



Core

Panel cores are self-extinguishing grade expanded polystyrene Class SL, manufactured to Australian standards. Steel skins are bonded to the core under pressure using a two-part thermosetting polyurethane adhesive. Other specialised cores are also available on request.

Skins

Sheet thickness ranges. The external weather skin is standard at 0.40mm with a 100mm profile of 0.75mm depth with a 34mm rib forming the weather-joint. The internal skin is optional and can range from 0.40mm to 0.60mm. thickness.

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 Colorbond® Stainless steel and Ultra steel for severe coastal and industrial environments.

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 heat. 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: 75 to 200mm in multiples of 25mm.
- Length: As required, determined by handling, design and transportation.

Profiles

External skin profile is shown below, see overleaf for internal skin options.

SECTION PROPERTIES

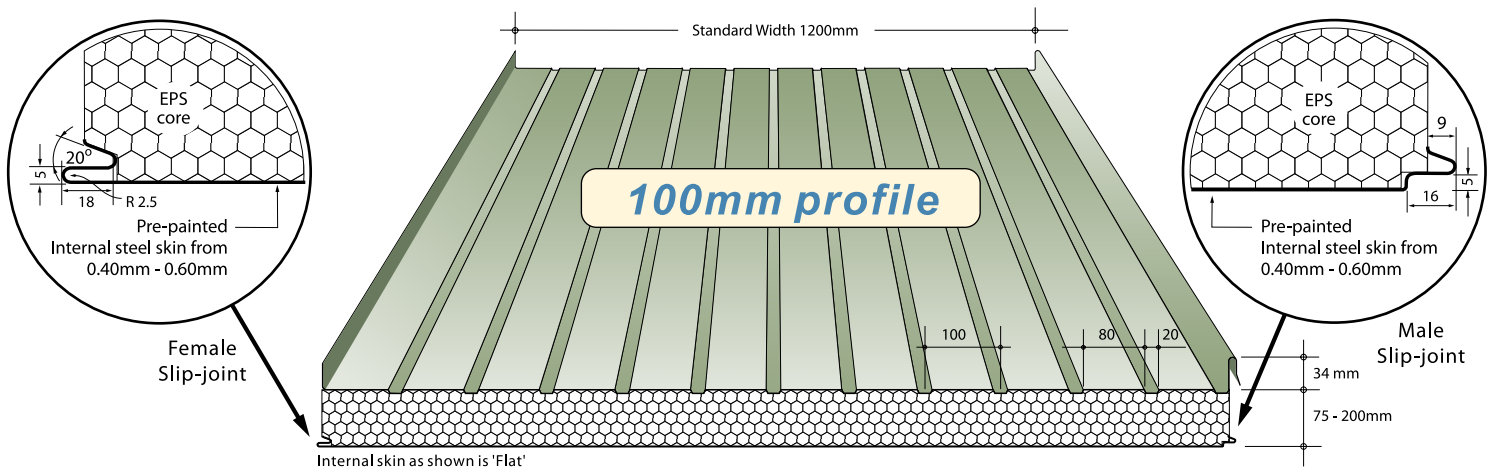
Section properties and mass for unit (1000mm) width of panel, together with the recommended maximum design skin stresses have been determined for panels of varying panel thickness and these are shown below.

0.40mm Steel Skin			
Thickness (mm)	Section Modulus (mm ²)	Maximum Design Skin Stress (MPa)	Weight (kg/m ²)
75	32020	90	8.1
100	42800	75	8.4
150	64370	63	9.1

THERMAL PERFORMANCE

(SL Grade EPS core)

Panel Thickness (mm)	R value (m ² K/W)	U factor (W/m ² K)
75	1.97	0.51
100	2.63	0.38
150	3.95	0.25



TECHNICAL INFORMATION

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



PROPERTIES - ULTIMATE LIMIT STATE

Nominal Panel Thickness (mm)	DESIGN LOAD CAPACITY													
	Ultimate Limit State Uniform Design Load Capacity kN/sqm													
	Single Span - Length in metres													
	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	9.0
75	2.88	2.31	1.92	1.65	1.44	1.14	0.92	0.76	0.64	0.55	0.47	0.41	0.36	-
100	3.21	2.57	2.15	1.83	1.60	1.27	1.03	0.85	0.71	0.61	0.52	0.46	0.40	0.32
150	4.06	3.25	2.71	2.32	2.03	1.60	1.30	1.07	0.90	0.77	0.66	0.58	0.51	0.40

Slip-joint®, 1200mm wide Roof panels, 0.40mm Base Metal thickness Colorbond®, raised profile at 50mm spacing on both sides of an SL Grade Polystyrene core. The top skin has a 34.0mm high male/female interlocking edge profile while the bottom skin has a standard Slip-joint male/female mating profile.

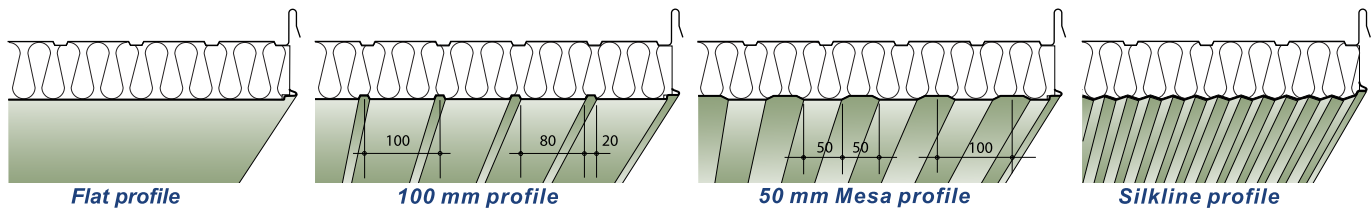
- Notes:
- 1) The tabulated loads are factored maximum design loads. (In the assessment of the design loads, the designer should take into account the self weight of the Econodeck panel).
 - 2) Compliance with these recommendations will ensure that deflections do not exceed span/90. Design loads below the lightly shaded area satisfy Serviceability Limits on deflections. 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 **0.67 kN/m²** is recommended for general applications. 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.

POLYSTYRENE CORE BUTT JOINTS

The butt joints between the ends of the polystyrene core material have been made by way of finger jointing providing a mechanical bond across the end faces of the core material. The finger joints at the butt joints of the polystyrene core material occur at every joint.

PROFILES

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



INSTALLATION

A complete guide to Econodeck installation techniques, including fixing and folding flashings for various applications, is available from Austral.

As it is often difficult to track down tool kits on hire (available on payment of a returnable deposit of \$1000) it has been decided to set a minimum order requirement of 200 sq. metres.

Austral Insulation reserves the right at all times and without notice to make any changes, modifications or improvements to its technical data or products. Issued Sept. 2008

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