

Lysaght Flatdek®

Roof cladding for
home improvements



- LYSAGHT FLATDEK® is a long-span cladding particularly suited to home improvement projects like room additions, carports and awnings.
- The underside of FLATDEK features clean uninterrupted lines, with an attractive gloss finish ensuring visual appeal.
- FLATDEK may be used on pitches from as low as 2° (1 in 30).



LYSAGHT

Lysaght Flatdek®

FLATDEK limit state wind pressure capacities (kPa)

Span type	Limit State	Span (mm)												
		1500	1800	2100	2400	2700	3000	3300	3600	3900	4200	4500	4800	5100
SINGLE	Serviceability	0.98	0.80	0.63	0.50	0.40	0.34	0.30	0.28	0.25	0.23	0.21	0.20	0.18
	Strength*	7.30	6.65	6.00	5.35	4.70	4.10	3.50	3.05	2.65	2.35	2.10	1.85	1.65
END	Serviceability	1.25	1.08	0.93	0.80	0.69	0.60	0.53	0.48	0.43	0.38	0.34	0.31	-
	Strength*	6.15	5.75	5.30	4.80	4.30	3.80	3.30	2.85	2.55	2.30	2.10	1.95	-
INTERNAL	Serviceability	1.30	1.16	1.04	0.93	0.83	0.75	0.68	0.63	0.57	0.52	0.47	0.43	-
	Strength*	6.75	6.10	5.50	5.00	4.55	4.15	3.85	3.50	3.20	2.90	2.60	2.30	-

*Table values are based on supports of 1mm BMT.

Material specifications

FLATDEK is made from:

- ZINCALUME® steel complying with AS 1397—2001 G550, AZ150 (550 MPa minimum yield stress, 150 g/m² minimum coating mass);

The base metal thickness is 0.42mm.

The COLORBOND® prepainted steel complies with AS/NZS 2728:2007.

Lengths

Sheets are supplied custom cut.

Limit states wind pressures

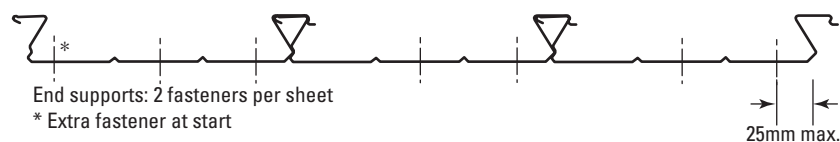
FLATDEK offers the full benefits of the latest methods for modelling wind pressures. The wind pressure capacity table is based on full scale tests conducted at BlueScope Lysaght's NATA-registered testing laboratory, using the direct air pressure testing rig.

Testing was conducted in accordance with AS 1562.1—1992 Design and installation of sheet roof and wall cladding—Metal, and AS 4040.2—1992 Resistance to wind pressure for non-cyclone regions.

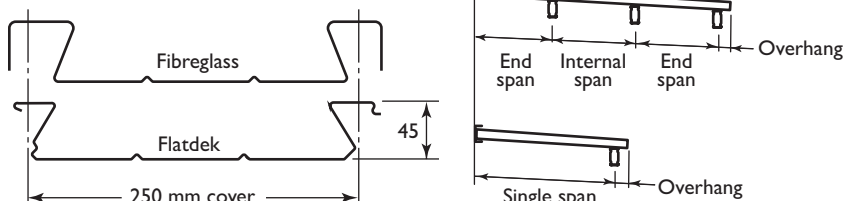
Simple fixing

The unique overlapping dovetail ribs of the FLATDEK profile can be easily fitted together by hand.

FLATDEK is simply and economically fixed on top of its supporting members using self-drilling screws in the trays. This method, using the recommended



Sections



Fasteners without Insulation

	Fix to Steel ≥0.55 up to 1.0mm BMT	Fix to Steel >1.0mm BMT up to 3.0mm BMT	Fix to Timber Hardwood (J1-J3)	Fix to Timber Softwood (J4)
Pan Fixed	12-14x20, Metal Tekes, HH with EPDM seal or RoofZips M6-11x25 with EPDM seal	12-14x20, Metal Tekes, HH with EPDM seal	10-12x25, Type 17, HH with EPDM seal	10-12x30, Type 17, HH with EPDM seal or RoofZips M6-11x25 with EPDM seal

- Notes: 1) Values given are: gauge/threads per inch/ lengths (mm). HH = Hex. Head. Coating Class 4
2) When fixing to FIRMLOK, tighten until washer is just gripped enough to give a weathertight seal. Don't tighten any more.
3) Screw specification as above or equivalent fastener.

fasteners, is appropriate for open sided awnings where a high degree of weather tightness is not required.

