Roofing

ASKIN™

PRODUCT SPECIFICATION SHEET

CORE: XFLAM PROFILE: METRIC

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.

THERMAL PERFORMANCE

XFLAM Panel insulation core minimises thermal transfer through its patented syntactic foam. With a major focus on energy efficiency, ASKINs easy slip-joint facilitates a sealed panelised construction. In Roofing applications, this air tight seal provides a highly efficient building envelope.

R-VALUES

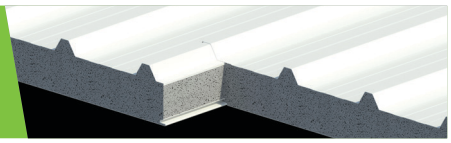
PANEL THICKNESS (mm)	50	75	100	125	150	175	200	250
XFLAM R-Value (m² K/W) at 15°Celcius	1.85	2.63	3.41	4.19	4.97	5.75	6.54	8.10

Metric Panel with Air Films (Zones 1-6, wind speed <7m/s)
NCC Specification J1.2-2, AS 2498.1: 1993

FIRE PERFORMANCE

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.

CRITERIA	PERFORMANCE
AS 1530.3: 1999 (Test for Flammability of materials)	Flame Spread 0 Ignitability 0 Heat evolved 0 Smoke Dev. 1
Factory Mutual (FM Approved) Unlimited Height	FM 4471 - Roofing FM 4880 - Interiors FM 4881 - Exterior
Compliance to C1.10 - AS5637.1 AS ISO 9705:2003	Group 1, SMOGRA = 2.2 (m² / s² x 1000)
CP4 requires materials and assemblies to resist spread of fire and limit the generation of smoke and toxic gases during evacuation	Toxicity (Combustion gases) - Very Low (CO, CO2)



MINIMUM PITCH

Minimum pitch of 3 degrees. Refer to ASKIN roof standard details for best installation practice.

3 Degrees to 6 Degrees	- (Butyl tape required)	Standard cut back for gutter	- 75mm
6+ Degrees	- (No tape required)	Standard lap at joint	- 200mm

ACOUSTIC

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

PANEL THICKNESS	RW	RW + Ctr
ASKIN XFLAM Panel 75mm	25	23
ASKIN Dual Panel Roof - XFLAM 75mm / EPS 75mm	43	37

PHYSICAL PROPERTIES

CRITERIA	PERFORMANCE
Density	32 kg/m3
Recyclable	100% Recyclable
Workability	Excellent. No requirement for protection
Trafficability (As per NCC / BCA)	Resistant to maintenance traffic (1 person per panel)
Peel Strength ASTM D1976 - Initial	1.27 N/mm

MANUFACTURING TOLERANCES

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

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.

ENVIRONMENTAL

ZERO ODP

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

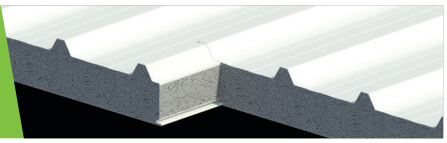
Resource Efficiency

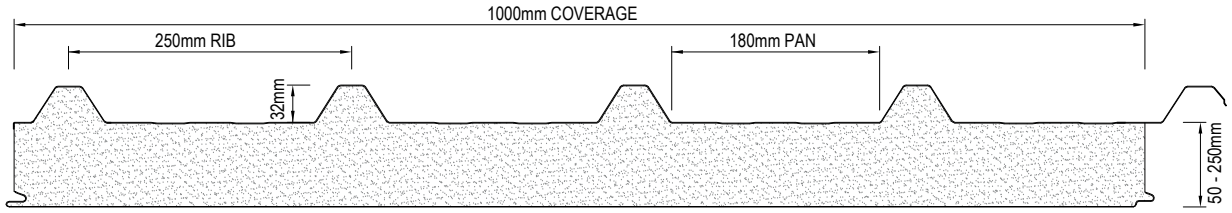
As a low density insulation product XFLAM uses very little natural resources by volume to manufacture. This, coupled with the high insulation performance, mean that the energy savings from using XFLAM will amount to hundreds of times the energy required to produce the product.

FEATURES & BENEFITS

- Fire Resistant and FM Approved
- Great Trafficability (140kg as per NCC/ BCA)
- Warranties up to 25 years
- All in one ceiling and roofing system
- Extremely thermally efficient (R Values up to 8+)
- Long lengths available up to 25m
- Low roof pitch down to 3°
- Cyclone Rated to 12 kPa
- Fast to install
- Superior spanning capability

ASKIN™ Roofing





Metric Roof with Mesa / Flat Profile

METRIC PROFILE COMBINATIONS

EXTERNAL SURFACE PROFILES	MESA (50mm)	MESA (50mm)
INTERNAL SURFACE PROFILES	FLAT	RIB (100mm)

Roofing

ASKIN™

0.5mm EXTERNAL FACE SKIN WITH 0.4mm INTERNAL FACE SKIN

STEEL SKIN SPECIFICATION

AS/NZS 2728 Paint Coating AS 1397 Substrate System

External Skin material – 0.5mm Thick G300S AM100 high performance steel with pre-painted superior polyester finish coat of 25 microns.

