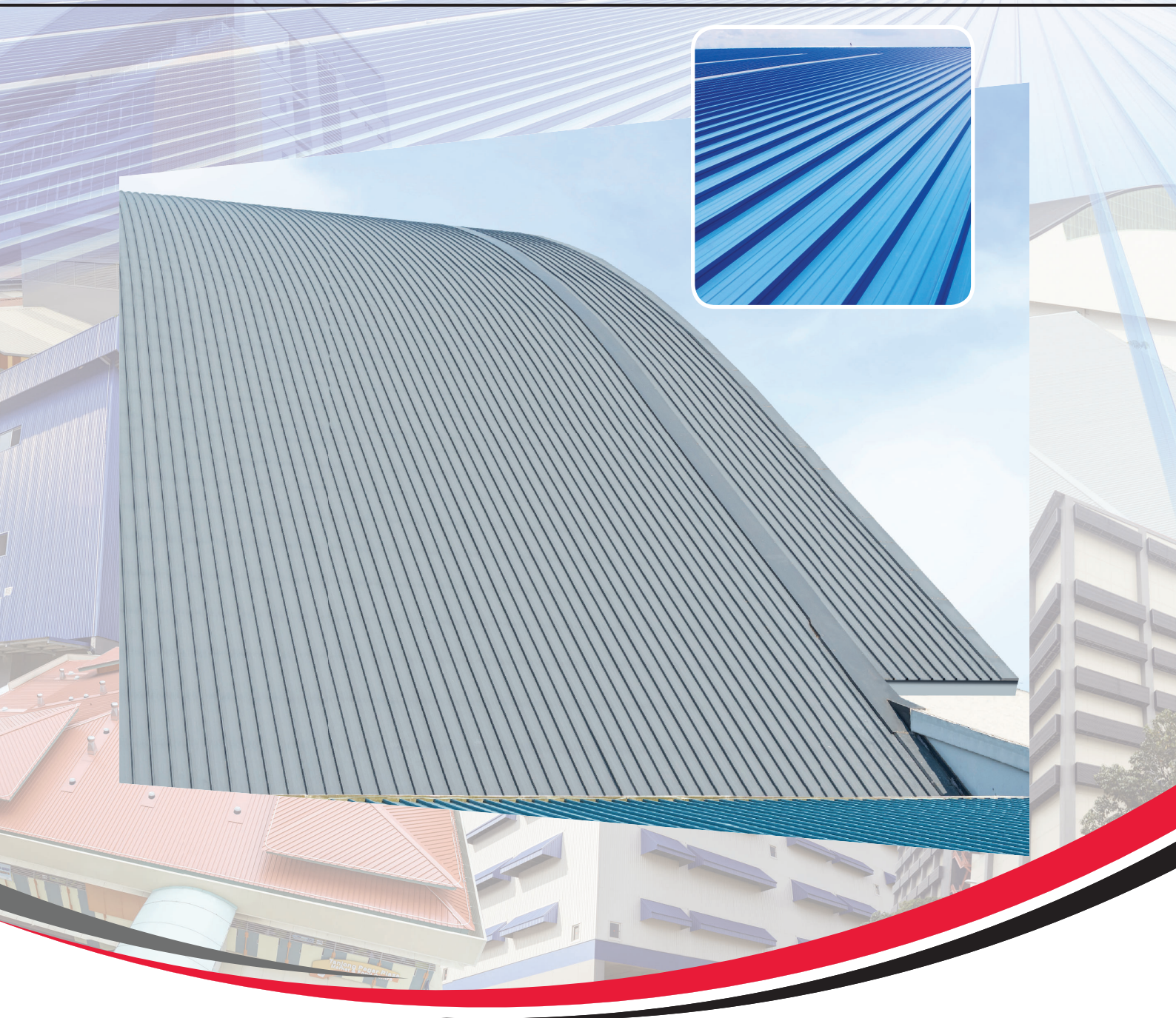




LCP ULTRADECK[®] 700

Metal Roof & Wall Cladding System



Integrity In **Partnership**



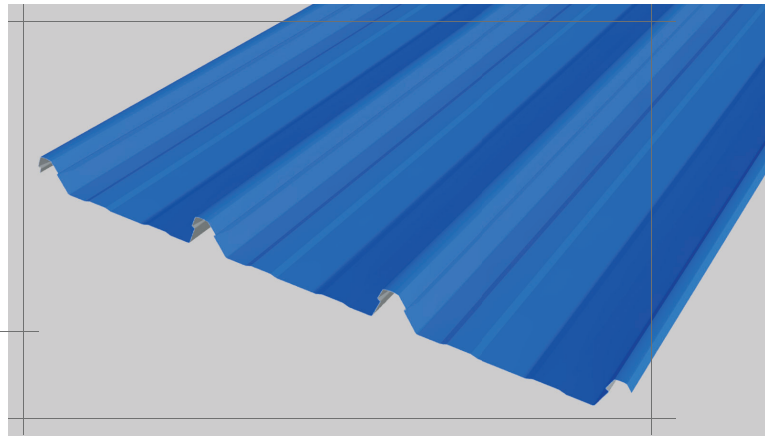
CERT NO. FM 59595
BS EN ISO 9001 : 2008



LCP ULTRADECK® 700

FEATURES

LCP ULTRADECK® 700 is a wide cover concealed fix roof cladding. Featuring improved full length clip design with positive snap action rib design and superior weather resistance performance.

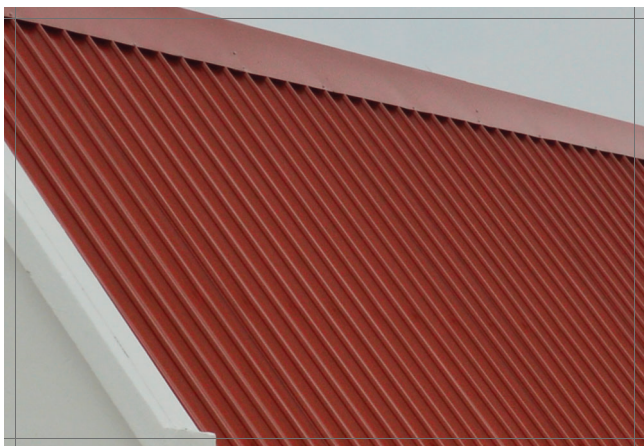


AESTHETICALLY PLEASING & COST EFFECTIVE

- ▶ Secret Fixing - Enhance full length concealed fix clip using hexagon head screws with positive rib action and compresses insulation. providing better security and appearance.
- ▶ 700mm Cover - wide sheet coverage.
- ▶ Quick Installation - wide profile design provides fewer clips ensuring effective cost saving.
- ▶ Hi-Tensile Sheet - Light weight and high strength with improved damage resistance.
- ▶ 1° minimum pitch in long length to save support structure.
- ▶ Bold Ribs - for an Architecturally pleasing profile.
- ▶ On-site rollforming capabilities.

MATERIALS

LCP ULTRADECK® 700 is a cold roll formed roof decking. Steel product is G550 base material (550MPa minimum yield stress), with a ZINCALUME® (AZ200) coating, in accordance with AS1397, and COLORBOND® is available in a number of colours.



COMPATIBILITY

Lead flashing should not be used in conjunction with zinc-aluminium coated steel, pre-painted zinc-aluminium coated steel, ZINCALUME® steel or Clean COLORBOND® steel sheeting. Drainage from zinc-aluminium coated steel, pre-painted zinc-aluminium coated steel, ZINCALUME® steel or Clean COLORBOND® steel roofing (inert material) should not be allowed to discharge onto galvanised rainwater components. Drainage from copper roofing should not be allowed to discharge onto zinc-aluminium coated steel, pre-painted zinc-aluminium coated steel, ZINCALUME® steel, Clean COLORBOND® steel or aluminium rainwater components. Any of these combinations can result in premature corrosion.

ADVERSE CONDITIONS

If it is intended to use LCP Building Products range of roofing, walling or rainwater products within 1Km of salt marine or industrial and unusually corrosive environments, please contact our Technical Department for advice.

