



Core

Panel cores are lightweight, fire-resistant composite insulation material manufactured to Australian standards. XFlam is both recyclable in itself and is capable of absorbing recycled foams such as EPS, PUR and PIR. Steel skins are bonded to the core under pressure using a two-part thermosetting polyurethane adhesive.

Skins

Sheet thickness can range from 0.40mm to 0.60mm for either surface skin. Panel skins are available with a choice of steel:

- Colorbond® Permagard™ steel, incorporating Microban® antibacterial technology in its coating to provide durable, food-safe performance that will not wash off. This steel is available in Permagard™ White only.
- Colorbond® standard grade steel comes in a wide range of designer colours.
- There are other skin materials available on request, including Stainless Steel, Aluminium and Printech™ printed steel.

Colour

The many colours available in Colorbond® range from traditional to modern. For Prestige Applications there is Colorbond® Metallic steel. Generally, the lighter colours are preferred for external use because they reflect solar radiation. The various surfaces and colour choice can influence the price per square metre - our sales staff will gladly assist you in your selection.

Dimensions

- Width: 1200mm as a modular standard.
- Thickness: 50 to 250mm in multiples of 25mm.
- Length: As required, determined by handling, design and transportation.

Profiles

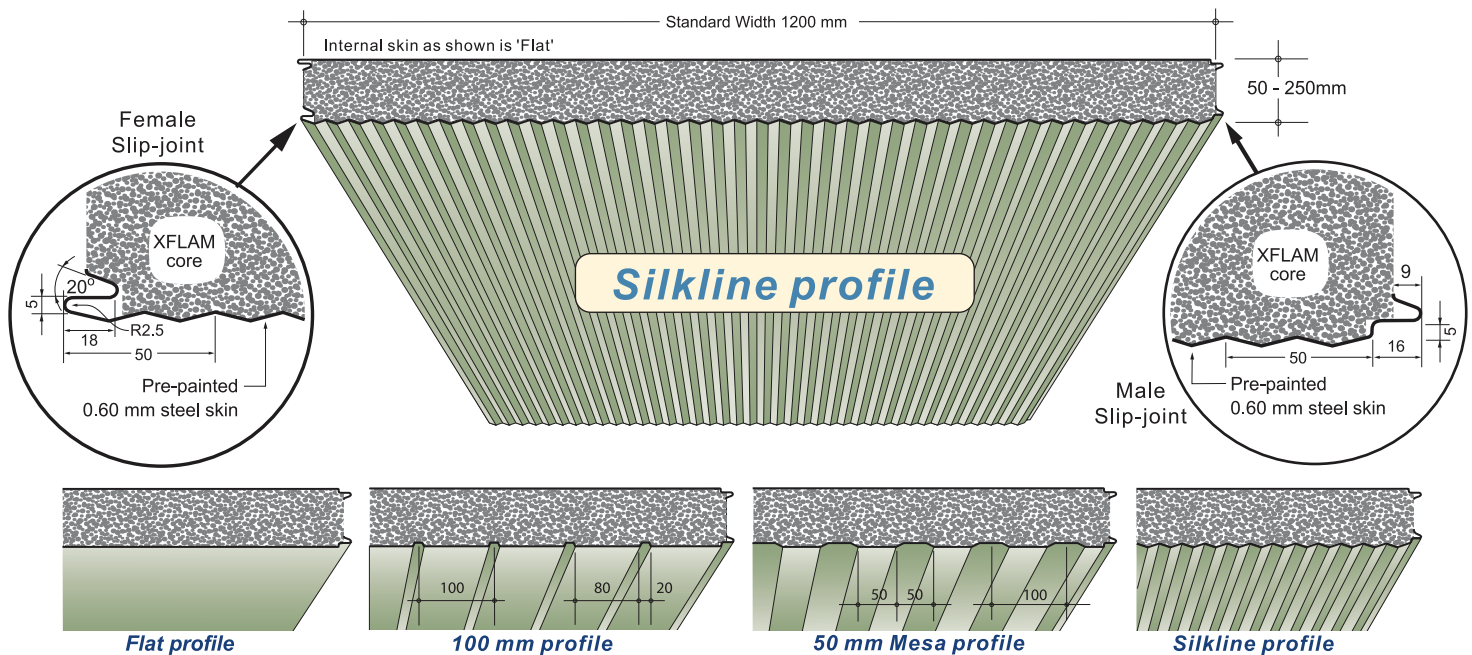
Available with a flat surface finish or low profile of 0.75mm depth to either surface: 100mm Rib profile, 50mm Mesa Rib and Silkline. The Austral Slip-joint® is incorporated into the edges of both surface skins for easy installation.

