

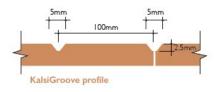
1. Product Description

KalsiGroove is a non combustible fiber cement panel, manufactured on Hatschek machine from a precise combination of cement, silica and natural organic reinforcing fibers. During the production, the boards are cured and stabilized in an autoclave process involving high temperature and pressure control, ensuring a final product with optimum dimensional stability and exceptional mechanical properties.

2. Applications

KalsiGroove is a fiber cement board with a 2.5mm deep, 5mm wide V shaped groove at every 100mm centres to replicate traditional tongue and groove style paneling that,

- a. can be finished with expressed or flushed joint
- b. can be coated with acrylic or texture coating



as internal wall lining, eaves or soffit cladding with superior resistance and aesthetic appeal.

3. Benefits

KalsiGroove is an advanced building material, serving as the best alternative over wood, concrete and masonry construction;

- a. Wide variety of thicknesses and applications
- b. Dimensionally stable
- c. High delamination strength and impact resistant
- d. Moist, mould and water resistant
- e. Resistant to attack of termites, insects and mould growth
- f. Easy to install and work with (easily nailed and cut with conventional tools)
- g. Environmental-friendly, no harmful gas emission
- h. Non combustible

4. Dimensions and tolerances:

Available Dimensions

Product	Thickness (mm)	Width x Length (mm)
KalsiGroove	7.5	1200 x 2400, 1200 x 2700

Dimensional Tolerance

Thickness	±0.6 mm
Width	± 6 mm
Length	± 8 mm
Squareness of Edges	≤ 0.4 %
Straightness of Edges	≤ 0.3 %

Weight (ex-works) based on nominal density plus variation

Thickness (mm)	Weight (kg/m²)	Weight (kg/ standard sheet)
7.5	+/- 10.65	+/- 31.2

Thicknesses, sizes, and types of the sheets which differ from those available as standard, are available subject to minimum order quantities. Please contact Etex Building Performance Indonesia for more information.





5. Technical Properties

The product has been tested based on internationally recognized standards and test methods for the fiber cement flat sheet and building material requirements such as EN 12467, AS/ NZS 2908.2 ASTM C1185, BS 476 relevant parts on material reaction to fire and EN13501 fire classification standards.

Physical and Mechanical Properties	Value	Standard
Dimensional Conformity	Passed	AS/NZS 2908.2
- Thickness		
- Length		
- Width		
- Straightness of edges		
- Squareness of edges		
Density (average)	> 1250 kg/m ³	AS/NZS 2908.2
Bending strength		AS/NZS 2908.2
(Type A – Category 3 average)	> 7.0 MPa	
(Type B - Category 3 average)	> 10.0 MPa	
Bending Elastic Modulus (ambient)	> 8500 MPa	AS/NZS 2908.2
Water absorption	33 ± 2 %	ASTM C1185
Moisture content	10 - 15 %	ASTM C1185
Moisture movement (Hygric) –	≤ 0.05 %	EN 12467:2016
Relative Humidity from 30% to 90%		
Thermal conductivity	0.25 W/mK	ASTM C518:2010
Durability (Type A Requirement)	Value	Standard
Durability (Type A Requirement) Water permeability	Value Passed	Standard AS/NZS 2908.2
Water permeability	Passed	AS/NZS 2908.2
Water permeability Warm water performance	Passed Passed	AS/NZS 2908.2 AS/NZS 2908.2
Water permeability Warm water performance Heat-rain performance – Category A	Passed Passed Passed 50 Cycles	AS/NZS 2908.2 AS/NZS 2908.2 EN 12467:2016
Water permeability Warm water performance Heat-rain performance – Category A Soak-dry performance – Category A	Passed Passed Passed 50 Cycles Passed 50 Cycles	AS/NZS 2908.2 AS/NZS 2908.2 EN 12467:2016 EN 12467:2016
Water permeabilityWarm water performanceHeat-rain performance – Category ASoak-dry performance – Category AFrost resistance	Passed Passed Passed 50 Cycles Passed 50 Cycles Passed 50 Cycles	AS/NZS 2908.2 AS/NZS 2908.2 EN 12467:2016 EN 12467:2016 AS/NZS 2908.2
Water permeabilityWarm water performanceHeat-rain performance – Category ASoak-dry performance – Category AFrost resistanceReaction to Fire	Passed Passed Passed 50 Cycles Passed 50 Cycles Passed 50 Cycles Value	AS/NZS 2908.2 AS/NZS 2908.2 EN 12467:2016 EN 12467:2016 AS/NZS 2908.2 Standard
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Water permeabilityWarm water performanceHeat-rain performance – Category ASoak-dry performance – Category AFrost resistanceReaction to FireNon CombustibilityHeat Release Smoke Production and Mass LossFire Hazard PropertiesIgnitability IndexSpread of Flame Index	Passed Passed 50 Cycles Passed 50 Cycles Passed 50 Cycles Value Non Combustible Group 1 0 0	AS/NZS 2908.2 AS/NZS 2908.2 EN 12467:2016 EN 12467:2016 AS/NZS 2908.2 Standard BS 476 Part 4:1970 ISO 5660 Part 1:2015
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Water permeabilityWarm water performanceHeat-rain performance – Category ASoak-dry performance – Category AFrost resistanceReaction to FireNon CombustibilityHeat Release Smoke Production and Mass LossFire Hazard PropertiesIgnitability IndexSpread of Flame IndexHeat Evolved IndexSmoke Development Index	Passed Passed 50 Cycles Passed 50 Cycles Passed 50 Cycles Value Non Combustible Group 1 0 0 0 1	AS/NZS 2908.2 AS/NZS 2908.2 EN 12467:2016 EN 12467:2016 AS/NZS 2908.2 Standard BS 476 Part 4:1970 ISO 5660 Part 1:2015 AS 1530 Part 3:1999

All material properties and physical performance are mean values given for information and guidance only. If certain properties are critical for particular application, it is advisable to consult Etex Building Performance Indonesia. Etex Building Performance Indonesia reserves the right to amend this information sheet without prior notice.





6. Health and safety aspects

During the mechanical machining of panels, airborne dust which may be hazardous to health, may be released. Avoid direct contact of dust with skin and eyes as they may cause irritation.

The use of dust extraction equipment is advised. Respect regulatory occupational exposure limits for total inhalable and respirable dust.

For more information, please check the Material Safety Data Sheet before working with the product.

7. Certification

All Etex Building Performance Indonesia products are manufactured in line with the ISO standards. Etex Building Performance Indonesia manufacturing facility achieved the certificates of ISO 9001:2008, ISO 14001:2015 and OHSAS 18001:2007. These certificates can also be downloaded from <u>www.kalsi.co.id</u>.

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For technical assistance please contact:

Promat Australia Pty. Ltd., 1 Scotland Road, Mile End South, Adelaide, SA 5031 T +61 (8) 8352 6759 F +61 (8) 8352 1014 E PAPL.mail@etexgroup.com www.kalsi-building-solutions.com

