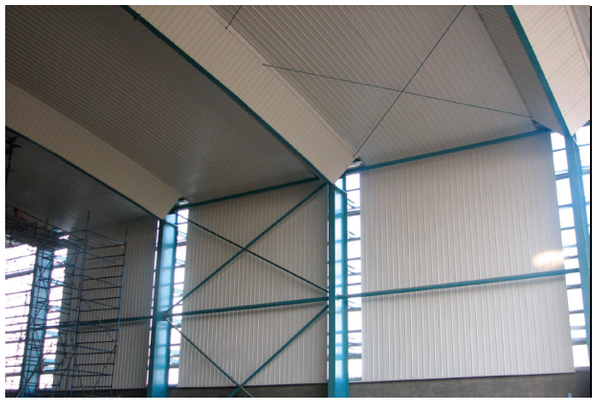
Fasteners

All the fasteners used for external application shall be as per AS3566 Class 3 for general environment. Where insulation is to be installed, you may need to increase the length of the screws given below, depending on the density and thickness of the insulation.

When the screw is properly tightened:

- into metal: there should be at least three threads protruding past the support you are fixing to, but the shankguard must not reach that support;
- into timber: the screw must penetrate the timber by the same amount that the recommended screw would do if there were no insulation.

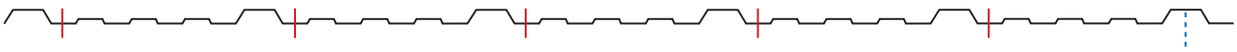


Fasteners without insulation

Support Details	Numbers of Fasteners		Valley Fixing Wall Application only
	Per Sheet/support	Per m2	
Steel up to 0.75 mm BMT	4 or 5	5*	10 -12 x 20, Type 17, Wafer Head
Steel > 0.75 mm BMT up to 3 mm BMT			10 -16 x 16, Metal Teks, Hex Head
Timber - Softwood			10 -12 x 30, Type 17 HG, Hex Head
Timber - Hardwood			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 m2 are only for guidance, based on support spaced at 1 m and wall 0.6m.
3. HG refers to Hi-Grips.
4. * - the screw quantity is based on an average number of screws.
5. Please refer to the above data for guidance purpose only. You may contact Tata BlueScope Steel office for further information.

Wall - Screw fix through pan



Benefits

- Attractive multi-ribbed profile
- Covers very wide surface area
- Quick and easy to install
- Available in ZINCALUME® steel and an attractive range of colours in COLORBOND® steel
- Suitable for wall cladding in industrial, commercial and residential building, as well as for garages, screens and fascias

LYSAGHT®

Global Excellence since 1857

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Standard Colour Range

Surfmist (SRI-87)	Headland (SRI-38)	Pale Eucalypt (SRI-44)	Cottage Green (SRI-25)	Aquamarine (SRI-41)	Sky Blue (SRI-46)	Torres Blue (SRI-27)	Toba Blue (SRI-37)	ZINCALUME® Steel (SRI-57)

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

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TATA BLUESCOPE STEEL

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LYSAGHT®

FLEXICLAD® 1110

Design and Installation Guide

#inspireyoursenseswithlysaght

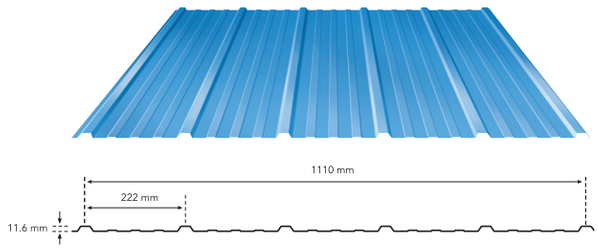
TATA BLUESCOPE STEEL

FLEXICLAD® 1110

LYSAGHT FLEXICLAD® 1110 is designed to provide an aesthetic and economical solution for wall cladding not only for commercial application, but also for residential and industrial applications.
LYSAGHT FLEXICLAD® 1110, manufactured from high strength steel base, has an attractive shape and provides high strength at lower base metal thickness for wall cladding applications.

Profile

LYSAGHT FLEXICLAD® 1110 is 1110 mm wide coverage profile with nominal 11.6 mm deep ribs at nominal 222 mm centre-to-centre with three stiffeners in between the ribs. The end ribs are designed for anti-capillary action, to avoid any seepage of water through the lateral overlap.



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^{0}C**.

Material Specifications:

ZINCALUME® steel resin coated, minimum metallic coating mass is AZ150 (150g/m^2), 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/m^2), 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.

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

COLORBOND® Ultra is pre-painted steel for severe coastal or industrial environments (closer to source), minimum metallic coating mass is AZ200 (200g/m^2), 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)

Lengths

Sheets are supplied custom cut.

Tolerances

Length: + 0 mm, - 15 mm
Width: + 0 mm, - 4 mm

Masses

LYSAGHT FLEXICLAD 1110				
BMT*	TCT*	Product	kg/m	kg/m^2
0.42	0.47	ZINCALUME® steel	4.21	3.80
0.42	0.47	COLORBOND® steel	4.29	3.876
0.45	0.50	ZINCALUME® steel	4.50	4.05
0.45	0.50	COLORBOND® steel	4.58	4.14

* Dimensions are in mm

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.