TECHNICAL SPECIFICATIONS AT A GLANCE

| Typical 100mm panel with XFlam core and nominal 0.60mm steel skins | |
|--|---|
| Weight | 14.6kg/m ² |
| Span | 5.5m with 1.61kN/m ² design load |
| R-Value | 3.23m ² KW |

FIRE PERFORMANCE AT A GLANCE

| Result | Standard |
|-------------------|----------------|
| FM Global Class 1 | FMG 4880 |
| -/130/30 | AS 1530.4 1997 |
| BCA Group 1 | ISO 9705:1993 |



TECHNICAL INFORMATION

MELBOURNE (03) 9706 3277
ADELAIDE (08) 8252 7188
PERTH (08) 9249 4022

TECHNICAL INFORMATION

All information contained in this brochure is available in PDF format at www.australinsulation.com.au



Description

- XFLAM™ panels are a lightweight composite building system.
- The system comprises of two sheets of Colorbond® steel, XFLAM™ core and bonded by special adhesives.
- Panels are formed with the Austral Slip-joint® enabling effective and easy installation.

Fire Safety Performance

| |
|---|
| BRANZ: ISO 9705 - exceeds 20mins which is the requirement for Group 1 Australian Building Code . |
| Factory Mutual: Meets fire resistance requirements of FM Global Class 1 (4880) "Subject to the conditions of Approvals as a Class 1 insulated wall & ceiling panel when installed as described in the current edition of the FM Approval Guide." |

Panel Specifications

| Width | Core | Length | U-Value | Adhesive | Finish |
|--------------|--------|---|-------------|---|--|
| 1200mm cover | XFlam™ | Cut to order Min. 1000mm Max. 22000mm | 0.031 W/M/K | Thermosetting two part mix of Polyurethane. CFC Free | Flat, 100mm Rib, 50mm Mesa Rib, Silkline. |

Panel Skin

| Finish | Thickness | Metal | Colour |
|------------|--------------|--|--|
| Colorbond® | 0.60mm (BMT) | BlueScope Steel Zinc coated with a corrosion inhibitive primer baked onto surface with durable top coat. | Classic Cream, Surfmist, Paperbark, Dune, Shale Grey, Deep Ocean and Pale Eucalypt plus 3 Metallics and Permagard™ White |

Colorbond® Permagard™ steel has been successfully designed with antibacterial properties which provide excellent benefits across many applications. Non-standard metals, colours and paint types may be negotiated subject to quantity and time considerations.

Panel Properties

| Thickness (mm) | 50mm | 75mm | 100mm | 150mm | 200mm | 250mm |
|---|------------------------|------|-------|-------|-------|-------|
| Weight (kg/m ²) based on panels with 0.59BMT steel wall & facade panels | 12.7 | 13.7 | 14.6 | 16.5 | 18.4 | 20.3 |
| R-Value (m ² KW) | 1.61 | 2.42 | 3.23 | 4.84 | 6.45 | 8.06 |
| Compressive Strength | 300 kpa | | | | | |
| Cross Breaking Strength | 535 kpa | | | | | |
| Peel Strength | 91.3 N/mm ² | | | | | |
| Core Density | 44 kg/m ³ | | | | | |

Panel Span in Metres

| DESIGN LOAD CAPACITY Steel Thickness 0.60mm | | | | | | | | | | | | | | |
|---|--|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Nominal Panel Thickness | Ultimate Limit State Uniform Design Load Capacity kN/sqm | | | | | | | | | | | | | |
| | Single Span - Length in metres | | | | | | | | | | | | | |
| | (mm) | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 |
| 50 | 3.0 | 2.40 | 2.00 | 1.71 | 1.50 | 1.19 | 0.96 | 0.79 | 0.67 | 0.57 | - | - | - | - |
| 75 | 4.54 | 3.63 | 3.03 | 2.59 | 2.27 | 1.79 | 1.45 | 1.20 | 1.01 | 0.86 | 0.74 | 0.65 | 0.57 | 0.45 |
| 100 | 6.07 | 4.86 | 4.05 | 3.47 | 3.04 | 2.40 | 1.94 | 1.61 | 1.35 | 1.15 | 0.99 | 0.86 | 0.76 | 0.60 |
| 150 | 9.14 | 7.31 | 6.09 | 5.22 | 4.57 | 3.61 | 2.92 | 2.42 | 2.03 | 1.73 | 1.49 | 1.30 | 1.14 | 0.9 |
| 200 | 10.9 | 8.72 | 7.27 | 6.23 | 5.45 | 4.31 | 3.49 | 2.88 | 2.42 | 2.06 | 1.78 | 1.55 | 1.36 | 1.08 |
| 250 | 13.7 | 10.9 | 9.13 | 7.82 | 6.80 | 5.37 | 4.35 | 3.6 | 3.02 | 2.58 | 2.22 | 1.93 | 1.70 | 1.34 |

- Notes:
- 1) The tabulated design loads are factored maximum design loads. (In the assessment of the design loads, the designer should take into account the self weight of the XFLAM™ panel).
 - 2) Compliance with these recommendations will ensure that deflections do not exceed span / 90 to the left of the dark shading and span / 150 to the left of the light shading. Where more severe deflection restrictions are required, specific testing of deflection characteristics is recommended for the various span / thickness combinations.
 - 3) A minimum design load of **0.75 kN / m²** is recommended for general applications. Design loads below the lightly shaded area satisfy Serviceability Limits on deflections. Circumstances may require different design loading.
 - 4) Where panels are continuous across a support, it is recommended that stress cuts be made across the inside (or cold side) steel skin adjacent to the supports to prevent buckling of the outer (warm side) skin at the support. Fixings should be provided on both sides of the stress cut.