



TRIMDEK® 1015

Design and Installation Guide



LYSAGHT TRIMDEK® cladding has a subtle square-fluted profile, available in long lengths up to 11 metres, so on most jobs you can have one sheet from ridge to gutter without end-laps.

LYSAGHT TRIMDEK® cladding is made of high strength steel and despite its lightness, provides excellent spanning and rainwater carrying capacity.

The strength, spanning ability, lightness and rigidity of LYSAGHT TRIMDEK® cladding permits wide support spacings to be used with safety.

Profile

LYSAGHT TRIMDEK® 1015 is 1015 mm wide coverage profile with nominal 28.5 mm deep ribs. The end ribs are designed for anti-capillary action, to avoid any seepage of water through the lateral overlap. (Please refer fig. 1)

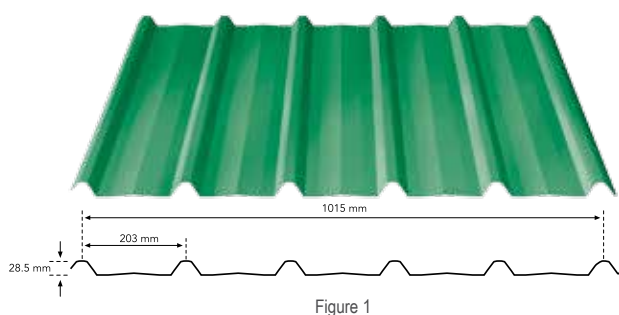


Figure 1

Material Specifications:

ZINCALUME® steel resin coated, minimum metallic coating mass is AZ150 (150g/m²), minimum yield strengths of G550 (550MPa) complies with AS1397 or IS15961.

COLORBOND® XRW is pre-painted steel for exterior roofing and walling. Its minimum metallic coating mass is AZ150 (150g/m²), minimum yield strengths is G550 (550 MPa) with Super Durable Polyester exterior paint system, total 25um DFT on topside and 10um DFT on reverse side complying with AS/NZS 2728- type 4 or IS15965- class 3

COLORBOND® Ultra is pre-painted steel for severe coastal or industrial environments (closer to source), minimum metallic coating mass is AZ200 (200g/m²), minimum yield strengths is G550 (550MPa), Super

Durable Polyester exterior paint system, total 25um DFT on topside and 15um DFT on reverse side complying with AS/NZS 2728- type 4 or IS15965- class 3.

(Please contact Tata BlueScope steel office for COLORBOND® spectrum series (metallic finish) and COLORBOND® XPD (PVDF) specification)

COLORBOND® steel with THERMATECH™ Technology

COLORBOND® steel with THERMATECH™ technology reflects more of the sun's heat, allowing both roofs and buildings stay cooler in summer. In moderate to hot climates, compared to roofing materials of similar colour with low solar reflectance, COLORBOND® steel with THERMATECH™ can reduce annual cooling and energy consumption by up to 15%* and also reduces peak roof temperature by up to 6°C**.

Lengths

Sheets are supplied custom cut.

Masses

LYSAGHT TRIMDEK® 1015				
BMT*	TCT*	Product	kg/m	kg/m ²
0.42	0.47	ZINCALUME® steel	4.214	4.152
0.42	0.47	COLORBOND® steel	4.29	4.22
0.45	0.50	ZINCALUME® steel	4.50	4.44
0.45	0.50	COLORBOND® steel	4.57	4.51

* Dimensions are in mm

Tolerances

Length: + 0 mm, - 15 mm

Width: + 4 mm, - 4 mm

*Depending on level of insulation, colour, building shape, orientation and function.

**Depending on the colour.



Maximum Support Spacing (in millimetres)

The maximum recommended support spacings are based on tests conducted in accordance with AS1562.1-1992, AS4040.1-1992 & AS4040.2-1992.

Roof spans consider both resistance to wind pressure and light roof traffic (traffic arising from incidental maintenance). Wall spans consider resistance to wind pressure only.

The pressure considered (in accordance with IS 875.3) is based on buildings up to 10 m high, Zone 3 (Basic wind speed $V_b = 47$ m/s), Class A, Terrain category 3, $K_1 = 1.0$, $K_2 = 0.91$, $K_3 = 1.0$, with the following assumptions made:

Roofs

$C_{pe} = -1.20$ (internal cladding spans)

$C_{pe} = -2.0$ (single and end cladding spans)

$C_{pi} = +0.2$

Walls:

$C_{pe} = -0.80$ (internal cladding spans)

$C_{pe} = -1.20$ (single and end cladding spans)

$C_{pi} = +0.2$

These spacings may vary for particular projects, depending on specific structure characteristics.

Maximum Roof Run (m) as based on CSIRO* Formula								
	Rainfall Intensity mm/hr	Roof Slope						
		1°	2°	3°	5°	7.5°	10°	
LYSAGHT	100	-	-	275	342	408	469	
TRIMDEK® 1015	150	-	-	183	228	272	313	
Flow Area	200	-	-	138	171	204	235	
= 3093 m2	250	-	-	110	137	163	188	
	300	-	-	92	114	136	156	
	400	-	-	69	86	102	117	
	500	-	-	55	68	82	94	

*Commonwealth Scientific & Industrial Research Organisation

Maximum roof lengths for drainage measured from ridge to gutter (in metres)

Penetrations will alter the flow of water on a roof. For

assistance in design of roofs with penetrations, please seek advice from your nearest Tata BlueScope Steel's sales office.

