Product Specification Sheet

Roofing

Metric

XFLAM

HARD FACTS

Project:
Melton Christian College

Architect:
Summers Architects

Profile:
Metric

Skins:
Colorbond® Shale Grey

XFLAM Core

XFLAM is a syntactic phenolic composite closed cell foam that provides excellent thermal and fire performance. XFLAM uses natural encapsulated air to ensure a stable thermal performance for the lifetime of the material. This patented material ensures that off gassing does not occur.

XFLAM Metric is a roofing 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/m²K) at 23°C**	**Product R-Value (m²K/W) at 23°C**	**Product R-Value (m²K/W) at 15°C**	**Product R-Value (m²K/W) at 0°C**	**Heat Flow Out (Winter)**	**Heat Flow In (Summer)**
50	0.71	1.40	1.40	1.50	1.60	1.50
75	0.45	2.05	2.10	2.20	2.20	2.20
100	0.34	2.75	2.80	2.95	3.10	3.00
125	0.29	3.45	3.50	3.70	3.80	3.70
150	0.24	4.15	4.25	4.45	4.40	4.20
175	0.21	4.85	4.95	5.20	5.10	4.90
200	0.18	5.55	5.65	5.95	5.80	5.60
250	0.14	6.90	7.05	7.40	7.20	6.90

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.

Features & Benefits

- Fire Rated and FM Approved
- Lengths available up to 25m
- Warranties up to 36 years
- Low roof pitch down to 2°
- All in one roof & ceiling system
- Fast to install
- Diminishes thermal bridging
- Cyclone Rated to 12 kPa
- Resilient material for a changing climate
- Thermally efficient (Product R-Values up to 5.0)
- Robust and durable building envelope
- Superior spanning capability

*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

CodeMark Australia | CMI Certification Certificate CM40340 | FM Approved | Colorbond® | ipcc Panel Certification Scheme

XFLAM panel is a safe material in a fire situation, has very low smoke generation. XFLAM panel holds best in class FM Approvals for Internal Walls and Ceilings, External Walls and Roofing in addition to BCA Group 1 materials classification, as tested in accordance with ISO 9705. Additionally XFLAM panel holds various AS approvals for fire rated walls and ceilings.

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 C1.10 AS ISO 9705: 2003 (R 2016)	Group 1, SMOGRA = 1.5 (m^2 / s^2 x 1000)

XFLAM Metric meets the performance requirements of weatherproofing per AS 1562.1:2018, as required by NCC 2022 F3D2.

Weather Proofing

CRITERIA	PERFORMANCE
AS 1562.1:2018	NCC Compliant to F3D2

Maximum Roof Length (m) for Drainage (AS1562.1, 3.3.1)

PEAK RAINFALL INTENSITY (mm/hr)	ROOF SLOPE (DEGREES)			
	3	5	7.5	10
100	410	504	600	683
150	273	336	400	455
200	205	252	300	341
250	164	201	240	273
300	136	168	200	227
400	102	126	150	170
500	82	100	120	136

Refer to ASKIN roof standard details for best installation practice. Minimum pitch of 3 degrees. (2 degrees with special design). Step joints required for larger roofs with multiple panels. SA HB39:2015 Installation code for metal roofing and wall cladding. Appendix B.

Minimum Pitch

PITCH	SEALANT	END LAPS	DIMENSION
3 degrees to 6 degrees	Butyl tape	Standard cut back for gutter	75mm
>6 degrees	Polyurethane	Standard end lap joint	200mm
		Standard expansion joint	200mm

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 XFLAM Panel 75mm	25	23
ASKIN Dual Panel System - XFLAM & EPS 75mm	43	37

Physical Properties

CRITERIA	PERFORMANCE
Core Density	32-36 kg/m^3
Recyclable	Excellent. No requirement for protection
Workability	Good – Mineral Fibres. Handle with care.
Trafficability (As per NCC / BCA)	Resistant to maintenance traffic (1 person per panel)

Manufacturing Tolerances

CRITERIA	MANUFACTURED	TOLERANCE
Length	2,000mm to 25,000mm	+/- 5mm
Width	Standard as 1,000mm	+/- 1mm
Thicknesses	50mm up to maximum 250mm	+/- 1mm

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The ASKIN XFLAM Metric Panel is a fully mechanically fixed system through the 5 ribs to structural members. The panels must be installed to the performance requirements of the National Construction Code and Australian Standards. 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.