Greater weather-tightness can be achieved using bonded washers (see table below).

Maximum support spacings

The maximum recommended support spacings are based on testing in accordance with AS 1562.1—1992, Design and installation of sheet roof and wall cladding, and AS 4040.1—1992, Resistance to concentrated loads.

Depending on support spacings used, FLATDEK can be installed as either

- light foot traffic roof (incidental maintenance foot traffic acceptable); or
- no foot traffic roof (will not support the weight of a person walking on it), see tables.

The pressure considered is based on a typical awning $C_{pn} = -0.8$ and $K_f = 1.5$ adjacent to an enclosed structure.

The tables are based on FLATDEK fixed to supports of 1.0 mm BMT minimum. For FLATDEK awnings applications, the awning span is often governed by the capacity of the receiver channel and its connections. This must be considered in the design of any awning system.

Maximum support spacings (mm)

Type of span	Wind classification to AS 4055 & BCA			
	N1 (W28)	N2 (W33)	N3 (W41N)	N4 (W50N)
Spans for light foot traffic				
Single	2000	2000	2000	2000
End	2600	2600	2600	2600
Internal	3000	3000	3000	3000
Spans for no foot traffic				
Single	5100*	5100*	4500	3300
End	4800	4800	3700	3000
Internal	4800	4800	4450	3500
Stiffened overhangs	600	600	450	400

Supports must be not less than 1mm BMT.

* Spans of 5100mm may result in noticeable deflections under maximum loads. When deflections need to be considered in designs, reduce these spans to 4800mm.