Internal Skin material – 0.4mm Thick G300S Z275 pre-painted off-white (Permagard®) steel with superior polyester finish coat of 25 microns and antibacterial protection.

PANEL WEIGHT

PANEL THICKNESS (mm)	**50**	**75**	**100**	**125**	**150**	**175**	**200**	**225**	**250**
Mass (kg / m²) for 0.5 / 0.4	10.0	10.9	11.7	12.6	13.4	14.3	15.1	16.0	16.8

PANEL SPAN (m)

Allowable UDL accounting for ULS SLS Span/200 single or multiple span condition (kPa)

PANEL THICKNESS	**2.0**	**2.4**	**3.0**	**3.6**	**4.0**	**5.0**	**6.0**	**7.0**	**8.0**	**9.0**	**10.0**
50mm	1.74	1.42	1.08	0.75	0.61	0.39	0.27	0.20	0.15	0.12	0.10
75mm	2.57	2.09	1.61	1.28	1.10	0.70	0.49	0.36	0.27	0.22	0.18
100mm	3.40	2.76	2.11	1.67	1.45	1.04	0.76	0.56	0.43	0.34	0.27
125mm	4.29	3.50	2.70	2.16	1.88	1.38	1.04	0.77	0.59	0.46	0.38
150mm	5.19	4.25	3.29	2.65	2.32	1.72	1.31	1.01	0.77	0.61	0.49
175mm	6.08	4.99	3.89	3.14	2.76	2.06	1.59	1.26	1.01	0.80	0.64
200mm	6.97	5.74	4.48	3.63	3.20	2.41	1.88	1.49	1.20	0.97	0.78
250mm	8.72	7.18	5.61	4.55	4.01	3.03	2.36	1.88	1.52	1.25	1.03

Span data generated in accordance with AS/NZS 1170: 2011
Based on 5% LPL 80% Confidence

>0.87 kPa Minimum Exterior
>0.5 Minimum Internal
<0.5 kPa Special Design

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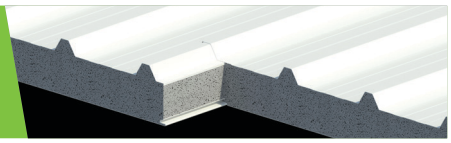

0.6mm EXTERNAL FACE SKIN WITH 0.6mm INTERNAL FACE SKIN

STEEL SPECIFICATION

AS/NZS 2728 Paint Coating AS 1397 Substrate System

External Skin material – 0.6mm 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 off-white (Permagard®) steel with superior polyester finish coat of 25 microns and antibacterial protection.

PANEL WEIGHT

PANEL THICKNESS (mm)	50	75	100	125	150	175	200	225	250
Mass (kg / m²) for 0.6 / 0.6	12.7	13.5	14.4	15.2	16.1	16.9	17.8	18.6	19.5

PANEL SPAN (m)

Allowable UDL accounting for ULS SLS Span/200 single or multiple span condition (kPa)

PANEL THICKNESS	2.0	2.4	3.0	3.6	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0
50mm	1.76	1.44	1.13	0.91	0.80	0.52	0.36	0.27	0.20	0.16	0.13	0.11	0.09
75mm	2.61	2.13	1.65	1.33	1.16	0.86	0.65	0.48	0.37	0.29	0.23	0.19	0.16
100mm	3.45	2.82	2.18	1.75	1.52	1.12	0.85	0.66	0.52	0.42	0.34	0.27	0.23
125mm	4.34	3.56	2.77	2.24	1.96	1.46	1.13	0.89	0.71	0.57	0.47	0.39	0.32
150mm	5.24	4.31	3.37	2.73	2.40	1.81	1.41	1.12	0.90	0.74	0.61	0.51	0.43
175mm	6.13	5.05	3.96	3.22	2.85	2.16	1.70	1.36	1.11	0.91	0.76	0.64	0.54
200mm	7.03	5.80	4.56	3.72	3.29	2.51	1.98	1.60	1.31	1.09	0.91	0.77	0.65
250mm	8.82	7.29	5.75	4.71	4.18	3.22	2.57	2.09	1.73	1.45	1.23	1.05	0.90

Span data generated in accordance with AS/NZS 1170: 2011
Based on 5% LPL 80% Confidence

>0.87 kPa Minimum Exterior
>0.5 Minimum Internal
<0.5 kPa Special Design

CYCLONE PERFORMANCE

PRESSURES / FIXING CENTRES	14g Tek Screws at 250 ctrs with buildex cyclone washers			
	6 kPa / 250	8kPa / 250	12 kPa / 250	Impact / m/s
75mm (Theoretical)	1.8	1.5	0.9	-
100mm (Certified)	2.4	2.0	1.2	40
150mm (Theoretical)	3.5	2.9	1.7	-

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.

Roofing

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Disclaimer

Information provided here for design guidance only. Designers are encouraged to seek advice from a suitably qualified professional. All data is subject to change without notice.