

**Product Specification Sheet**

**External Walls & Facades**

# Panel



**HARD FACTS**

**Project:**  
Avalon Airport

**Architect:**  
Designphase Australia

**Profile:**  
Silkline

**Skins:**  
Colorbond® Paperbark & Sky Red

**XFLAM Core**

ASKIN XFLAM is a patented Australian made material that is made from a syntactic phenolic foam that meets and exceeds all the performance requirements for rigid insulated material. XFLAM External Wall systems have been tested for thermal performance, weatherproofing, fire, wind loadings and fire resistance levels (FRL).

XFLAM Panel is a Group 1 material that meets the Factory Mutual requirements for internal, external, and roofing applications. XFLAM has achieved FM 4882 that certifies the insulated panels for smoke sensitive occupancies.

**Thermal Performance**

PRODUCT MATERIAL PROPERTIES					TOTAL SYSTEM R-VALUES	
Panel Nominal Thickness (mm)	Product U-Value (W/m <sup>2</sup> K) at 23°C	Product R-Value (m <sup>2</sup> K/W) at 23°C	Product R-Value (m <sup>2</sup> K/W) at 15°C	Product R-Value (m <sup>2</sup> K/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

Declared Product R-Value is calculated in accordance with AS/NZS 4859.1:2018 as required for compliance to the National Construction Code 2019.

**Features & Benefits**

- ▲ Fire Rated and FM Approved
- ▲ Long lengths available of 22m+
- ▲ Concealed Fix Systems available
- ▲ Warranties up to 15 years
- ▲ Superior spanning capability
- ▲ Cyclone Rated up to 15 kPa
- ▲ Fast to install
- ▲ Up to 120 minute FRL's
- ▲ Resilient material for a changing climate
- ▲ Thermally efficient (Product R-Values up to 6.9)
- ▲ Architectural low profiled ribs available
- ▲ Metallic and Printed Skins 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 © ASKIN February, 2023.



XFLAM Panels meet and exceed all the requirements of the National Construction Code with NATA approved testing and approvals. XFLAM Panel is a Factory Mutual (FM Approved) product meeting the rigorous international guidelines for fire compliance. XFLAM is a multi-layered product thus needs to satisfy the ISO AS9705 2003 Room test as stipulated in AS5637. ASKIN XFLAM meets a Group 1 system as a mechanically fixed install including concealed bracket. The panel has achieved a number of Fire Resistance Levels (FRL).

### Fire Performance

CRITERIA	PERFORMANCE
AS 1530.3: 1999 (Test for Flammability of materials)	Flame Spread 0 Smoke Dev. 2 Heat Evolved 0 Ignition 0
AS 5637.1: 2015 Compliance to C1.10 AS ISO 9705: 2003 (R 2016)	Group 1, SMOGRA < 100 (m <sup>2</sup> / s <sup>2</sup> 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)

XFLAM Panel has met the performance requirements of weatherproofing by tested to AS4284:2008, as required by the verification method NCC 2019 FV1.1.

### Weather Proofing

CRITERIA	PERFORMANCE
AS 4284: 2008 Water Ingress Test	NCC Compliant to FP1.4 and FP1.5 as per FV1.1

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

### Physical Properties

CRITERIA	PERFORMANCE
Core Density	36 +/- 4 kg/m <sup>3</sup>
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 to 250mm in multiples of 25mm	+/- 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. 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.

### 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

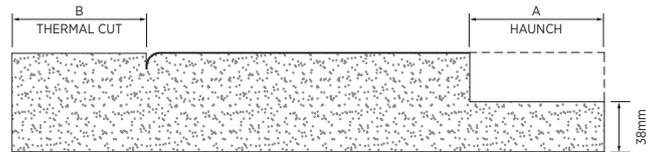
As a low density insulation product XFLAM uses very little natural resources by volume to manufacture. This, coupled with the high insulation performance, mean that the energy savings from using XFLAM will amount to hundreds of times the energy required to produce the product.