Limit State Load Tables

LYSAGHT TRIMDEK® 1015 offers full benefits of the latest methods for modelling wind pressures. The wind pressure capacity table is determined by full scale tests conducted at BlueScope Steel's NATA-registered testing laboratory, using the direct 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 Pressures for Noncyclonic Regions).

The pressure capacities for serviceability are based on a deflection limit of (span/120) + (maximum fastener pitch/30).

The pressure capacities for strength have been determined by testing the cladding to failure (ultimate capacity). These pressures are applicable when the cladding is fixed to a minimum of 1.0 mm, G550 steel. For material less than 1.0 mm thickness, seek advice from your nearest Tata BlueScope Steel's sales office.

Maximum Support Spacings (mm)		
Type of span	Total Coated Thickness (mm)	
	0.47	0.50
Roofs		
Single Span	1090	1300
End Span	1280	1400
Internal Span	1600	1800
Unstiffened eaves overhang	150	200
Stiffened eaves overhang	300	350
Walls		
Single Span	1780	1900
End Span	1600	1800
Internal Span	1900	2300
Overhang	150	200

- For roofs, the data are based on foot-traffic loading
- For walls, the data are based on pressures (see pressure table)
- Tables are based on supports of 1 mm BMT
- Please contact Tata BlueScope Building Products office before adopting for design



LYSAGHT TRIMDEK® 1015: Limit state wind pressure capacities (KPa)

Span Type	Limit State	Span (mm)								
		600	900	1200	1500	1800	2100	2400	2700	3000
TRIMDEK® 1015 - 0.40 mm Base Metal Thickness (0.45 mm Total Coated Thickness)										
SINGLE	Serviceability	3.16	2.65	2.00	1.36	0.87	0.57	0.41	-	-
	Strength*	7.25	5.45	4.05	2.81	2.08	1.81	1.60	-	-
END	Serviceability	2.61	2.35	2.09	1.82	1.53	1.24	0.94	0.65	0.36
	Strength*	4.00	3.85	3.66	3.48	3.21	2.89	2.44	2.01	1.56
INTERNAL	Serviceability	3.21	2.69	2.26	1.95	1.68	1.39	1.08	0.82	0.63
	Strength*	7.03	5.81	4.71	3.69	2.95	2.46	2.23	2.09	1.99
TRIMDEK® 1015 - 0.45 mm Base Metal Thickness (0.50 mm Total Coated Thickness)										
SINGLE	Serviceability	4.84	3.54	2.44	1.55	0.91	0.58	0.41	-	-
	Strength*	8.79	7.88	6.34	4.94	3.83	3.06	2.51	-	-
END	Serviceability	4.14	3.46	2.78	2.16	1.66	1.25	0.92	0.66	0.43
	Strength*	6.22	5.47	4.68	3.99	3.42	2.94	2.57	2.25	1.98
INTERNAL	Serviceability	4.91	4.01	3.19	2.52	2.01	1.64	1.37	1.13	0.93
	Strength*	7.66	6.52	5.49	4.54	3.83	3.32	3.00	2.73	2.49

*A capacity reduction factor of $\phi = 0.9$ has been applied to strength capacities. Supports must be not less than 1 mm BMT *Please contact Tata BlueScope Building Products office before adopting for design

Installation

Fastening Sheets to Supports

LYSAGHT TRIMDEK® 1015 is pierce-fixed to timber or steel supports. This means that fastener screws pass through the sheeting. You can place screws through the crests or in the valleys. To maximise water tightness, always place roof screws through the crests. For walling, you may use either crest or valley fixing. Always drive the screws perpendicular to the sheeting and in the centre of the corrugation or rib. Don't place fasteners less than 25 mm from the ends of sheets. All the fasteners shall conform to Australian Standard AS3566 Class 3-4 (min.) for external application.

Roof - Screw fix through rib



Wall - Screw fix through pan



End Lapping

End-laps are not usually necessary because TRIMDEK® 1015 is available in long lengths. If you want end-laps, seek advice from your nearest on the sequence of laying and the amount of overlap.

Side-Laps

The edge of TRIMDEK® 1015 with the anti-capillary groove is always the underlap (Please refer fig. 2). It is generally considered good practice to use fasteners

along side-laps.

However, when cladding is supported as indicated in maximum support spacings, side-lap fasteners are not usually needed for strength.

