ASKIN Performance Panels

EXTERIORS
External Walls & Facades
XFLAM Panel

XFLAM is a patented, Australian-made material manufactured from advanced syntactic phenolic foam, delivering exceptional performance as a rigid insulated panel

ASKIN's XFLAM External Wall Systems have been comprehensively tested for thermal efficiency, weatherproofing, structural integrity, wind loading, and fire resistance levels (FRL). In the event of a fire, XFLAM remains a safe choice, producing very low smoke and maintaining its structural stability

XFLAM panels meet and exceed the requirements of the National Construction Code (NCC) through NATA-approved testing and certifications. They are also Factory Mutual (FM) Approved, complying with rigorous international standards for fire performance

As a multi-layered system, XFLAM satisfies the AS ISO 9705:2003(R 2016) Room Test in accordance with AS5637, achieving a Group 1 fire rating when installed as a mechanically fixed system with concealed brackets. The panels have been certified to achieve multiple Fire Resistance Levels (FRL), offering superior protection and compliance for external wall applications.

Fire Performance

Criteria	Performance
AS/NZS 1530.3: 1999(R 2016) (Test for Flammability of materials)	Flame Spread 0 Smoke Dev. 2 Heat Evolved 0 Ignition 0
AS 5637.1: 2015 Compliance to C2D11(1)(b) AS ISO 9705: 2003 (R 2016)	Group 1, SMOGRA < 100 (m^2 / s^2 x 1000)
Factory Mutual (FM Global) Approval	FM 4880 - Unlimited Height FM 4881 - Exterior wall systems FM 4882 - Smoke Sensitive Occupancies
AS 1530.4: 2014	FRL Performance up to 120 minute's (Refer ASKIN FRL Systems)

Features & Benefits

- Cyclone Rated up to 15 kPa
- Warranties up to 15 years
- Fire Rated and FM Approved
- Thermally efficient (Product R-Values up to 5.0)
- Long lengths available of 22m+ and is fast to install
- Resilient material for a changing climate
- Up to 120-minute FRL's
- Robust and durable with superior spanning capability

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ASKIN Performance Panels

0.6mm (or 0.7mm) 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	150	175	200	250
Weight (kg/m^2) for 0.6/0.6	11.6	12.5	13.3	14.2	15.0	16.7	18.4

*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	5.5m	6.0m	7.0m	8.0m
50	2.83	2.44	1.85	1.27	0.88	0.71	0.63	0.55	0.39	0.22
75	4.03	3.55	2.82	2.14	1.68	1.35	1.18	1.02	0.69	0.35
85	4.51	3.99	3.21	2.48	2.00	1.60	1.40	1.20	0.81	0.41
100	5.23	4.65	3.79	3.01	2.48	1.98	1.73	1.48	0.98	0.48
125	-	-	-	3.33	2.82	2.20	1.90	1.64	1.13	0.62
150	-	-	-	3.65	3.15	2.42	2.06	1.79	1.27	0.75
175	-	-	-	3.98	3.48	2.64	2.22	1.95	1.41	0.88
200	-	-	-	4.30	3.81	2.86	2.38	2.10	1.56	1.01
250	-	-	-	4.95	4.48	3.29	2.70	2.41	1.84	1.27

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	5.5m	6.0m	7.0m	8.0m
50	1.83	1.58	1.21	0.84	0.59	0.47	0.41	0.34	0.22	0.09
75	2.27	2.05	1.73	1.41	1.20	0.96	0.85	0.73	0.49	0.26
85	2.44	2.24	1.94	1.64	1.44	1.16	1.02	0.88	0.60	0.32
100	2.70	2.52	2.25	1.98	1.80	1.46	1.29	1.11	0.77	0.42
125	-	-	-	2.07	1.89	1.54	1.36	1.20	0.87	0.55
150	-	-	-	2.16	1.98	1.61	1.43	1.28	0.98	0.67
175	-	-	-	2.25	2.07	1.69	1.50	1.36	1.08	0.80
200	-	-	-	2.33	2.16	1.77	1.57	1.44	1.18	0.92
250	-	-	-	2.51	2.34	1.93	1.72	1.61	1.39	1.18

