

Product Specification Sheet

External Walls & Facades

Panel

EPSFR



HARD FACTS

Project:
St Kilda Football Club

Architect:
Peddle & Thorp Architects

Profile:
Express Joint

Skins:
Piemento Red & Colorbond® Surfsmist

EPS-FR Core

EPS-FR core has been tried and tested for over half a century. This cost effective construction solution has an impressive strength to weight ratio, is 100% recyclable and because of its low density, it can provide further saving in the cost of foundations, framing and auxiliary insulation.

This NCC Group 1 or 2 panel contains a Flame-retardant (FR) making it self-extinguishing. ASKIN SL Grade EPS-FR insulation core delivers excellent thermal insulation and an integrated wall system. The high R-Value of ASKIN cellular foam EPS-FR is derived by the insulation value of air filled cells making up 98% of the product volume giving a safe and natural insulation to the building.

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	0.86	1.15	1.20	1.30	1.40	1.30
75	0.57	1.75	1.80	1.95	2.00	1.90
100	0.42	2.35	2.40	2.60	2.60	2.40
125	0.34	2.90	3.00	3.25	3.20	3.00
150	0.28	3.50	3.65	3.95	3.80	3.60
175	0.24	4.10	4.25	4.60	4.40	4.20
200	0.21	4.70	4.85	5.25	5.00	4.80
250	0.17	5.85	6.05	6.55	6.20	5.90

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 EPS-FR 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

- Flame retardant
- Superior spanning capability
- Thermally efficient (Product R-Values up to 5.85) (23 degrees))
- Fast to install
- Long lengths available of 22m
- Architectural low profiled ribs available
- Warranties up to 15 years
- Designer range of colours
- Concealed Fix Systems available

ASKIN Panel comprises an EPS-FR cellular foam core sandwiched between sheets of steel. The panel has been tested in the rigorous testing regime for surface linings prescribed in the National Construction Code (NCC). Encapsulation of the insulation material by the steel skins has been successfully proven to comply with the highest lining level of fire protection being NCC Group 1 classification.

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 C2D11(1)(b)	Group 1, SMOGRARC = 2.1 (Up to 250mm panel thickness, refer to note 1) Group 2, SMOGRARC = 14.0 (Up to 100mm panel thickness, refer to note 2) Group 2, SMOGRARC = 12.0 (Up to 250mm panel thickness, refer to note 3)

Note 1: Flashings - Steel angles, Steel Rivets Stitching - 1200mm in ceiling joints, Steel Rivets
Note 2: Flashings - Aluminium angles, Aluminium Rivets Stitching - No stitching requirements
Note 3: Flashings - Steel angles, Steel Rivets Stitching - No stitching requirements

ASKIN EPS-FR Panel has met the performance requirements of weatherproofing by tested to AS 4284:2008, as required by the verification method NCC 2022 FV3V1.

Weather Proofing

CRITERIA	PERFORMANCE
AS 4284:2008 Water Ingress Test	NCC Compliant to F3P1 as per F3V1

ASKIN Panel achieves the following ratings for panel tested in accordance with AS 1191:2002 and assessed against AS/NZS ISO 7171: 2004

Acoustics

CRITERIA	RW	RW + CTR
ASKIN EPS-FR Panel 75mm	25	20

Physical Properties

CRITERIA	PERFORMANCE
Core Density	13.5 kg/m ³
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 EPS-FR uses very little natural resources by volume to manufacture. This, coupled with the high insulation performance, mean that the energy savings from using EPS-FR will amount to hundreds of times the energy required to produce the product.

