LYSAGHT®

PANELRIB® 1110

For Ceiling and Wall Cladding

TATA BLUESCOPE
BUILDING PRODUCTS

(A Division of Tata BlueScope Steel Limited)

PANELRIB® 1110

PANELRIB® 1110 is an attractive, slightly fluted wall and ceiling cladding for exterior and interior use on straight or curved surfaces. Its elegant appearance makes it suitable for many applications where a flat sheet would not normally be considered. These include ceilings, partition facings, screens, garage doors, fascias and barge boards.

PANELRIB® 1110 is manufactured out of high strength steel and has longitudinal flutes that provide rigidity and strength along the length of the sheet, while retaining full flexibility across the width. It can be used with the flutes vertically or horizontally. However, PANELRIB® 1110 is not intended as a roofing material.

Hence, we can say that for exterior and interior walls and on straight or curved surfaces with horizontal or vertical flutes, PANELRIB® 1110 is easy to fix. Moreover,

- It provides easy solutions for false ceiling and wall partition
- Its long, straight lengths minimise fixing costs

Profile

PANELRIB® 1110 is 1110 mm wide coverage profile with nominal 3.5 mm deep rib with pitch of nominal 50.5 mm centre to centre distance. *(Please refer to fig. 1)*

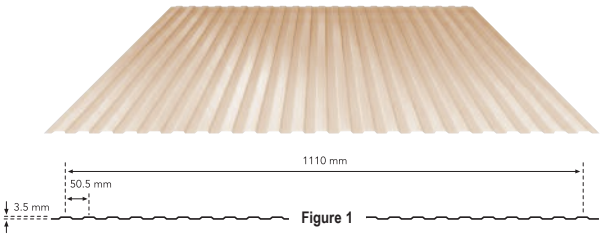
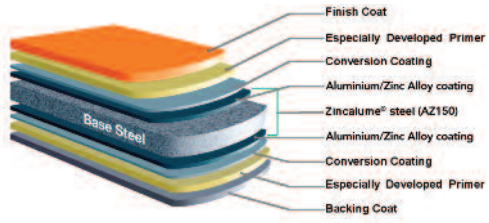


Figure 1

Material Specification

LYSAGHT PANRLRIB® 1110 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/m^2 minimum coating mass) or COLORBOND® steel, a pre-painted steel conforming to AS/NZS 2728 Type 3-4.

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



Cross Sectional View of COLORBOND® steel

Length

Sheets are supplied custom cut to length.

Tolerances

Length: + 0 mm, - 15 mm

Width: + 0 mm, - 4 mm

Masses

PANELRIB® 1110

BMT*	TCT*	Product	kg/m	kg/m^2
0.35	0.40	ZINCALUME® steel	3.56	3.21
0.35	0.40	COLORBOND® steel	3.63	3.27
0.40	0.45	ZINCALUME® steel	4.04	3.63
0.40	0.45	COLORBOND® steel	4.11	3.70
0.45	0.50	ZINCALUME® steel	4.52	4.06
0.45	0.50	COLORBOND® steel	4.59	4.13

** Dimensions are in mm*

Maximum Support Spacing (mm)

The maximum recommended support spacings are based on tests conducted in accordance with AS1562.1-1992, AS4040.1-1992 and 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 height, Zone 3 (Basic wind speed V_b = 47m/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	0.35	0.40	0.45
Walls			
Single Span	850	950	1000
End Span	950	1050	1100
Internal Span	1000	1150	1150
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 Building Products 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

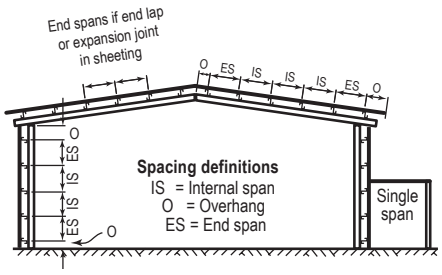
These spacings may vary for particular projects, depending on specific structural characteristics.

Limit State Load Tables

PANELRIB® 1110 offers the 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.

Tests were 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 Non-cyclonic Regions.*

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



LYSAGHT PANELRIB® 1110: Limit state wind pressure capacities (kPa)

