



C-Dek™ Design and Installation Guide

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Posts, beams and brackets shown
may differ from actual product supplied.



C-Dek™

C-Dek™ is a long-span cladding particularly suited to home improvement projects including room additions, carports and awnings. The underside of C-Dek™ features clean uninterrupted lines, with an attractive gloss finish ensuring visual appeal.



Material Specifications

COLORBOND® steel is pre-painted steel for exterior roofing and walling. The painting complies with AS/NZS 2728 and the steel base is an aluminium/zinc alloy-coated steel complying with AS 1397. Minimum yield strength is G550 (550 MPa). Minimum coating mass is AM100 (100g/m²).

The base metal thickness is 0.42mm.

Colours

C-Dek™ is available in an attractive range of colours in COLORBOND® pre-painted steel and is available in different combinations of top/bottom colours with a gloss finish on the underside. Ask your local sales centre for colour availability.

Lengths

Sheets are supplied custom cut. Maximum length 9000mm, minimum length 850mm.

Mass (COLORBOND® steel)

5.23kg/m² (Painted both sides)

Tolerances

Length: +0mm, -15mm, Width: +2mm, -2mm

Maximum Support Spacings

The maximum recommended support spacings are based on testing in accordance with AS 1562.1 Design and installation of sheet roof and wall cladding Part 1: Metal, AS 4040.1 Methods of testing sheet roof and wall cladding Method 1: Resistance to concentrated loads. Depending on support spacings used, C-Dek™ can be installed as either:

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

The pressure considered is based on a typical flat awning attached to an enclosed structure. The pressure coefficient for this situation is based on 3 sides blocked.

The tables are based on C-Dek™ fixed to supports of 1.0mm BMT minimum or C-Dek™ awning applications, the strength of the receiver channel method of attachment must be considered in the design of any system.

Maximum Support Spacings (mm)

Type of Span	Wind classification to AS 4055 & BCA			
	N1	N2	N3	N4
Spans for no foot traffic				
Single span	4500	4500	4500	3800
End span	4500	4500	4500	3700
Internal span	4500	4500	4500	4400
Stiffened overhangs	600	600	450	400
Spans for light foot traffic				
Single span	2100			
End span	2600			

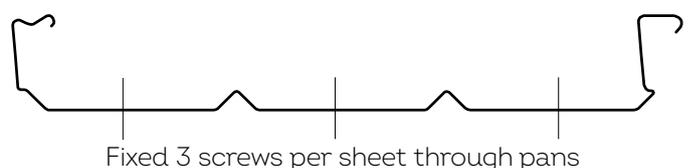
No overhang is allowed.

Notes:

1. For pitched structures when dead load deflections need consideration, use a maximum span of 3300.

Simple Fixing

C-Dek™ is simply and economically fixed on top of its supporting members using self-drilling screws (teks) in the pans. This method, using the recommended fasteners, is appropriate for open sided awnings where a high degree of weather tightness is not required.



Fasteners without Insulation

	Fix to Steel (Total 2.0mm) Single & lapped steel thickness ≥0.55 up to 1.0mm BMT	Fix to Steel Single steel thickness ≥1.0mm BMT up to 3.0mm BMT	Fix to Timber Hardwood	Fix to Timber Softwood
Pan Fixed	12-14x20, Metal Tek, HH with EPDM seal	12-14x20, Metal Tek, HH with EPDM seal	M5.5-11x40 Batten Zip with 16mm bonded Aluminium EPDM washer	M5.5-11x40 Batten Zip with 16mm bonded Aluminium EPDM washer

Notes:

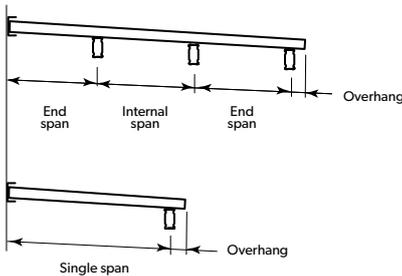
1. Values given are: gauge-threads per inch x lengths (mm). HH = Hex. Head. Finish is Coating Class 4.
2. When fixing to the Centenary® beam, tighten until washer is just gripped enough to give a weathertight seal. Don't tighten any more.
3. Screw specification as above or equivalent fastener.

C-Dek™ Limit State Wind Pressure Capacities (KPa)

Span Type	Limit State	Span (mm)											
		1500	1800	2100	2400	2700	3000	3300	3600	3900	4200	4500	4800
Single	Serviceability	0.98	0.8	0.63	0.5	0.4	0.34	0.27	0.25	0.22	0.21	0.19	0.17
	Strength	7.3	6.65	6	4.2	3.78	3.7	2.85	2.67	2.48	2.35	2.1	1.85
End	Serviceability	1.25	1.08	0.93	0.8	0.69	0.6	0.53	0.48	0.43	0.38	0.34	0.31
	Strength	6.15	5.26	4.46	4.06	3.56	3.05	2.64	2.25	1.9	1.58	1.28	1
Internal	Serviceability	1.3	1.16	1.04	0.93	0.86	0.79	0.72	0.66	0.59	0.52	0.47	0.43
	Strength	6.75	6.1	5.26	4.46	3.56	3.05	2.64	2.25	1.9	1.58	1.28	1

Limit States Wind Pressures

Testing was conducted in accordance with AS 1562.1 Design and installation of sheet roof and wall cladding Part 1: Metal and AS 4040.2 Methods of testing sheet roof and wall cladding Method 2: Resistance to wind pressures for non-cyclone regions.



Notes:

1. For double spans use the end spans.

Adverse Conditions

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

Minimum Roof Pitch

2° (1 in 30).

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.



Maintenance

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

Safety, Storage and Handling

Handling Safety - Fielders® products 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.

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.

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.

Cutting

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

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AUSTRALIAN STANDARDS

Australian Standard	Definition
AS 1397:2021	Continuous hot-dip metallic coated steel sheet and strip - Coatings of zinc and zinc alloyed with aluminium and magnesium
AS 1562.1:2018	Design and installation of sheet roof and wall cladding - Part 1: Metal
AS 4040.1-1992 (Rec :2016)	Methods of testing sheet roof and wall cladding - Method 1: Resistance to concentrated loads
AS 4040.2-1992 (Rec 2016, Amd 1:2018)	Methods of testing sheet roof and wall cladding - Part 2: Resistance to wind pressures for non-cyclone regions
AS 4055:2021	Wind loads for housing
AS/NZS 1170.2:2021	Structural design actions - Part 2: Wind actions
AS/NZS 2728:2013	Prefinished/prepainted sheet metal products for interior/exterior building applications - Performance requirements

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