ASKIN Performance Panels

EXTERIORS
External Walls & Facades

EPS Panel

EPSFR

With over 50 years of proven performance, **EPS-FR (Flame-Retardant Expanded Polystyrene)** is a cost-effective construction solution offering an exceptional strength-to-weight ratio. Its low density helps reduce the cost of foundations, framing, and auxiliary insulation, while being **100% recyclable** for a more sustainable build. ASKIN's EPS External Wall Systems have been comprehensively tested for thermal efficiency, weatherproofing, structural integrity, and wind loading,

ASKIN's **SL Grade EPS-FR insulation core** delivers excellent thermal performance within an integrated wall system. Containing a flame-retardant (FR) additive, the panel is **self-extinguishing** and tested to achieve **NCC Group 1 or 2 classifications**.
The high R-Value of ASKIN cellular foam EPS-FR is derived from millions of air-filled cells — which make up approximately 98% of the product's volume — providing a safe, natural, and efficient insulation solution for external wall applications.

Fire Performance

Criteria	Performance
AS 1530.3: 1999 (Test for Flammability of materials)	Flame Spread 0 Smoke Dev. 2 Heat Evolved 0 Ignition 0
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)
AS 5637.1: 2015 Compliance to C2 D11 AS ISO 9705: 2003 (R 2016)	Group 1, SMOGRARC =2.4 (Up to 250mm panel thickness, refer to note 1) Group 2, SMOGRARC =18.1(Up to 150mm 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 - Aluminum angles, Aluminum Rivets Stitching - No stitching requirements
Note 3: Flashings - Steel angles, Steel Rivets Stitching - No stitching requirements)

Features & Benefits

- Fire retardant
- Warranties up to 15 years +
- Concealed Fix Systems available
- Thermally efficient (Product R-Values up to 5.85)
- Lengths up to 22m and is fast to install
- Suitable for temperature-controlled environments
- Cyclone Rated up to 15 kPa
- Superior spanning capability

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0.6mm External Face Skin with 0.6mm Internal Face Skin

Standard Steel Specification

External skin material – 0.6 Thick G300S AM100 high performance steel with pre-painted superior polyester finish coat of 25 microns.

Internal Skin Material – 0.6 mm 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**	**150**	**175**	**200**	**250**
Weight (kg / m²) for 0.6 / 0.6	11.6	21.2	13.3	14.2	15.0	16.7	18.4

*AS/NZS 2728 Paint Coating. AS 1397 Substrate System

Panel 0.6/0.6	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
300mm	10.40	8.61	6.80	5.36	4.34	2.78	1.93	1.42	1.09	0.86	0.70	0.57

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/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. Fixings, number and type should be considered by a suitably competent person. 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).

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.

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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

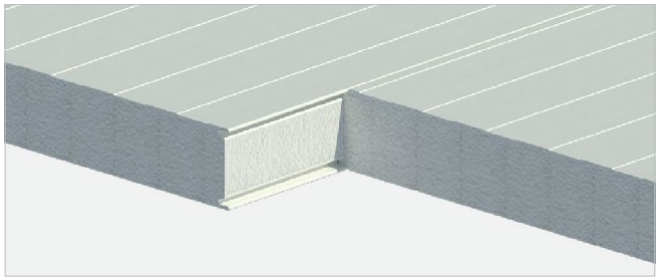
EPS-FR foam insulation manufacturing does not use Ozone Depleting Substances such as CFCs, HCFCs or HFCs.

External Wall & Facade Profile Combinations

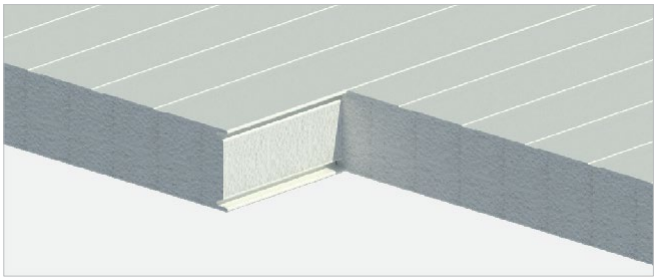
Internal Profiles

EPS Panel Mesa

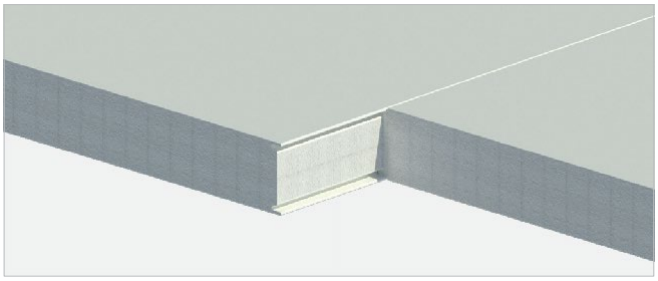
EPS Panel Flat, Shadowline, Australine



EPS Panel Mesa Joint



EPS Panel Rib Joint



EPS Panel Flat Joint

EPS Panel Rib

EPS Panel has met the performance requirements of weatherproofing by tested to AS4284:2008, as required by the verification method NCC 2022 Volume 1 AMDT 2 F3 P1

Weatherproofing	
Criteria	**Performance**
AS 4284: 2008 Water Ingress Test	NCC Compliant to F3P1 as per F3 V1

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ASKIN EPS-FR Panel has met 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 EPS-FR Panel 75mm	23	21
ASKIN Dual Panel System - XFLAM & EPS-FR 75mm	43	37

Physical Properties

Criteria	Performance
Core Density	13.5 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

ASKIN Performance Panels offer outstanding flexibility in design and installation. While most commonly installed vertically, they can also be laid horizontally or diagonally to achieve specific aesthetic or practical outcomes. For longer spans or where panels intersect with structural elements, they can be butt-jointed using negative-detail top-hat sections, which are available with optional fixing-concealing caps for a seamless finish. A comprehensive range of approved hardware is 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 guidance on the most suitable installation method for your project.

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.

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	2.50
125	0.34	2.90	3.00	3.25	3.30	3.20
150	0.28	3.50	3.65	3.95	3.90	3.70
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	6.00

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

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

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