Product Specification Sheet

External Walls & Facades

Panel

Volcore

HARD FACTS

Project:
Frankston Private Hospital

Architect:
STH Health Architecture

Profile:
Silkline

Skins:
Colorbond® Basalt
Colorbond® Surfmist

Volcore Core

ASKIN Volcore Panel is a non-combustible material under the provisions of the NCC 2022 C2D10(6)(g) , the Australian requirement for non-combustible external walls for Construction Types A and B.

Volcore Panel is an architectural solution that meets performance requirements for weatherproofing, structural strength, thermal performance and fire performance for all building types and classes.

Thermal Performance

PRODUCT MATERIAL PROPERTIES					TOTAL SYSTEM R-VALUES	
Panel Nominal Thickness (mm)	**Product U-Value (W/m^2K) at 23°C**	**Product R-Value (m^2K/W) at 23°C**	**Product R-Value (m^2K/W) at 15°C**	**Product R-Value (m^2K/W) at 0°C**	**Heat Flow Out (Winter)**	**Heat Flow In (Summer)**
50	0.80	1.25	1.30	1.35	1.40	1.40
75	0.54	1.85	1.95	2.00	2.10	2.00
100	0.40	2.50	2.60	2.70	2.70	2.60
120	0.33	3.00	3.10	3.25	3.30	3.10
150	0.26	3.75	3.90	4.05	4.00	3.80
175	0.22	4.40	4.55	4.75	4.70	4.50
200*	0.20	5.00	5.20	5.40	5.40	5.30

Total R-Values for the building element as required by the Energy Provisions of the National Construction Code, calculated in accordance with AS/ NZS 4859.2 2018. ASKIN Volcore is manufactured, tested and packaged in conformance with AS/NZS 4859.1 :2018

Declared Product R-Value is calculated in accordance with AS/NZS 4859.1:2018 as required for compliance to the National Construction Code 2022.
*200mm Volcore thermal computation based on theoretical assumptions of AS 4859.1

Features & Benefits

- Non-combustible material (C2D10(6)(g))
- Lengths available up to 13.5m
- Warranties up to 15 years
- FM Approved
- Fast to install
- Up to 210 minute FRL's
- Resilient material for a changing climate
- Thermally efficient (Product R-Values up to 5.0 23 degrees))
- Architectural low profiled ribs available

*All information correct at time of printing. Check with your ASKIN representative for latest information. Call 13 000 ASKIN, or email contact@askin.net.au

Volcore is a non-combustible insulation material tested to AS 1530.1 and ideal for commercial and industrial applications requiring type A & B construction.

Volcore Panel has achieved high performance requirements of FM Approval for exterior wall systems.

Fire Performance

CRITERIA	PERFORMANCE
AS 1530.3: 1999 (Test for Flammability of materials)	Flame Spread 0 Smoke Dev. 1 Heat Evolved 0 Ignition 0
AS 5637.1: 2015 Compliance to C2D11 AS ISO 9705: 2003 (R 2016)	Group 1, SMOGRA = 1.5 (m^2/ s^2 x 1000)
NCC compliant C2D10(6)(g)	Non-Combustible
Factory Mutual (FM Global)	FM Approved 4880 (Unlimited Height), 4881
AS 1530.4: 2014	FRL Performance up to 210 minute's (Refer ASKIN FRL Systems)

Volcore Panel has met the performance requirements of weatherproofing by tested to AS 4284:2008, as required by the verification method NCC 2022 F3V1.

Weather Proofing

CRITERIA	PERFORMANCE
AS 4284:2008 Water Ingress Test	NCC Compliant to F3P1and F1P4 as per F3V1

ASKIN Panel achieves the following ratings for panel tested in accordance with AS 1191-2002 and assessed against AS/NZS ISO 717.1: 2004

Acoustics

CRITERIA	RW	RW + CTR
ASKIN Volcore Panel 75mm	28	25
*ASKIN Volcore Panel 100mm	29	–
*ASKIN Volcore Panel 120mm	30	–
*ASKIN Volcore Panel 150mm	31	–
*ASKIN Volcore Panel 200mm	33	–

*Values from third party professional opinion report

Physical Properties

CRITERIA	PERFORMANCE
Core Density	110 kg/m^3 +/- 10%
Recyclable	100% Recyclable
Workability	Good – Mineral Fibres. Handle with care.