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

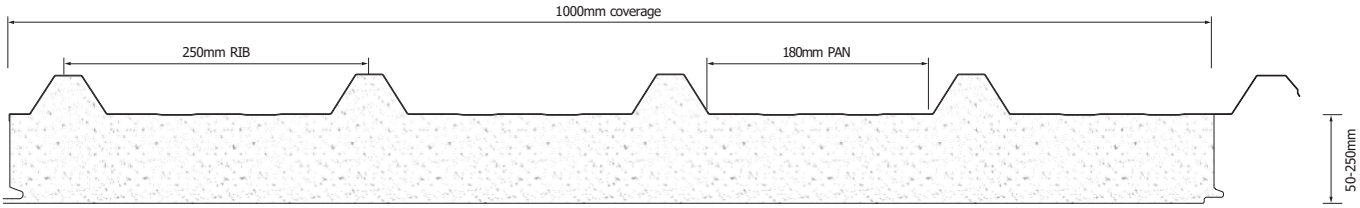
As an insulation product XFLAM is efficient in its use of resources. Coupled with the high insulation, this means that the energy savings from using Volcore will amount to many of times the energy required to produce the product.

Zero ODP

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

Roofing Profile Combination

ROOFING PROFILES



METRIC ROOF / RIB or FLAT Profile

Profile Options

External Surface Profiles	MESA (50mm)	MESA (50mm)
Internal Surface Profiles	FLAT	RIB (100mm)

Note: Other profile combinations available dependent on application. Please contact your ASKIN representative for availability of each profile.

Cyclone Performance

	1x 14g Tek Screws per rib with Buildex steel cyclone washers			
PRESSURE	**6 kPa**	**8 kPa**	**12 kPa**	**Impact**
100mm (0.6 / 0.6)	2.4m	2.0m	1.2m	40m/s

100mm Results certified by UA in accordance with NZ/AS 1170: 2011, AS 4040: 1992 and NCC L-H-L Testing Other data generated from cyclic and static testing performed in other locations.

Please contact ASKIN for spacing and minimum support thickness.

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0.5mm External Face Skin with 0.6mm Internal Face Skin

Standard Steel Specification

EXTERNAL SKIN MATERIAL – 0.5mm Thick G300S AM100 high performance steel with pre-painted superior polyester finish coat of 25 microns. Other high performance products, Colorbond® Ultra, Colorbond® stainless steel are available to suit project specific applications.

INTERNAL SKIN MATERIAL – 0.6mm Thick G300S Z275 prepainted Colorbond® Intramax® steel with superior polyester finish coatof 25 microns. A range of substrates and colours are available subjectto application and MOQ, of which include standard Colorbond® range.

Panel Weight (m^2)

PANEL THICKNESS (mm)	75	100	120	150	175	200
Weight (kg / m²) for 0.5 / 0.6	19.4	22.2	24.2	27.7	30.5	33.2

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	7.0m	8.0m
50	3.10	2.65	1.97	1.29	0.84	0.77	0.70	–	–
75	3.21	2.81	2.22	1.62	1.22	1.04	0.86	–	–
100	3.32	2.98	2.46	1.95	1.61	1.31	1.02	0.72	0.42
125	–	–	2.51	2.03	1.71	1.39	1.08	0.77	0.46
150	–	–	2.55	2.12	1.82	1.47	1.14	0.82	0.50
175	–	–	2.60	2.20	1.93	1.55	1.21	0.87	0.54
200	–	–	2.65	2.28	2.04	1.62	1.27	0.92	0.57
250	–	–	2.74	2.45	2.26	1.78	1.40	1.03	0.65

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	7.0m	8.0m
50	2.77	2.44	1.94	1.44	1.11	0.76	0.41	–	–
75	2.90	2.56	2.03	1.51	1.16	0.88	0.60	–	–
100	3.04	2.67	2.13	1.58	1.21	1.00	0.78	0.56	0.35
125	–	–	2.30	1.79	1.46	1.19	0.93	0.66	0.40
150	–	–	2.48	2.01	1.70	1.38	1.07	0.76	0.45
175	–	–	2.65	2.22	1.94	1.58	1.22	0.86	0.50
200	–	–	2.83	2.44	2.18	1.77	1.36	0.96	0.55
250	–	–	3.18	2.87	2.67	2.16	1.66	1.15	0.65

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	7.0m	8.0m
50	-2.41	-2.12	-1.69	-1.25	-0.96	-0.77	-0.57	–	–
75	-2.56	-2.24	-1.77	-1.29	-0.98	-0.82	-0.66	–	–
100	-2.71	-2.37	-1.85	-1.33	-0.99	-0.86	-0.74	-0.61	-0.49
125	–	–	-2.03	-1.53	-1.20	-0.98	-0.83	-0.68	-0.52
150	–	–	-2.21	-1.73	-1.41	-1.10	-0.92	-0.74	-0.56
175	–	–	-2.38	-1.92	-1.62	-1.22	-1.01	-0.80	-0.59
200	–	–	-2.56	-2.12	-1.83	-1.34	-1.10	-0.86	-0.63
250	–	–	-2.92	-2.51	-2.24	-1.57	-1.28	-0.99	-0.70

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. Serviceability limit state deflection limited to span/200. Contact ASKIN for span/150 specific data.

Panel is assumed to be fixed from outside into a suitable structure inside. 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). Roof accessibility imposed loading is in line with R2(b)(iii) as per section 3.5.1 of AS1170.1.

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