Installation of a typical awning

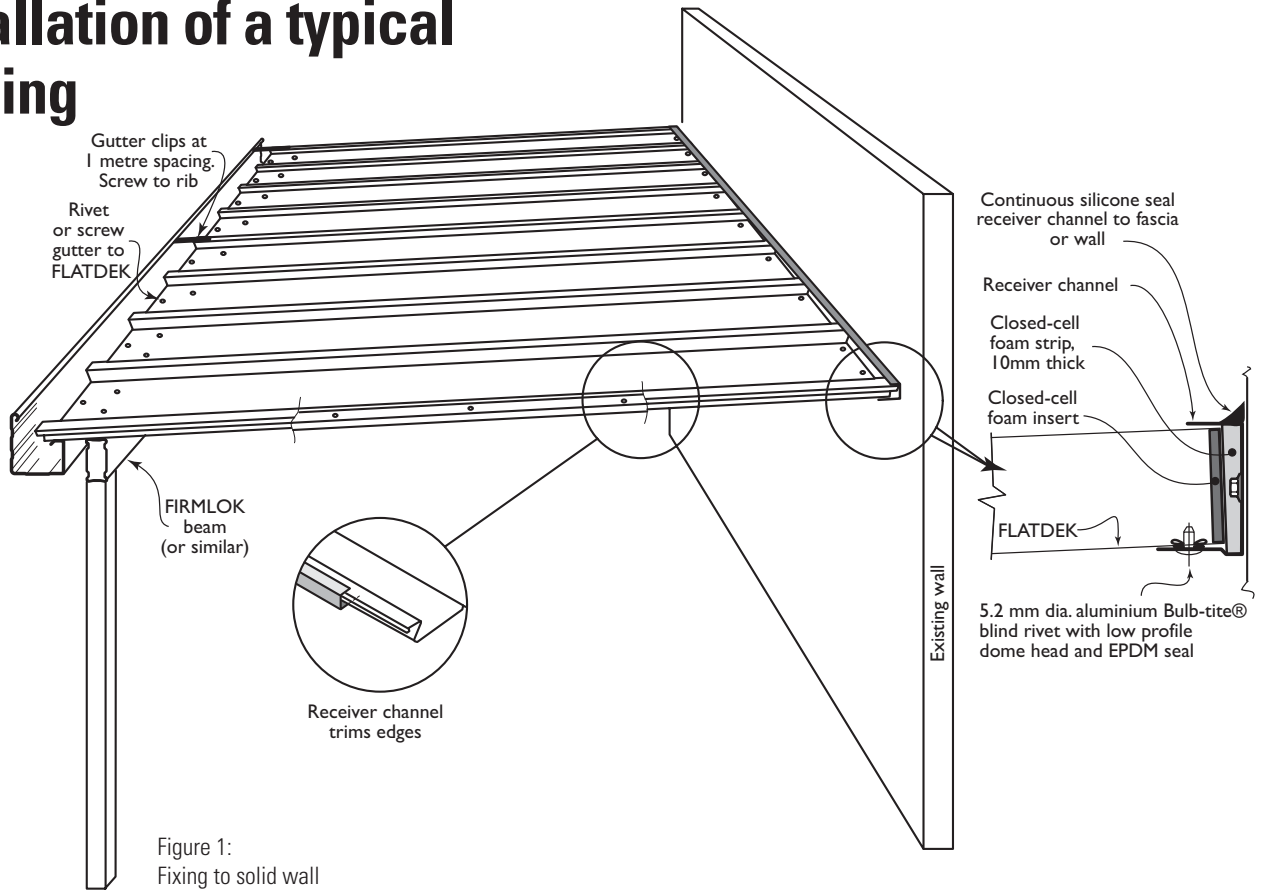


Figure 1:
Fixing to solid wall

Fit receiver channel

A receiver channel is usually used to securely fix the FLATDEK roof to the main building—usually to the building fascia, but the channel can be fixed to any solid wall if there is sufficient height (Figure 1).

Laying FLATDEK: Introduction

Laying of FLATDEK is easy. Lay sheets towards the prevailing wind.

Before you join sheets, it is important to remove the protective plastic coating otherwise the sheets won't clip together properly. Be careful to place the sheets on a soft surface to prevent scratching.

Some people find it easier to join two sheets together on the ground before placing them on the structure.

Laying FLATDEK: Procedure

Insert the closed-cell foam strip into the receiver channel.

Push the first sheet firmly into the receiver channel, with the flat-topped rib to the edge of the roof (Figure 2).

- Fix the sheet at the beam end as shown in diagram above. Tighten screws until washer is just gripped enough to give a weathertight seal. Don't tighten any more.
- Squeeze a closed-cell foam insert into the receiver channel and massage it to fit neatly all round as illustrated above (Figure 1).
- Fix the sheet at the receiver channel end (Figure 1).

Place the next sheet with its rib on top of the rib of the first sheet, and with the house-end close to the receiver channel. Engage the ribs at the house end for the first 100 mm (Figure 3).

With a rubber mallet, tap the sheet into the receiver channel, ensuring the sheet beds firmly in the foam strip.

Complete engaging the ribs (Figure 3).

Check that the sheet fits snugly against the previous sheet by looking at the joint between the sheets on the underside. Fix the sheet as previously described. Repeat the process until all sheets are laid.