Manufacturing Tolerances

CRITERIA	MANUFACTURED	TOLERANCE
Length	2,000mm to 13,500mm	+/- 5mm
Width	Standard as 1,000mm (1,200mm subject to MOQ)	+/- 2mm
Thicknesses	50mm up to maximum 150mm	+/- 2mm

Though predominantly installed vertically or horizontally, ASKIN Volcore Panel can also be installed diagonally for aesthetic reasons. Long panels or panels passing structural elements can be butt jointed with negative detail joiners or top hat sections. Please contact your ASKIN representative for more information.

Installation Tolerances

PANEL LENGTH	INSTALLATION TOLERANCE
0mm to 4,000mm	+2 / -1mm
+4,000mm	+3 / -1mm
Panel Joints	+2 / -2mm

*ASKIN recommend the use of clamps for ensuring minimum variable tolerance.

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Colour Range

A full range of colours are available depending on Minimum Order Quantities and warranties. Please contact your ASKIN representative as each project needs clarification on Solar Absorbance as stated in the NCC.

Environment

Resource Efficiency

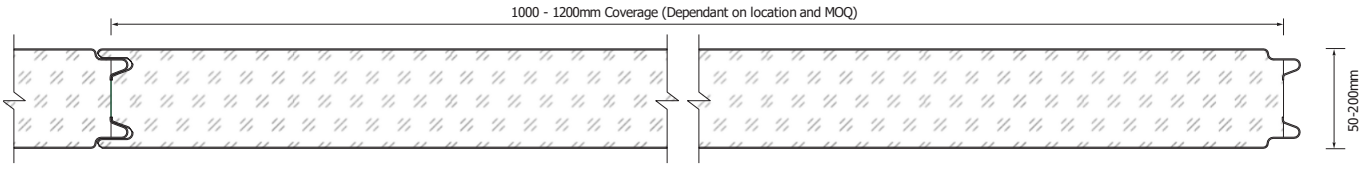
As an insulation product Volcore is efficient in its use of resources. Coupled with the high insulation, this means that the energy savings from using Volcore will amount to many times the energy required to produce the material.

Zero ODP

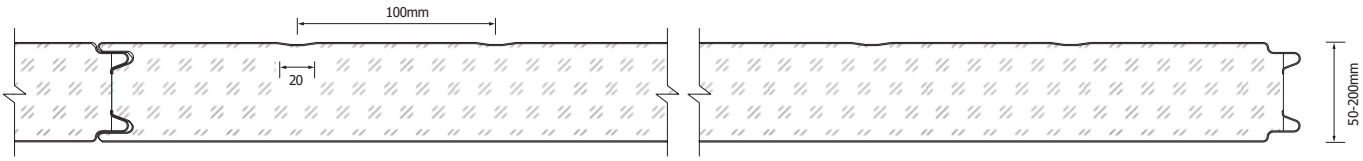
Volcore insulation manufacturing does not use Ozone Depleting Substances such as CFCs, HCFCs or HFCs.

External Wall & Facade Profile Combination

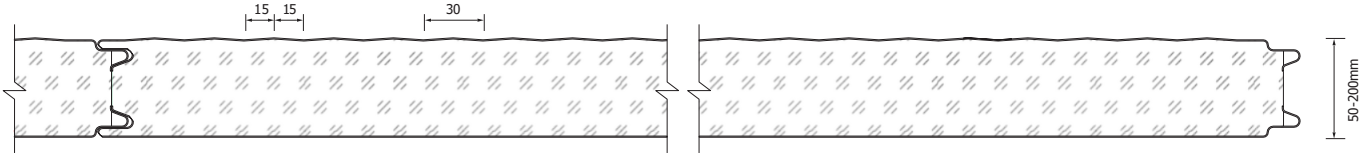
EXTERNAL PROFILES



FLAT / Internal FLAT Profile



RIB / Internal FLAT Profile



SILKLINE / Internal FLAT Profile

Profile Options

External Surface Profiles	FLAT	FLAT	RIB (100mm)	RIB (100mm)	Silkline	Silkline
Internal Surface Profiles	FLAT	RIB (100mm)	FLAT	RIB (100mm)	FLAT	RIB (100mm)

Note: Other profile combinations available dependant on application.