ROOF PITCH

The water carrying capacity of a **LCP ULTRADECK® 700** roof allows for a minimum slope of 1° (1 in 60). It is imperative that this minimum is adhered to at all points of the roof to prevent ponding from occurring. The 1° minimum pitch may be used for roofing run lengths up to 60m for rainfall intensities of up to 250mm/hr. Where alternative design rainfall intensities are known or required, or for greater run lengths, contact **LCP Building Products Pte. Ltd.** Technical Services Department for revised slope calculations. Please note however that in most locations, roofs with a slope of 5° or more generally have an improved life, as debris is more readily washed away. Where a primary roof or down pipe outlet discharges directly onto a secondary roof, damming, splashing or a standing wave may form which may need special design attention to prevent water intrusion. Care must also be taken for roofs with skylights, vents, etc where the water flow from several "pans" may be concentrated into just one or two pans, and standing waves may again occur.

LCP ULTRADECK® 700

ARCHITECTURAL SPECIFICATION

The roofing and/or wall cladding metal sheets shall be 0.48mm BMT (i.e. 0.54mm TCT) or 0.60mm BMT (i.e. 0.66mm TCT) **LCP ULTRADECK® 700** as produced by **LCP Building Products Pte. Ltd.**, with ribs of 41mm height spaced at 233mm centres. The effective cover width for the metal sheets shall be 700mm.

The sheeting material shall be ZINCALUME® protected steel sheet to Australian Standard AS1397 with a minimum yield stress of 550MPa (Grade G550), metallic hot-dip coated with ZINCALUME® zinc / aluminium alloy-coated steel comprising 55% aluminium, 43.5% zinc and 1.5% silicon. The minimum coating mass for the ZINCALUME® zinc/aluminium alloy - coated steel shall be AZ200 (200 g/m² minimum coating mass) as determined by Australian Standard AS 1397.

Wherever applicable, the installation of the metal sheets shall be in accordance to the "Installation code for metal roofing and wall cladding; Standards Australia SAA HB39-1997". The sheets shall be installed using concealed fixing clips in accordance to manufacturer's recommendations. The fasteners used to secure the fixing clips to the supports shall conform to Australian Standard AS 3566 and be compatible with the roofing material used. The clips shall be concealed and no fasteners are to penetrate the cladding.

Sheets shall be laid in such a manner that the approved side lap faces away from the prevailing weather. A minimum of 50mm shall be provided for projection into gutters. Flashings shall be supplied in compatible materials as specified, minimum cover of flashing shall be 150mm.

All sheets shall be fixed in a workman like manner, leaving the job clean and weather-tight. All debris (nuts, screws, cuttings, filings etc.) shall be cleaned off daily.

COLOUR COATING OPTIONS

Clean COLORBOND® pre-painted steel is resistant to dirt pick-up and staining. The various categories of Clean COLORBOND® pre-painted steel finishes offer excellent gloss and long lasting life span to the roof and wall cladding.

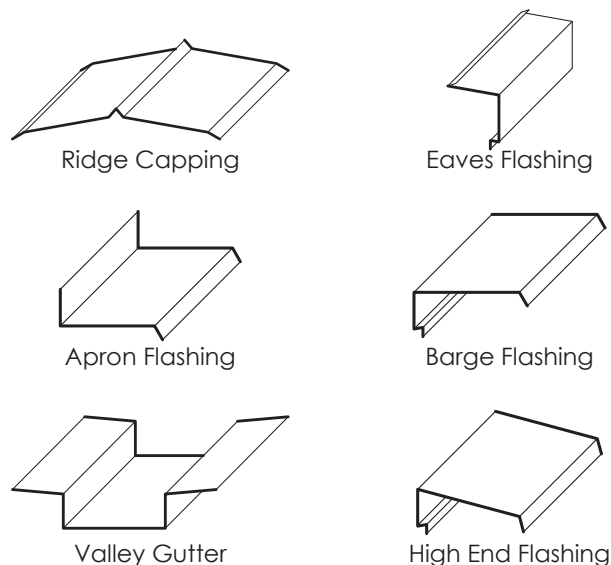
The following Clean COLORBOND® pre-painted steel finishes are available:

1. **Clean Colorbond® Ultra Steel** (Used for severe applications that require premium durability.)
2. **Clean Colorbond® XPD Steel** (Used for moderate/severe applications that require premium durability.)
3. **Clean Colorbond® XPD Pearlescent Steel** (Used for moderate/severe applications that require premium durability and a decorative alternative.)
4. **Clean Colorbond® Matt Steel** (The new trend for roof with superior reduction in specular reflection.)

