800 808 868 or visit www.jameshardie.co.nz



Figure 1:

