

# Certificate of Physical Properties

**RAB™ BOARD**

**Australia** February 2024

RAB™ Board has been comprehensively tested and displays the following typical physical properties.

STRENGTH AND MOISTURE RELATED			
Physical Property	Saturated Condition	Equilibrium Condition 23°C -50% RH	Standard
Minimum Bending Strength	>7.0 Mpa	16.0 Mpa	AS/NZS 2908.2
Category	3	4	
Type	A	B	
Average Density in kg/m <sup>3</sup> - Oven Dry	1330		AS/NZS 2908.2
Watertightness		Passes	AS/NZS 2908.2
Water Absorption		27.4%	ASTM C1186
EQ Moisture Content		3.5%	ASTM C1186
Moisture Movement 30-90% relative humidity*		A direction 0.07% B direction 0.05%	ASTM C1186
Dimensional Conformance		Passes	ASTM C1186

DURABILITY			
Heat-Rain Durability		Passes	AS/NZS 2908.2
Warm Water Resistance		Passes	AS/NZS 2908.2
Freeze-Thaw Resistance		Passes	AS/NZS 2908.2
Soak-Dry		Passes	AS/NZS 2908.2

\*The way fibre cement sheets are produced, the grain direction of the cellulose fibre is typically along the direction of the sheet. That means that typically the fibre direction is in the same direction as the long edge of the sheet. The characteristic flexural strength in the 'a' direction is typically stronger, as the rupture is occurring across the grain length. The 'b' direction is tested along the length of the cellulose fibres, therefore is typically lower than the 'a' direction.

TEMPORARY WEATHER PROTECTION PROPERTIES			
Vapour Resistance		0.72 MN s/g	ASTM E96 B
Vapour Permeance		1.37µg/N.S (Class 4)	AS/NZS 4200.1
Water Permeability		Passes	AS/NZS 2908.2
Water Barrier*		Passes	AS/NZS 4201.4
Water Resistance		199.1g/m <sup>2</sup>	AS/NZS 4201.6

\* As per BRANZ Appraisal No.611 (2011)

MISCELLANEOUS PROPERTIES			
Termite Resistance	Resistance to damage from termite attacks.	Based on testing completed by CSIRO Division of Forest Products and Ensis Australia. Hardie™ building products have demonstrated resistance to termite attack.	
Surface PH	10 -11	AS/NZS 4201.6	

## FIRE PERFORMANCE PROPERTIES

Combustibility	Suitable where non-combustible materials are required in accordance with C3D10 of the NCC	Deemed to comply with NCC
Sample Classification Average Specific Extinction Area	Group 1 6.8m <sup>2</sup> /Kg	AS/NZS 3837
Early Fire Hazard Properties	Lower Values Are Better	
- Ignitability Index (0-20)	0	AS 1530.3
- Spread of Flame Index (0-20)	0	
- Heat Evolved Index (0-10)	0	
- Smoke Developed Index (0-10)	0-1	
Thermal Conductivity	0.23W/m <sup>2</sup> K	ASTM C 518
Thermal Expansion	9.4x10 <sup>-6</sup> C <sup>-1</sup>	AS 4459-8:1997

**NOTE**  
In addition to the above product properties, building assemblies incorporating this product have been tested for fire, acoustic and impact performance. Additional installation information, warranties, and warnings are available at [www.jameshardie.com.au](http://www.jameshardie.com.au)