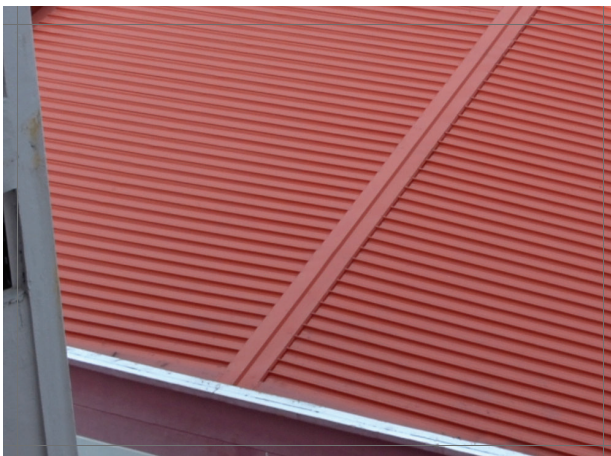


FLASHING DETAIL

When designing the flashing, the rib needs to be taken into account. The shape of the rib affects how the flashing interface is designed and installed.



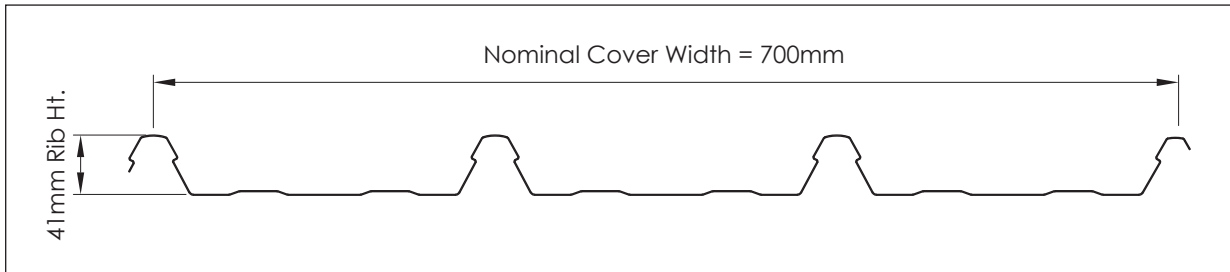
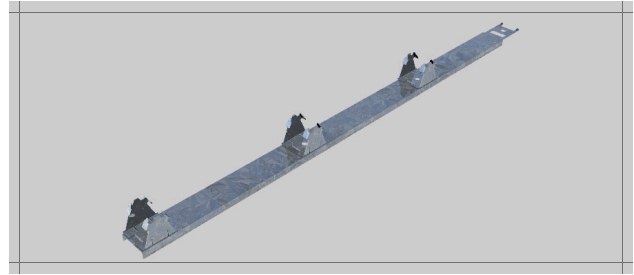
Typical common flashing used. Full range of flashings is available.



LCP ULTRADECK® 700

PANEL FIXING CLIPS

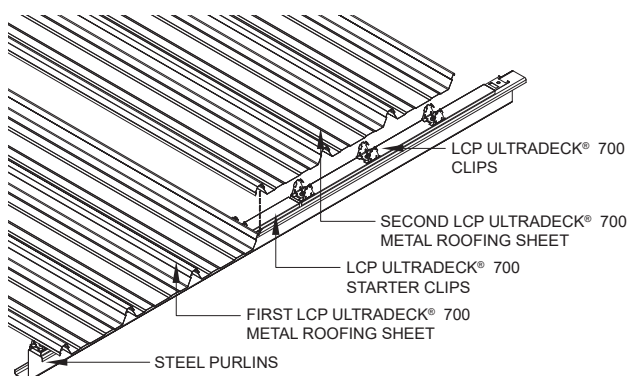
Attachment clips for **LCP ULTRADECK® 700** are hidden within the ribs where they engage the male and female rib, depending on the clip design. The strength of the clip attachment method and spacing are therefore coordinated with the panel size and structural characteristics to provide the necessary wind uplift resistance and allowance for the thermal movement.