Zero ODP

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

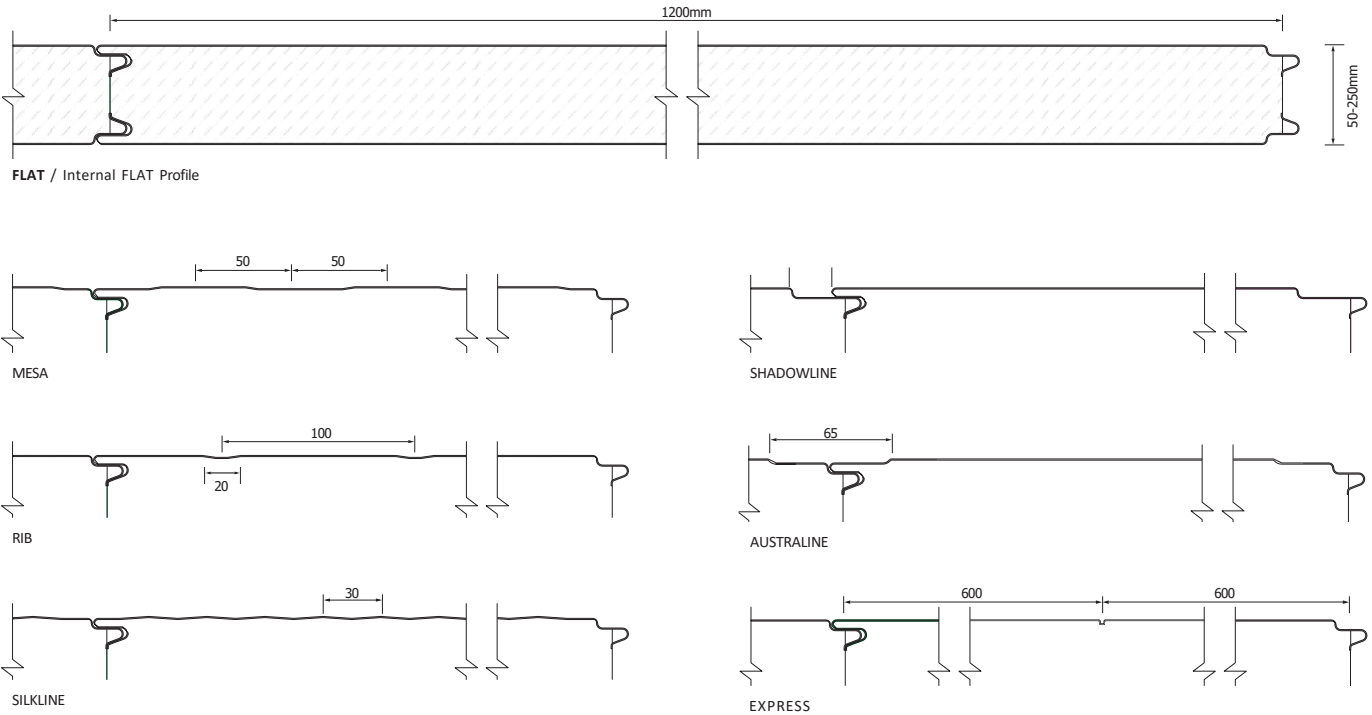
Haunches & Thermal Cuts

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	
Internal Surface Profiles	FLAT	RIB (100mm)	FLAT	RIB (100mm)	FLAT	RIB (100mm)	FLAT	RIB (100mm)	FLAT	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 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 – 0.6 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 (m²)

PANEL THICKNESS (mm)	50	75	100	125	150	175	200	250
Weight (kg / m²) for 0.6 / 0.6	10.7	11.1	11.4	11.8	12.2	12.6	13.3	13.7

AS/NZS 2728 Paint Coating. AS 1397 Substrate System

Span Table: Allowable Pressure Applied Externally (kPa)

PANEL	PANEL SPAN (m)											
PANEL THICKNESS (mm)	2.0	2.4	3.0	3.6	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0
50mm	1.65	1.33	1.00	0.77	0.66	0.46	0.32	0.24	0.18	0.14	0.11	0.09
75mm	2.52	2.05	1.57	1.24	1.08	0.72	0.50	0.37	0.28	0.22	0.18	0.15
100mm	3.39	2.78	2.15	1.72	1.49	0.95	0.66	0.49	0.37	0.29	0.24	0.20
125mm	4.27	3.50	2.73	2.20	1.86	1.19	0.83	0.61	0.47	0.37	0.30	0.25
150mm	5.14	4.23	3.31	2.68	2.23	1.43	0.99	0.73	0.56	0.44	0.36	0.30
175mm	6.02	4.96	3.89	3.16	2.61	1.67	1.16	0.85	0.65	0.51	0.42	0.34
200mm	6.89	5.69	4.47	3.58	2.90	1.85	1.29	0.95	0.72	0.57	0.46	0.38
250mm	8.65	7.15	5.64	4.47	3.62	2.32	1.61	1.18	0.91	0.72	0.58	0.48

Uniformly distributed ultimate limit state short term Wind load as derived from AS1170.2. Serviceability limit state deflection limited to span/90. Thermal deflection and required stress relief cuts should be considered for controlled environments by a suitably competent person.

Panel is assumed to be fixed into a suitable structure. Fixings, number and type should be considered by a suitably competent person. Cyclonic applications require further information from ASKIN engineering. 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

Wall Application

PANEL THICKNESS (mm)	PANEL SPAN 2.8 (single)	IMPACT
75mm (0.6 / 0.6)	2.7 kPa	37m/s
100mm (0.6 / 0.6)		38 m/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.