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0.6mm External Face Skin with 0.6mm Internal Face Skin

Standard Steel Specification

EXTERNAL SKIN MATERIAL – 0.6 or 0.7mm Thick G300S AM100 high performance steel with pre-painted superior polyester finish coat of 25 microns.

INTERNAL SKIN MATERIAL – 0.6mm Thick G300S Z275 pre-painted Colorbond® Intramax® steel with superior polyester finish coat of 25 microns. Colorbond® Intramax® steel is specifically designed for temperature controlled environments.

Panel Weight (m^2)

PANEL THICKNESS (mm)	50	75	100	120	150
Weight (kg / m²) for 0.6 / 0.6	15.7	18.4	21.2	23.4	26.7
Weight (kg / m²) for 0.7 / 0.6	16.5	19.3	22.0	24.2	27.5

AS/NZS 2728 Paint Coating. AS 1397 Substrate System

Span Table: ULS Allowable Pressure (kPa)

PANEL	PANEL SPAN (m)						
THICKNESS (mm)	2.0m	2.4m	3.0m	3.6m	4.0m	5.0m	6.0m
50	2.45	2.03	1.39	1.01	0.75	–	–
75	3.07	2.50	1.64	1.25	0.99	–	–
100	3.16	2.74	2.10	1.46	1.04	0.72	0.41
120	3.84	3.32	2.53	1.75	1.23	0.87	0.52
150	4.86	4.19	3.19	2.18	1.51	1.10	0.69

Span Table: SLS Allowable Pressure applied Externally (kPa)

PANEL	PANEL SPAN (m)						
THICKNESS (mm)	2.0m	2.4m	3.0m	3.6m	4.0m	5.0m	6.0m
50	0.62	0.56	0.46	0.34	0.26	–	–
75	1.47	1.24	0.89	0.65	0.48	–	–
100	1.50	1.35	1.12	0.88	0.73	0.53	0.33
120	1.55	1.40	1.17	0.94	0.78	0.56	0.34
150	1.63	1.48	1.25	1.02	0.87	0.61	0.36

Span Table: SLS Allowable Pressure applied Internally (kPa)

PANEL	PANEL SPAN (m)						
THICKNESS (mm)	2.0m	2.4m	3.0m	3.6m	4.0m	5.0m	6.0m
50	-0.80	-0.74	-0.65	-0.54	-0.47	–	–
75	-1.14	-1.02	-0.83	-0.72	-0.65	–	–
100	-1.23	-1.16	-1.04	-0.93	-0.86	-0.61	-0.36
120	-1.24	-1.17	-1.06	-0.95	-0.88	-0.69	-0.50
150	-1.25	-1.18	-1.08	-0.98	-0.91	-0.81	-0.71

Uniformly distributed ultimate limit state short term Wind load as derived from AS1170.2. Capacities derived from NATA approved structural testing in accordance with AS4040.2. Serviceability limit state deflection limited to span/150. Thermal deflection and required stress relief cuts should be considered for controlled environments by a suitably competent person. See ASKIN connection details for fire rated stress relief cuts.

Panel is assumed to be fixed from outside into a suitable structure inside. Fire rated walls and ceilings are non-load carrying and no permanent loads should be applied. Fixings, number and type should be considered by a suitably competent person. For FM approval requirements, please refer to specific test certificates available for download on our website. Loadings noted within span tables do not include the self-weight of the panel. Self-weight will need to be applied when panel is used in a horizontal application (i.e. a roof or a ceiling).

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