Ends of Sheets

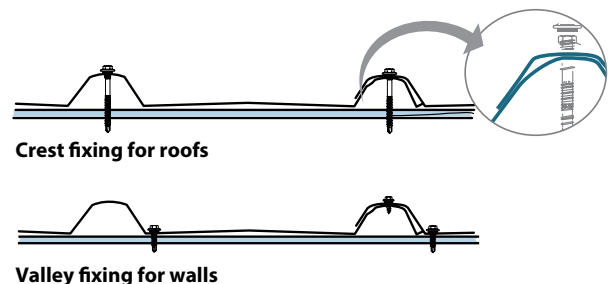


Figure 2

It is usual to allow roof sheets to overlap into gutters by about 50 mm. If the roof pitch is less than 25° or extreme weather is expected, the valleys of sheets should be turned down at lower ends and turned-up at upper ends by about 80°.

Lay Sheets toward Prevailing Weather

It is much easier and safer to turn sheets on the ground than up on the roof. Before lifting sheets onto the roof, check that they are the correct way up and the overlapping side is towards the edge of the roof from which installation will start. Place bundles of sheets over or near firm supports, not at mid span of roof members. To align the first bullnosed sheet, use a level on the

Fasteners without insulation				
Support Details	Number of Fasteners		Crest Fixing Roof & Wall Application	Valley Fixing Wall Application only
	Per Sheet/support	Per sq. mt.		
Steel up to 0.75 mm BMT	5	5	13 -13 x 55, Batten Tek's HG, Hex Head	10-16 x16 Metal Tek's, Hex Head
Steel > 0.75 mm BMT up to 3 mm BMT			12 -14 x 45, Metal Tek's HG, Hex Head	10-16 x16 Metal Tek's, Hex Head
Timber - Softwood			12 -11 x 65, Type 17 HG, Hex Head	10-12 x 30, Type 17 HG, Hex Head
Timber - Hardwood			12 -11 x 50, Type 17 HG, Hex Head	10-12 x 20, Type 17 HG, Hex Head

Note:

1. All screws are self drilling, self tapping with EPDM sealing washer unless otherwise noted
2. The number of screws per support are per sq.m and are only for guidance, based on support spaced at 1 m and wall 0.6 m
3. HG refers to Hi-Grips
4. Please refer to the above data for guidance purpose only. You may contact Tata BlueScope Steel office for further information

gutter-end.

Sheet-Ends on Low Slopes

When TRIMDEK® 1015 is laid on slopes of 5° or less, cut back the corner of the under-sheet at the downhill end of the sheet, to block capillary action.

Walking on Roofs

Generally, keep your weight evenly distributed over the soles of both feet to avoid concentrating your weight on either heels or toes. Always wear smooth soft-soled shoes; avoid ribbed soles that pick up and hold small stones, swarf and other objects.

Adverse Conditions

If this product is to be used in marine, severe industrial or unusually corrosive environments, ask for advice from your nearest Tata BlueScope Steel's sales office .

Metal & Timber Compatibility

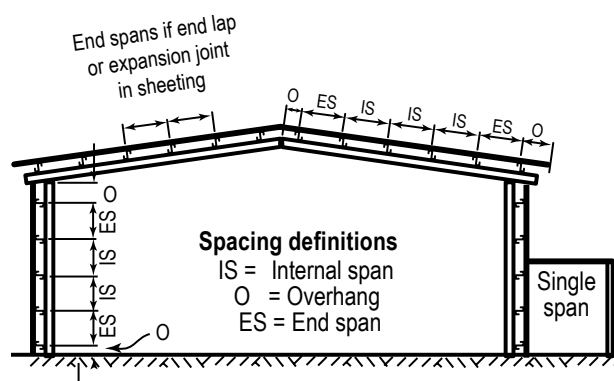
Lead, copper, stainless steel and green or some chemically treated timbers are not compatible with this product; thus don't allow any contact of the product with these materials, nor discharge of rainwater from them onto the product. If there are doubts about the compatibility of products being used, ask for advice from your nearest Tata BlueScope Steel office.

Maintenance

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

Storage and Handling

Keep the product dry and clear off the ground. If stacked or bundled product becomes wet, separate it, wipe it with a clean cloth and stack it to dry thoroughly. Handle materials carefully to avoid damage: do not drag materials over rough surfaces or each other, carry



tools, do not drag them and protect it from swarf.

Sealed Joints

For sealed joints, use screws or rivets and neutral-cure silicone sealant branded as suitable for use with ZINCALUME® steel and COLORBOND® steel.

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 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.

Non-Cyclonic Areas

The information in this brochure is suitable for use only in areas where a tropical cyclone is unlikely to occur. Ask for advice from your nearest Tata BlueScope Steel's sales office on designs to be used in cyclonic areas.

Benefits

- TRIMDEK® is our most cost effective roofing and walling profile
- Strong and wider coverage, which makes it economical for all type of buildings
- Troughed valleys to enhance easy water flow, roof traffic and to avoid oil canning effect
- Long roof runs at shallow roof slope (min 3°)
- Specially designed ribs, with unique anti-capillary side lap, which makes it leak proof
- Curved roof : it is possible only in crimping option
- Very good rainfall capacity
- Easy to install on roof and wall cladding application



Global Excellence since 1857

Product Descriptions

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Standard Colour Range



The above colours are only for illustrative purpose and actual colours may vary.



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