INSTALLATION

All roof slopes require a turn up at top of the sheet and also need to be turned down at the low end. This is best achieved using a **LCP ULTRADECK® 700** Stop Ending tool. For maximum protection from weather intrusion the sheet should be laid with the exposed edge of the overlaps away from the direction of the prevailing weather. To commence installation, the first row of clips should be fixed in-line. Check the alignment of the clips using a string line. Lay the first starter sheet over the starter clips and snap lock onto the starter clips. The second row of clips can be installed overlapping the first row of clips at the guide arm. The second sheet is then snapped home over the clip as before, ensuring that the female rib of the second sheet is fully engaged along the full length over the male rib of the first sheet. Repeat the method for the remaining roof sheet.

In cyclonic regions the first female rib must be mechanically fastened through to the clip.



FOOT TRAFFIC

When walking on **LCP ULTRADECK® 700** always wear clean, non-marking and flat rubber soled shoes. Avoid unnecessary foot traffic and walk on the flat of the panel at or near the supporting roof structural members as much as possible. Do not use the roof panel as a working platform.



STRUCTURAL SPECIFICATION

PROPERTIES

LCP ULTRADECK® 700 Mass/Thickness Chart

Thickness		Material Mass kg/m ² of Roof Cover		
BMT (mm)	TCT* (mm)	Zincalume®	Galvanised	Colorbond®
0.48	0.54	5.2	5.3	5.3
0.60	0.66	6.4	6.6	6.6

*TCT (Total Coated Thickness) values are based on ZINCALUME® coating and are nominal only.

MAXIMUM SPAN CHART

LCP ULTRADECK® 700 - Sheltered Suburban and other conditions as noted below

Thickness		Roofs Spans (mm)			Wall Spans (mm)			Overhang (Roof & Wall)	
BMT (mm)	TCT (mm)	Double Spans	Equal Spans	Internal (End Span) * Combination	Double Spans	Equal Spans	Internal (End Span) * Combination	Unstiffened	Stiffened
0.48	0.54	1600	1600	2000(1600)	2500	2300	3000(2400)	200	450
0.60	0.66	2000	2000	2500(2000)	2800	2550	3000(2400)	200	500
- Exposed Sub-Urban and other condition as noted below									
0.48	0.54	1600	1600	2000(1600)	2150	2000	2700(2150)	200	450
0.60	0.66	2000	2000	2500(2000)	2400	2250	3000(2400)	200	500

CONDITIONS

The maximum span charts apply to buildings no more than 10m in height, and less than 1000m² in plan area. The spans listed are based on both foot traffic and wind loadings, and assume both the end and first internal span to be subject to local pressure zone factors. Assumed wind loads are: Sheltered suburban -0.93kPa and 0.72 kPa; exposed suburban -1.43 kPa and 1.10 kPa, for roof and walls respectively.

*For optimum spanning capacity, end spans are shorter than internal spans in a fixed ratio, (End Span = 0.8 x Internal Span). The Internal/End Span combinations shown must only be used in this specific ratio, rounded to the nearest 50mm.

PERFORMANCE

LCP ULTRADECK® 700 Permissible Wind Pressure (kPa)

Thickness		Span Type	Maximum Span for Foot Traffic Limitations	Internal Span (End Span) Combination (mm) ‡						
BMT (mm)	TCT (mm)			(750) 900	(1000) 1200	(1250) 1500	(1500) 1800	(1750) 2100	(2000) 2400	(2250) 2700
0.48	0.54	Internal (End)	2000 (1600)	3.94	2.95	2.36	1.97	1.69	1.48	1.12
		Equal	1600	3.45	2.59	2.07	1.49	0.94	0.63	0.44
		Double	1600	3.15	2.36	1.89	1.57	1.20	0.80	0.56
0.60	0.66	Internal (End)	2500 (2000)	4.81	3.61	2.89	2.41	2.06	1.80	1.58
		Equal	2000	4.22	3.17	2.53	2.11	1.33	0.89	0.63
		Double	2000	3.85	2.89	2.31	1.92	1.65	1.14	0.80

Loads have been determined from testing to SS EN1993 and also conforms to BS 5950 and IS 875 – Design and Installation of Metal Roofing.

‡Spans shown in brackets are the end spans to be used in conjunction with the internal spans shown.

