

TRIMDEK[®] 1015



Subtle Square Fluted Steel Cladding

TATA BLUESCOPE
BUILDING PRODUCTS

(A Division of Tata BlueScope Steel Limited)



TRIMDEK® 1015

LYSAGHT TRIMDEK® 1015 is a subtle square fluted steel cladding. The fluting in the pans provides strength and long spanning capabilities.

LYSAGHT TRIMDEK® 1015 is available in long lengths, therefore on most projects you can have one sheet from ridge to gutter without end laps.

LYSAGHT TRIMDEK® 1015 is made of high strength steel and despite its lightness, provides excellent spanning capability and remarkable recovery after deformation.

The strength, spanning ability, lightness and rigidity of LYSAGHT TRIMDEK® 1015 permits wide support spacing to be used with safety (Refer to maximum support spacings table).

Simple, Low Cost Fixing

Long, straight lengths of LYSAGHT TRIMDEK® 1015 can be lowered into place and aligned easily. Fixing with hexagon headed screws is simple and fast.

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)

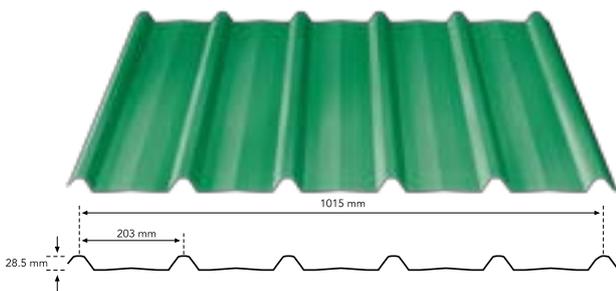


Figure 1

Material Specification

LYSAGHT TRIMDEK® 1015 is manufactured out of high strength steel. The coated steel is ZINCALUME® steel, which is a zinc-aluminium alloy coated steel complying with AS 1397, G550, AZ150 (550 MPa minimum yield stress, 150 g/m² minimum coating mass) or COLORBOND® steel, a pre-painted steel conforming to AS/NZS 2728 Type 3-4.

(Please refer to ZINCALUME® steel and COLORBOND® steel brochure for details)



Cross Sectional View of COLORBOND® steel

Lengths

Sheets are supplied custom cut.

Tolerances

Length: + 0 mm, - 15 mm

Width: + 4 mm, - 4 mm

Masses

LYSAGHT TRIMDEK® 1015				
BMT*	TCT*	Product	kg/m	kg/m ²
0.35	0.40	ZINCALUME® steel	3.56	3.51
0.35	0.40	COLORBOND® steel	3.63	3.58
0.40	0.45	ZINCALUME® steel	4.04	3.98
0.40	0.45	COLORBOND® steel	4.11	4.05
0.45	0.50	ZINCALUME® steel	4.52	4.45
0.45	0.50	COLORBOND® steel	4.59	4.52

* Dimensions are in mm

JBM Magnetto, India

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:

Maximum Support Spacings (mm)		
	Total Coated Thickness (mm)	
Type of span	0.45	0.50
Roofs		
Single Span	950	1300
End Span	1200	1400
Internal Span	1750	2050
Unstiffened eaves overhang	150	200
Stiffened eaves overhang	300	350
Walls		
Single Span	1700	1900
End Span	2450	2600
Internal Span	2850	3000
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

Roofs

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

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

$C_{p_i} = + 0.2$

Walls:

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

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

$C_{p_i} = + 0.2$

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

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 Building Products office.

	Rainfall Intensity mm/hr	Roof Slope					
		1°	2°	3°	5°	7.5°	10°
LYSAGHT	100	-	235	275	342	408	469
LYSAGHT	150	-	156	183	228	272	313
TRIMDEK® 1015	200	-	117	138	171	204	235
Flow Area	250	-	94	110	137	163	188
= 3093 m ²	300	-	78	92	114	136	156
	400	-	59	69	86	102	117
	500	-	47	55	68	82	94

*Commonwealth Scientific & Industrial Research Organisation

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 Building Products office.

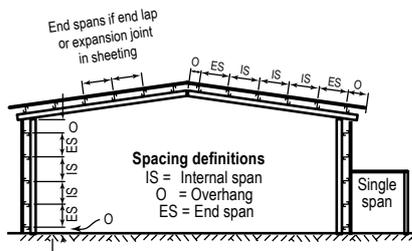


Siemens Limited, India

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



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 Building Products 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 Building Products 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 Building Products office on designs to be used in cyclonic areas.

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 Tata BlueScope Building Products office 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.



Crest fixing for roofs or walls



Valley fixing for walls only

Figure 2

Ends of Sheets

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 gutter-end.

Sheet-Ends on Low Slopes

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

Fasteners without insulation

Support Details	Numbers of Fasteners Requirements Screws		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 Tekes HG, Hex Head	10-16 x16 Metal Tekes, Hex Head
Steel > 0.75 mm BMT up to 3 mm BMT			12 -14 x 45, Metal Tekes HG, Hex Head	10-16 x16 Metal Tekes, 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:

- All screws are self drilling, self tapping with EPDM sealing washer unless otherwise noted
- 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
- HG refers to Hi-Grips
- Please refer to the above data for guidance purpose only. You may contact Tata BlueScope Building Products office for further information

LYSAGHT TRIMDEK® 1015 - Design Advantages

- Smart appearance with subtle square fluting
- Fixed with ease and speed
- Made from high tensile steel which provides design freedom and longer spans
- Unique anti-capillary side lap which makes it leak proof
- Appealing architectural appearance and multiple colour choice
- Manufactured from high quality raw material such as COLORBOND® steel and ZINCALUME® steel



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Note:

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