#### Zero ODP

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

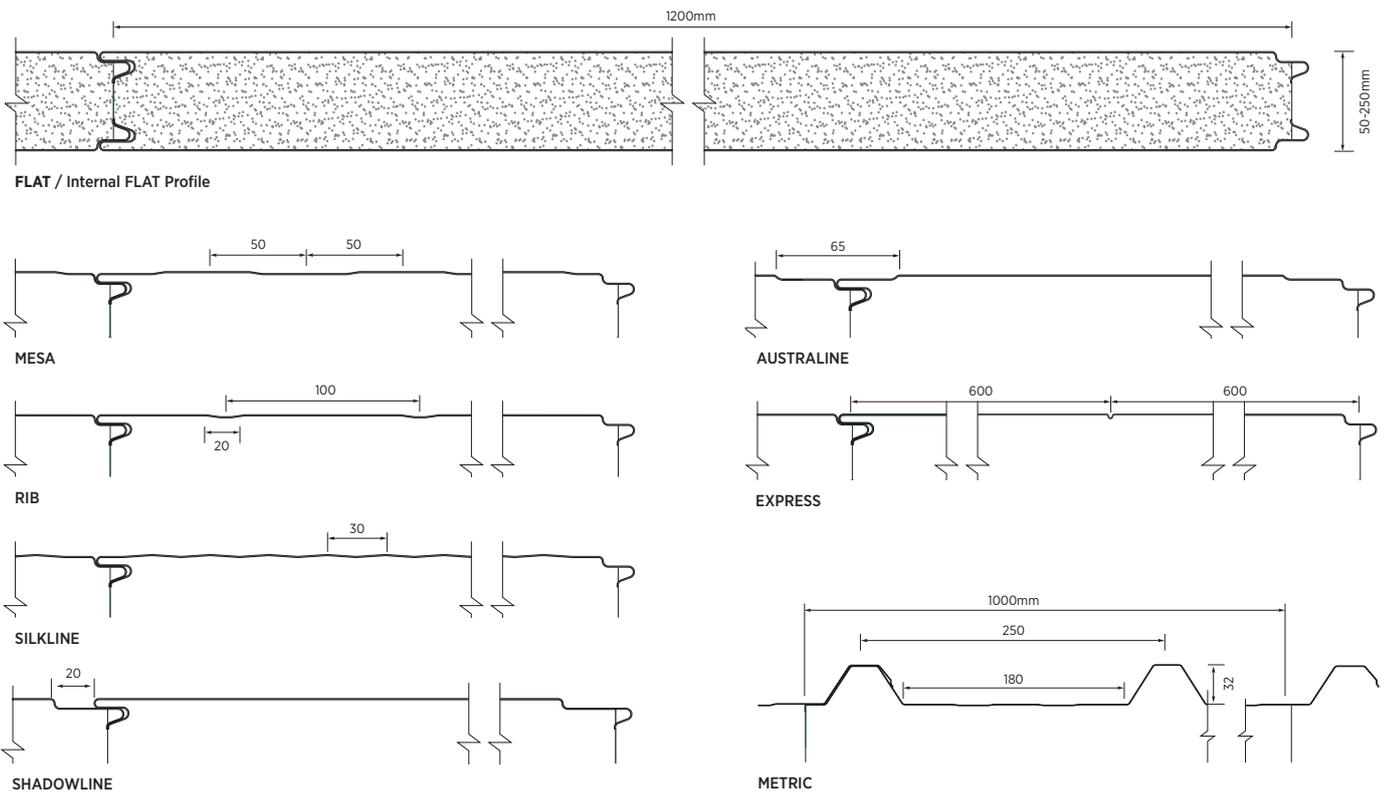
### Haunches & Thermal Cuts

ASKIN has the ability to manufacture on-line haunches for wall to ceiling joints and thermal cuts for low temp rooms. The standard cuts range from 50mm to 225mm in multiples of 25mm and significantly assist onsite installation speed as well as the reduction of site waste. Custom cut lengths are available subject to request.