Span Type	Fasteners per sheet per support		Span (mm)												
			600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
PANELRIB® 1110 - 0.40 mm Base Metal Thickness (0.45 mm Total Coated Thickness)															
SINGLE	5	Serviceability	3.23	2.71	2.21	1.75	1.32	0.95	0.66	0.44	0.29	0.19	0.14	0.13	0.12
		Strength*	13.00	11.50	10.05	8.70	7.45	6.35	5.50	4.80	4.35	4.05	3.85	3.75	3.65
	11	Serviceability	2.71	2.28	1.87	1.48	1.12	0.81	0.57	0.37	0.24	0.16	0.11	0.08	0.07
		Strength*	15.80	14.45	13.15	11.90	10.80	9.70	8.80	8.05	7.45	6.90	6.50	6.10	5.75
END	5	Serviceability	4.45	3.77	3.12	2.50	1.94	1.45	1.05	0.75	0.54	0.40	0.32	0.26	0.24
		Strength*	9.35	8.35	7.40	6.45	5.60	4.85	4.25	3.75	3.40	3.20	3.05	2.90	2.85
	11	Serviceability	3.70	3.13	2.57	2.04	7.57	1.15	0.82	0.57	0.41	0.31	0.25	0.23	0.23
		Strength*	12.75	11.90	11.05	10.25	9.50	8.80	8.15	7.55	7.00	6.55	6.10	5.70	5.30
INTERNAL	5	Serviceability	4.28	3.64	3.02	2.43	1.90	1.43	1.05	0.76	0.56	0.42	0.34	0.29	0.25
		Strength*	12.70	11.50	10.35	9.25	8.20	7.30	6.55	5.95	5.45	5.10	4.80	4.60	4.40
	11	Serviceability	3.16	2.67	2.20	1.76	1.36	1.00	0.73	0.52	0.38	0.30	0.25	0.24	0.24
		Strength*	13.60	12.50	11.50	10.50	9.55	8.70	8.00	7.40	6.90	6.50	6.20	5.90	5.65
PANELRIB™ 1110 - 0.45 mm Base Metal Thickness (0.50 mm Total Coated Thickness)															
SINGLE	5	Serviceability	3.65	3.07	2.51	1.99	1.51	1.09	0.76	0.51	0.34	0.23	0.17	0.15	0.14
		Strength*	14.20	12.70	11.25	9.85	8.60	7.50	6.60	5.90	5.35	5.00	4.75	4.60	4.45
	11	Serviceability	2.80	2.37	1.96	1.57	1.21	0.90	0.65	0.45	0.31	0.22	0.15	0.11	0.09
		Strength*	16.70	15.55	14.40	13.30	12.30	11.30	10.45	9.70	9.00	8.40	7.85	7.30	6.85
END	5	Serviceability	5.31	4.47	3.65	2.88	2.19	1.58	1.10	0.74	0.50	0.36	0.29	0.26	0.26
		Strength*	10.95	9.75	8.60	7.50	6.50	5.60	4.90	4.35	3.95	3.70	3.55	3.40	3.35
	11	Serviceability	4.26	3.60	2.96	2.35	1.81	1.33	0.95	0.66	0.47	0.35	0.29	0.26	0.26
		Strength*	13.50	12.65	11.85	11.05	10.30	9.60	8.90	8.30	7.70	7.20	6.65	6.20	5.70
INTERNAL	5	Serviceability	5.55	4.67	3.82	3.01	2.28	1.65	1.15	0.78	0.53	0.38	0.31	0.29	0.29
		Strength*	12.50	11.05	9.60	8.30	7.10	6.05	5.20	4.55	4.15	3.85	3.75	3.65	3.65
	11	Serviceability	3.59	3.02	2.48	1.96	1.50	1.09	0.77	0.53	0.37	0.27	0.22	0.20	0.20
		Strength*	14.50	13.50	12.60	11.70	10.80	10.00	9.30	8.70	8.15	7.65	7.20	6.80	6.40

**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*

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 thick, seek advice from your nearest Tata BlueScope Building Products 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 Building Products office.

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 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 the top portion 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, separate it, wipe it with a clean cloth and stack it to dry thoroughly.

Handle materials carefully to avoid damage: don't drag materials over rough surfaces or each other; carry tools, don't drag them; and protect it 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 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 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 Building Products office on designs to be used in cyclonic areas.

Installation

PANELRIB® 1110 steel cladding can be attached to the frame with the flutes either vertically or horizontally. When fixing with flutes horizontally, ensure that the top sheet overlaps the sheet below.

If end laps are necessary because of very long runs, allow at least 75 mm lap.

For sheets fixed on external applications where sealing is required, seal end laps with a suitable sealant.

Location of Fasteners

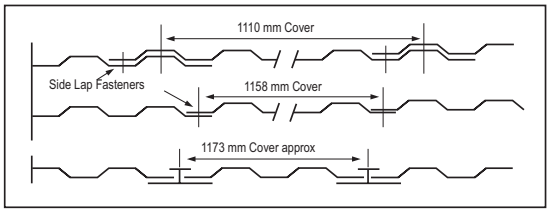
A fastener should be located either at the side lap or adjacent to it. For a quality finish, fasteners at the ends of PANELRIB® 1110 sheets, including end laps, should be located at every second valley. At intermediate supports, four fasteners should be used. They should be equidistant across the sheet.

For internal applications not subject to wind loads, the number of fasteners may be reduced by 50%, except for ceiling applications.

Side Lapping

Three types of side lapping methods are used: the overlapping flute, the butt joint and the edge lap joint.

When using the overlapping or edge lap joint methods, side lap fasteners are required at 200-300 mm centres.



Fasteners without insulation

Support Details	Numbers of Fasteners		Valley Fixing
	Per Sheet/support	Per sq. mt.	Wall Application only
Steel up to 2.00 mm BMT	6	8.5*	8 -18 x 12 Metal Teks, Hex Head
Timber - Softwood			8 -15 x 20, Type 17 HG, Hex Head
Timber - Hardwood			8 -15 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 spaced at 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 Building Products office for further information

PANELRIB® 1110 - Design Advantages

- Slightly fluted panel gives attractive look
- Lightest wall cladding for interior and exterior application
- Provides easy solution for false ceiling and wall partition
- Panels can be installed in horizontal as well as in vertical direction
- Appealing architectural appearance and multiple colour choice
- It is manufactured from G550 COLORBOND® steel or ZINCALUME® steel

For more information, please contact -

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