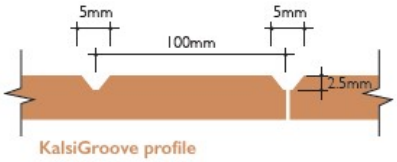
KalsiGroove
Technical Data Sheet
Date: 05 Apr 2022

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



KalsiGroove profile

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, 1200 x 3000

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/m^2)	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 - Thickness - Length - Width - Straightness of edges - Squareness of edges	Passed	ISO 8336
Density (average)	> 1250 kg/m^3	ISO 8336
Bending strength (Category A – Class 2 average) (Category C - Class 3 average)	 > 7.0 MPa > 10.0 MPa	ISO 8336
Bending Elastic Modulus (ambient)	> 8500 MPa	ISO 8336
Water absorption	33 ± 2 %	ASTM C1185
Moisture content	10 - 15 %	ASTM C1185
Moisture movement (Hygric) – Relative Humidity from 30% to 90%	≤ 0.05 %	EN 12467:2016
Thermal conductivity	0.25 W/mK	ASTM C518:2010
Durability (Type A Requirement)	**Value**	**Standard**
Water permeability	Passed	ISO 8336
Warm water performance	Passed	ISO 8336
Heat-rain performance – Category A	Passed 50 Cycles	EN 12467:2016
Soak-dry performance – Category A	Passed 50 Cycles	EN 12467:2016
Frost resistance – Category A	Passed 100 Cycles	EN 12467:2016
Reaction to Fire	**Value**	**Standard**
Non Combustibility	Non Combustible	BS 476 Part 4:1970
Surface Spread of Flame	Class 1	BS 476 Part 7:1997
Fire Propagation Index	I = 2.3 i1 = 2.1 i2 = 0.1 i3 = 0.1	BS 476 Part 6:1989
Heat Emission	Pass	BS 476 Part 11:1982
Fire classification using test data from reaction to fire tests	Class A1	EN 13501-1:2007 + A1:2009

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 www.kalsi.co.id.

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For technical assistance please contact:

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