### External Wall & Facade Profile Combinations

#### EXTERNAL PROFILES



#### Profile Options

External Surface Profiles	FLAT	MESA (50mm)	RIB (100mm)	Silkline	Shadowline	Australine	Express Joint	Metric
Internal Surface Profiles	FLAT RIB (100mm)	FLAT RIB (100mm)	FLAT RIB (100mm)	FLAT RIB (100mm)	FLAT	FLAT RIB (100mm)	FLAT RIB (100mm)	FLAT RIB (100mm)

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

## 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<sup>2</sup>)

PANEL THICKNESS (mm)	50	75	100	125	150	175	200	250
<b>Weight (kg / m<sup>2</sup>) for 0.6 / 0.6</b>	11.6	12.5	13.3	14.2	15.0	15.9	16.7	18.4

AS/NZS 2728 Paint Coating. AS 1397 Substrate System

### Span Table: ULS Allowable Pressure (kPa)

PANEL THICKNESS (mm)	PANEL SPAN (m)									
	2.0m	2.4m	3.0m	3.6m	4.0m	5.0m	5.5m	6.0m	7.0m	8.0m
<b>50</b>	2.83	2.44	1.85	1.27	0.88	0.71	0.63	0.55	0.39	0.22
<b>75</b>	4.03	3.55	2.82	2.14	1.68	1.35	1.18	1.02	0.69	0.35
<b>85</b>	4.51	3.99	3.21	2.48	2.00	1.60	1.40	1.20	0.81	0.41
<b>100</b>	5.23	4.65	3.79	3.01	2.48	1.98	1.73	1.48	0.98	0.48
<b>125</b>	-	-	-	3.33	2.82	2.20	1.90	1.64	1.13	0.62
<b>150</b>	-	-	-	3.65	3.15	2.42	2.06	1.79	1.27	0.75
<b>175</b>	-	-	-	3.98	3.48	2.64	2.22	1.95	1.41	0.88
<b>200</b>	-	-	-	4.30	3.81	2.86	2.38	2.10	1.56	1.01
<b>250</b>	-	-	-	4.95	4.48	3.29	2.70	2.41	1.84	1.27

### Span Table: SLS Allowable Pressure applied Externally (kPa)

PANEL THICKNESS (mm)	PANEL SPAN (m)									
	2.0m	2.4m	3.0m	3.6m	4.0m	5.0m	5.5m	6.0m	7.0m	8.0m
<b>50</b>	1.83	1.58	1.21	0.84	0.59	0.47	0.41	0.34	0.22	0.09
<b>75</b>	2.27	2.05	1.73	1.41	1.20	0.96	0.85	0.73	0.49	0.26
<b>85</b>	2.44	2.24	1.94	1.64	1.44	1.16	1.02	0.88	0.60	0.32
<b>100</b>	2.70	2.52	2.25	1.98	1.80	1.46	1.29	1.11	0.77	0.42
<b>125</b>	-	-	-	2.07	1.89	1.54	1.36	1.20	0.87	0.55
<b>150</b>	-	-	-	2.16	1.98	1.61	1.43	1.28	0.98	0.67
<b>175</b>	-	-	-	2.25	2.07	1.69	1.50	1.36	1.08	0.80
<b>200</b>	-	-	-	2.33	2.16	1.77	1.57	1.44	1.18	0.92
<b>250</b>	-	-	-	2.51	2.34	1.93	1.72	1.61	1.39	1.18

### Span Table: SLS Allowable Pressure applied Internally (kPa)

PANEL THICKNESS (mm)	PANEL SPAN (m)									
	2.0m	2.4m	3.0m	3.6m	4.0m	5.0m	5.5m	6.0m	7.0m	8.0m
<b>50</b>	-2.01	-1.76	-1.38	-0.99	-0.74	-0.62	-0.56	-0.51	-0.39	-0.27
<b>75</b>	-2.38	-2.15	-1.79	-1.43	-1.19	-1.00	-0.90	-0.80	-0.60	-0.41
<b>85</b>	-2.53	-2.30	-1.95	-1.61	-1.37	-1.14	-1.03	-0.92	-0.69	-0.46
<b>100</b>	-2.75	-2.53	-2.20	-1.87	-1.65	-1.37	-1.23	-1.09	-0.81	-0.54
<b>125</b>	-	-	-	-2.04	-1.81	-1.46	-1.29	-1.15	-0.87	-0.59
<b>150</b>	-	-	-	-2.20	-1.97	-1.56	-1.36	-1.21	-0.92	-0.63
<b>175</b>	-	-	-	-2.37	-2.13	-1.66	-1.42	-1.27	-0.98	-0.68
<b>200</b>	-	-	-	-2.54	-2.29	-1.75	-1.49	-1.34	-1.03	-0.73
<b>250</b>	-	-	-	-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 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).

## Cyclone Performance

PRESSURE FIXING CENTRES	SPANNING CAPABILITIES								
	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.