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	5.5m	6.0m	7.0m	8.0m
50	-2.01	-1.76	-1.38	-0.99	-0.74	-0.62	-0.56	-0.51	-0.39	-0.27
75	-2.38	-2.15	-1.79	-1.43	-1.19	-1.00	-0.90	-0.80	-0.60	-0.41
85	-2.53	-2.30	-1.95	-1.61	-1.37	-1.14	-1.03	-0.92	-0.69	-0.46
100	-2.75	-2.53	-2.20	-1.87	-1.65	-1.37	-1.23	-1.09	-0.81	-0.54
125	-	-	-	-2.04	-1.81	-1.46	-1.29	-1.15	-0.87	-0.59
150	-	-	-	-2.20	-1.97	-1.56	-1.36	-1.21	-0.92	-0.63
175	-	-	-	-2.37	-2.13	-1.66	-1.42	-1.27	-0.98	-0.68
200	-	-	-	-2.54	-2.29	-1.75	-1.49	-1.34	-1.03	-0.73
250	-	-	-	-2.87	-2.61	-1.95	-1.62	-1.46	-1.14	-0.82

Uniformly distributed ultimate limit state short term Wind load as derived from AS/NZS 1170.2. Capacities derived from NATA approved structural testing in accordance with AS 4040.2. 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).

Cyclone Performance (Spanning Capabilities

Pressure Fixing Centres	1.9 kPa	2.0 kPa	2.5 kPa	2.8 kPa	4.6 kPa	8.0 kPa	9.2 kPa	15.0 kPa	Impact
100mm (0.6 / 0.6)	*3.6	4.3	3.3	2.1	1.7	1.5	1.2	0.9	39m/s

In order to achieve the above design pressures fixing methodology must be identical to the tested system, in addition this table does not allow for interpolation or extrapolation of design values. Please contact ASKIN Engineering for further information prior to specifying panel in cyclonic zones.

Span table: Wind Classification (AS4055)

Panel	Panel Span (m)						
Thickness (mm)	2.0m	2.4m	3.0m	3.6m	4.0m	5.0m	6.0m
50	N2r	N1r	N1r	-	-	-	-
75	N3r	N2r	N2r	N1r	-	-	-
85	N3r	N3r	N2r	N1r	N1r	-	-
100	N3r	N3r	N2r	N2r	N1r	N1r	-
125	-	-	-	N2r	N2r	N1r	-
150	-	-	-	N2r	N2r	N1r	-
175	-	-	-	N3r	N2r	N2r	N1r
200	-	-	-	N3r	N2r	N2r	N1r
250	-	-	-	N3r	N3r	N2r	N1r

Notes:
Limited by strength at corners within 1200mm of both edges.
Wind Classifications for ultimate strength and serviceability pressures from the net pressure coefficients given in AS 4055 Tables 3.5(A) & 3.5(B).
Panels are installed over minimum 3-supports (double-span).

Colour Range

A broad range of colours is available, subject to minimum order quantities and applicable warranties. Please speak with your ASKIN representative to confirm availability and discuss solar-absorbance requirements for your project, as outlined in the National Construction Code (NCC).

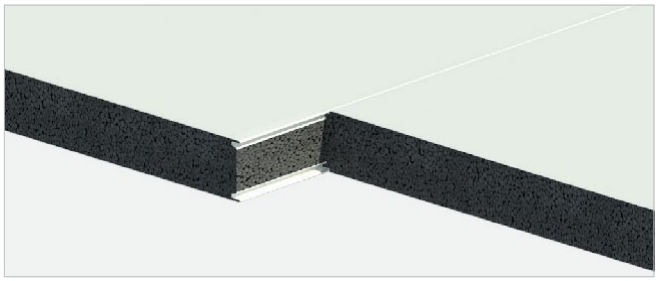
Environment

Resource Efficiency

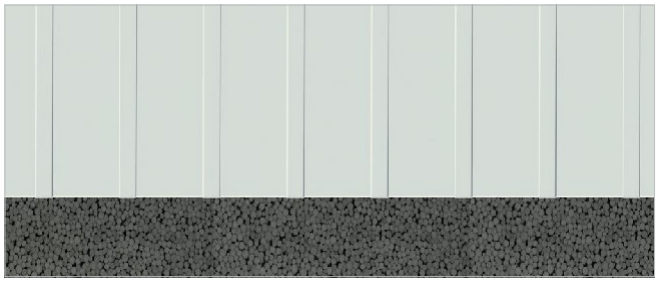
XFLAM is engineered for sustainability. As a low-density insulation product, it uses minimal natural resources during manufacture. Its outstanding thermal efficiency ensures that, over the life of a building, the energy savings can exceed production energy by several hundred times — making XFLAM a smart, environmentally responsible choice..