Wall Span considers resistance to wind pressure only. The pressure considered (in accordance with IS 875.3) is based on buildings up to 10m 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	0.47	0.50
Walls		
Single Span	1060	1150
End Span	1260	1500
Internal Span	1500	1650
Overhang		

- For walls, the data are based on pressure (see pressure table)
- Tables are based on supports of 1 mm BMT
- Please contact Tata BlueScope Steel office before adopting for design

Walls:

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

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

C_{pi} = + 0.2

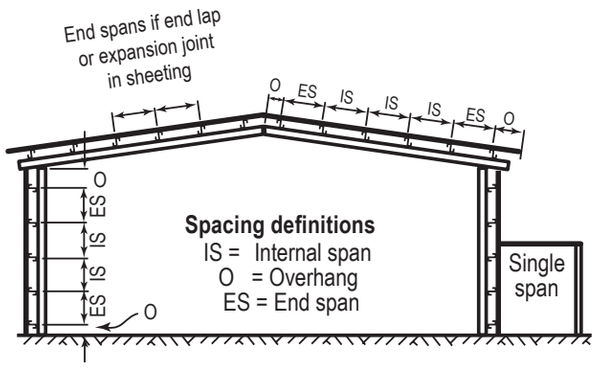
These spacings may vary for particular projects, depending on specific structure characteristics.

Limit States Wind Pressures

The wind pressure capacities are based on tests conducted at BlueScope Steel's NATA registered testing laboratory. Testing was conducted in accordance with AS1562.1-1992 Design and Installation of Sheet Roof and Wall Cladding-Metal and AS 4040.2-1992 Resistance to Wind Pressure for Non-cyclonic 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.



LYSAGHT FLEXICLAD® 1110: Limit state wind pressure capacities (kPa)														
Span		**Span (mm)**												
Type	**Limit State**	**600**	**700**	**800**	**900**	**1000**	**1100**	**1200**	**1300**	**1400**	**1500**	**1600**	**1700**	**1800**
FLEXICLAD® 1110 - 0.35 mm Base Metal Thickness (0.40 mm Total Coated Thickness)														
	Serviceability	1.83	1.57	1.33	1.10	0.88	0.70	0.55	0.43	0.35	0.30	0.26	0.24	0.23
SINGLE	Strength*	12.00	10.75	9.50	8.30	7.15	6.15	5.35	4.70	4.20	3.85	3.55	3.35	3.20
	Serviceability	2.39	2.19	2.00	1.81	1.62	1.44	1.28	1.12	0.97	0.82	0.68	0.55	0.42
END	Strength*	10.20	9.05	7.95	6.90	5.95	5.10	4.40	3.80	3.35	3.00	2.75	2.55	2.40
	Serviceability	2.17	2.05	1.93	1.80	1.68	1.54	1.41	1.26	1.10	0.94	0.78	0.61	0.45
INTERNAL	Strength*	10.90	9.55	8.25	7.00	5.85	4.85	4.05	3.50	3.05	2.80	2.70	2.60	2.60
FLEXICLAD® 1110 - 0.40 mm Base Metal Thickness (0.45 mm Total Coated Thickness)														
	Serviceability	2.19	1.88	1.58	1.30	1.03	0.81	0.63	0.49	0.39	0.33	0.29	0.27	0.26
SINGLE	Strength*	12.90	11.70	10.60	9.50	8.45	7.50	6.65	6.00	5.40	4.95	4.50	4.15	3.85
	Serviceability	3.24	2.90	2.58	2.26	1.96	1.69	1.45	1.24	1.06	0.90	0.75	0.63	0.51
END	Strength*	10.75	9.70	8.60	7.60	6.70	5.85	5.15	4.55	4.05	3.70	3.40	3.15	2.90
	Serviceability	2.91	2.68	2.45	2.22	2.00	1.79	1.59	1.40	1.22	1.05	0.89	0.74	0.59
INTERNAL	Strength*	11.50	10.25	9.05	7.90	6.80	5.90	5.10	4.50	4.05	3.70	3.50	3.30	3.20
FLEXICLAD® 1110 - 0.45 mm Base Metal Thickness (0.50 mm Total Coated Thickness)														
	Serviceability	2.55	2.18	1.82	1.49	1.18	0.91	0.70	0.54	0.43	0.36	0.32	0.30	0.29
SINGLE	Strength*	13.80	12.70	11.70	10.70	9.75	8.85	8.00	7.30	6.65	6.05	5.50	5.00	4.55
	Serviceability	4.08	3.61	3.15	2.71	2.30	1.93	1.62	1.35	1.14	0.97	0.82	0.70	0.59
END	Strength*	11.35	10.35	9.30	8.35	7.45	6.60	5.90	5.30	4.80	4.40	4.05	3.75	3.45
	Serviceability	3.65	3.30	2.96	2.63	2.32	2.03	1.77	1.54	1.34	1.16	1.00	0.86	0.72
INTERNAL	Strength*	12.10	10.95	9.85	8.80	7.80	6.95	6.20	5.55	5.05	4.65	4.35	4.05	3.80

*A capacity reduction factor of Ø= 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.

For material less than 1.0 mm thick, seek advice from your nearest Tata BlueScope Steel office.

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 office.

Metal and Timber Compatibility

Lead, copper, free carbon, bare steel and green or some chemically treated timber is not compatible with coated steel. Hence, any contact or rainwater discharge from above mentioned materials should be controlled. Supporting members should be coated to avoid problems with underside condensation. If there are doubts about the compatibility of other products being used, ask for advice from your nearest Tata BlueScope Steel office.

Maintenance

Optimum product life will be achieved if all external walls 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.

Storage and Handling

Keep the product dry and clear of the ground. If stacked or bundled product becomes wet, it is always advisable to separate the sheets, wipe them with a clean cloth to dry thoroughly to avoid product problems.

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.

Sealed Joints

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

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 office for designs to be used in cyclonic areas.