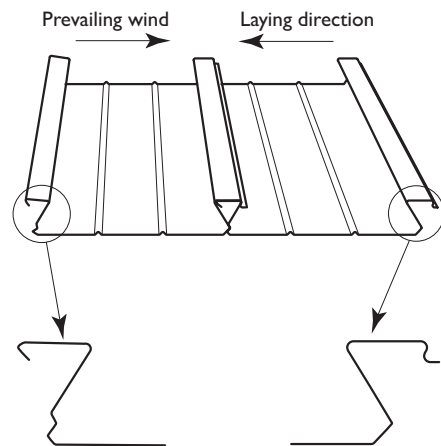


Figure 2: Sequence of laying sheets

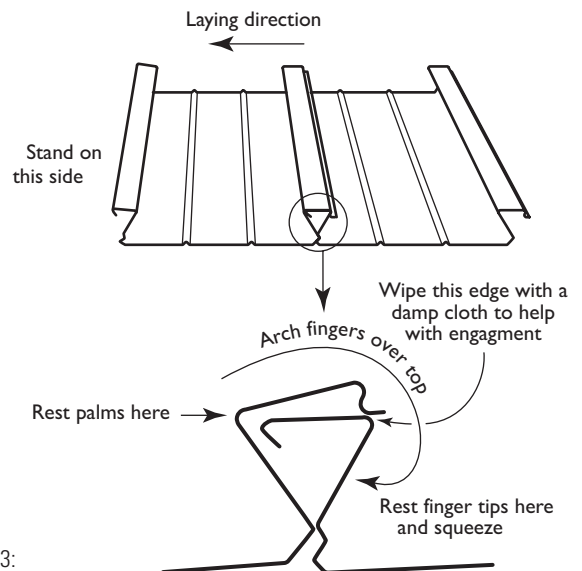


Figure 3:
Engaging the ribs

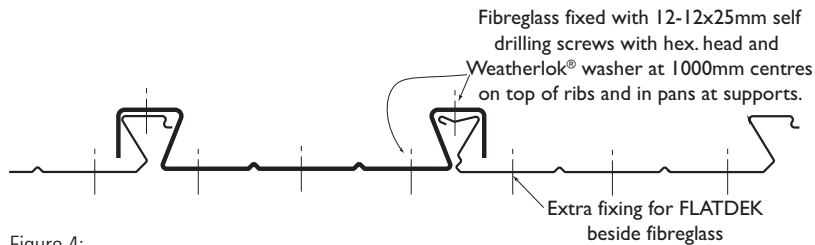


Figure 4:
Fixing of fibreglass panels

Fibreglass panels

FLATDEK can be complemented with translucent fibreglass panels. The edges of these panels overlap the adjoining FLATDEK panels (Figure 4).

Either side of a fibreglass panel there must be at least two FLATDEK panels before another fibreglass panel may be placed. Two fibreglass panels cannot be laid next to each other. Slide fibreglass panels along the FLATDEK into the receiver channel.

Adverse conditions

If this product is to be used in marine, severe industrial, or unusually corrosive environments, ask for advice from our information line.

Metal & timber compatibility

Lead, copper, bare steel and green or some chemically-treated timbers are not compatible with this product; thus don't allow any contact of the product with those materials, nor discharge of rainwater from them onto the product. If there are doubts about the compatibility of products being used, ask for advice from our information line.

Maintenance

Optimum product life will be achieved if all external surfaces are washed regularly. Areas not cleaned by natural rainfall (such as the tops of walls sheltered by eaves) should be washed down every six months.

Safety, storage and handling

Handling Safety - LYSAGHT product may be sharp and heavy.

It is recommended that heavy-duty cut resistant gloves and appropriate manual handling techniques or a lifting plan be used when handling material.

Keep the product dry and clear of the ground. If stacked or bundled product becomes wet, separate it, wipe it with a clean cloth to dry thoroughly.

Disclaimer, warranties and limitation of liability

This publication is intended to be an aid for all trades and professionals involved with specifying and installing LYSAGHT products and not to be a substitute for professional judgement.

Terms and conditions of sale available at local BlueScope Lysaght sales offices.

Except to the extent to which liability may not lawfully be excluded or limited, BlueScope Steel Limited will not be under or incur any liability to you for any direct or indirect loss or damage (including, without limitation, consequential loss or damage such as loss of profit or anticipated profit, loss of use, damage to goodwill and loss due to delay) however caused (including, without limitation, breach of contract, negligence and/or breach of statute), which you may suffer or incur in connection with this publication.

© Copyright BlueScope Steel Limited October 2010

www.lysaght.com

Information, brochures and your local distributor

1800 641 417

Please check the latest information which is always available at www.lysaght.com

LYSAGHT, FLATDEK, COLORBOND & ZINCALUME are registered trademarks of BlueScope Steel Limited, ABN 16 000 011 058. Bulb-tite® is a registered trademark of ITW Buildex Pty Ltd. The LYSAGHT® range of products is exclusively made by BlueScope Steel Limited trading as BlueScope Lysaght. Printed by PM11M10/10

Handle materials carefully to avoid damage: don't drag materials over rough surfaces or each other; don't drag tools over material; protect from swarf.

Cutting

For cutting thin metal on site, we recommend a circular saw with a metal-cutting blade because it produces fewer damaging hot metal particles and leaves less resultant burr than does a carborundum disc.

Cut materials over the ground and not over other materials.

Sweep all metallic swarf and other debris from roof areas and gutters at the end of each day and at the completion of the installation. Failure to do so can lead to surface staining when the metal particles rust.

Sealants

Use neutral cure silicone sealants.

Pipe penetration

Flashing round small pipe penetrations is fairly simple using flanged sleeves or proprietary EPDM sleeves. Be careful to insulate incompatible materials.

Non-cyclonic areas

The information in this brochure is suitable for use only in areas where a tropical cyclone is unlikely to occur as defined in AS 1170.2—2002.

For information on the use of LYSAGHT products in cyclonic conditions, refer to the Cyclonic Area Design Manual, which is available by ringing Steel Direct on 1800 641 417 or on our website: www.lysaght.com.