Note – Spans shown in shaded (■) areas are not suitable for trafficable roofs. The pressures shown for 0.48mm BMT (0.54mm TCT) and 0.60 mm BMT (0.66mm TCT) materials should only be used where steel purlin thickness exceeds 1.2mm.

MANUFACTURING and CONSTRUCTION

ORDERING

When ordering, please have the following information available to ensure a speedy processing of your requirements:

- ▶ Customer/Company name, address, phone number & fax number.
- ▶ Contact person name & phone number
- ▶ Name of Product (e.g. **LCP ULTRADECK® 700**) and material (e.g. G550 steel). Thickness of product (e.g. 0.54mm TCT).
- ▶ Coating or Colour (e.g. Clean **COLORBOND®**: Enduring White colour).
- ▶ Number/quantity and length of sheets (e.g. 10 pieces of 5 metres length per piece)
- ▶ Flashing – style, quantity and colour.
- ▶ Delivery address (e.g. No. 10 Telok Kurau Lane, Singapore).
- ▶ Delivery date & preferred time.
- ▶ Site access (please specify whether current access to delivery location would permit entry by standard 12 metres length flat-bed trailers).
- ▶ Cranage requirement (please specify whether crantage will be required at site).

LENGTH

LCP ULTRADECK® 700 can be supplied in any length up to the limit of the local Transport Authority regulations. Lengths specified must be actual site measurements and not plan dimensions. The length should be measured accurately and allowance should be made for clearance at the ridge (unless the sheet is continuous over the ridge) of normally around 50mm, and at the eave an overhang into the gutter which is normally not less than 50mm. Where a step down, or expansion joint is incorporated into the roof, an allowance of not less than 300mm should be added.

FLASHING

Standard flashings are readily available for use with **LCP ULTRADECK® 700** roofing. **LCP Building Products Pte. Ltd.** will give design advice for flashing details and will manufacture the required flashing.

DELIVERY

Delivery can normally be made within 2 or 3 days, subject to order quantity, delivery location and material availability, or can be at a pre-arranged date and time. Please assist us to provide undamaged product by ensuring that suitable arrangements have been made for truck unloading. When lifting sheeting by crane, care should be taken to ensure that the load is spread to prevent sheeting damage. Where a crane is not available, sufficient labour must be supplied to assist in manual unloading.

HANDLING

LCP ULTRADECK® 700 (especially **COLORBOND®**) should be handled with care at all times to preserve the quality of the finish. Packs should always be kept dry and stored above ground level whilst on site. If however the sheets have become wet then they should be separated, wiped and placed in the open to aid drying.

FASTENERS

All fasteners should conform with AS3566 and be compatible with the roofing material used.

For steel purlins use the **LCP ULTRADECK® 700** fixing clips with No. 12 × 16mm self drilling, tapping hex head screws, three per clip.

When fastening into timber, use 60mm × 3.75mm galvanized fluted drive nails or No. 10 × 25mm hex type 17 screws, three per clip.

FOOT TRAFFIC

When walking on **LCP ULTRADECK® 700** roofing, always wear flat rubber soled shoes and place feet only in the pans.

CUTTING

Sheeting can be cut, where necessary, by means of metal snips or electric nibbler. The use of cutting discs should be avoided but if it is used, the Clean **COLORBOND®** pre-painted steel sheeting should be placed downwards, or carefully shielded, to minimise the risk of hot filings embedding in the painted surface.

CLEAN UP

Ensure that all debris, nails, rivets, screws, rags, and especially filings & particles from cutting or drilling, are carefully cleared from the surface after each day's work, otherwise premature corrosion could occur.

BIRD PROOF INSERT

Bird proof inserts fit inside exposed rib ends to prevent bird intrusion. Simply clip the insert onto the last fixing clip as each sheet is laid.

IMPORTANT NOTE: The information published in this brochure is as far as possible accurate at the date of publication, however, prior to application in a particular situation, **LCP Building Products Pte. Ltd.** recommends that you obtain qualified expert advice confirming the suitability of product(s) in question for the application proposed. While **LCP Building Products Pte. Ltd.** accepts its legal obligations, be aware however that to the extent permitted by law, **LCP Building Products Pte. Ltd.** disclaims all liability (including liability for negligence) for all losses and damages resulting from the use of the information provided in this brochure.



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