External Wall & Facade Profile Combinations

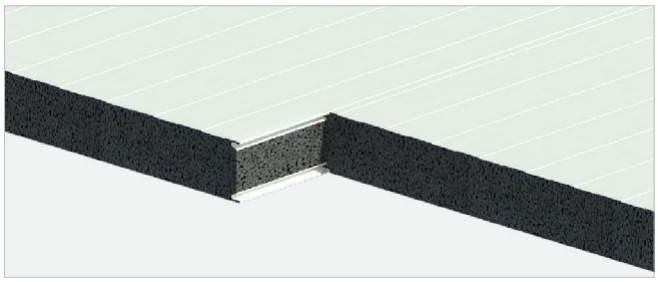
External Profiles



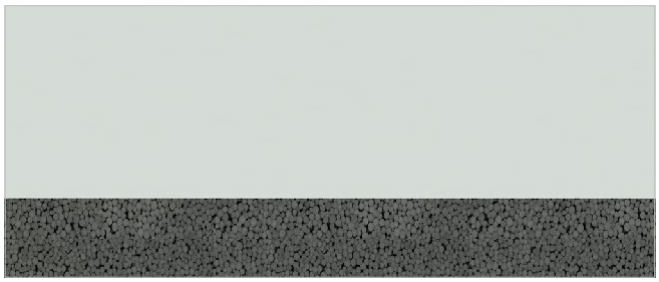
XFLAM Panel Flat Joint



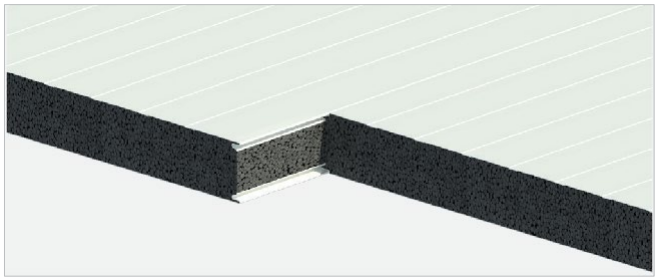
XFLAM Panel Rib



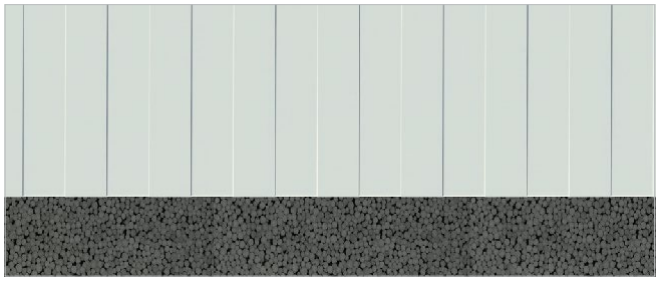
XFLAM Panel Mesa Joint



XFLAM Panel Flat



XFLAM Panel Rib Joint



XFLAM Panel Mesa

XFLAM Panel has met the performance requirements of weatherproofing by tested to AS/NZS 4284:2008, as required by the verification method NCC 2022 Volume 1 AMDT 2 F3 P1 and Volume 2 AMDT Two H2P2

Weather Proofing	
Criteria	**Performance**
AS 4284: 2008 Water Ingress Test	NCC Vol 1 Compliant to F3 P1 F3 D2 NCC Vol 2 Compliant to H2P2 H2V1

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	R_w	$R_w + C_{tr}$
ASKIN XFLAM Panel 75mm	25	23

Physical Properties

Criteria	Performance
Core Density	36 +/- 4 kg/m3
Recyclable	100% Recyclable
Workability	Excellent. No requirement for protection

Manufacturing Tolerances

Criteria	Manufactured	Tolerance
Length	2,000mm to 22,000mm	+/- 5mm
Width	Standard as 1,200mm	+/- 1mm
Thicknesses	50mm up to maximum 250mm	+/- 1mm

Though predominantly installed vertically, ASKIN Performance Panels can also be installed horizontally or diagonally for aesthetic or practical reasons. Long panels or panels passing structural elements can be butt jointed with negative detail top hat sections. These can be supplied with fixing concealing caps.

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.

ASKIN performance Panels can be fastened with a range of hardware available from ASKIN, including hidden fixings, Tek screws, mushroom head threaded rods, dome nut bolts, coach screws, suspension brackets and spring fixings. Please contact your ASKIN representative for more information.

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	2.30	2.10
85	0.40	2.50	2.55	2.60	2.60	2.50
100	0.34	2.75	2.80	2.95	3.00	2.80
125	0.29	3.45	3.50	3.70	3.70	3.50
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	5.50
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 XFLAM is manufactured, tested and packaged in conformance with AS/NZS 4859.1: 2018

*All information correct at time of printing. Check with your ASKIN representative for latest information.