

MINI ORB[®] W.A.

DESIGN AND INSTALLATION GUIDE

LYSAGHT



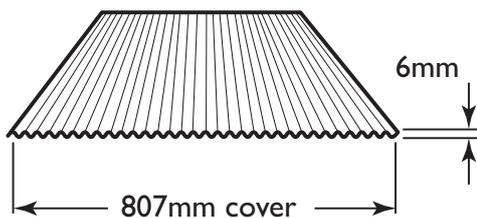
LYSAGHT MINI ORB® W.A.

MINI ORB® W.A. is a corrugated sheet with reduced height of corrugation to the more traditional custom orb profile.

It is suitable for interior and exterior applications; on straight or curved surfaces; with the corrugations running vertically or horizontally.

MINI ORB® W.A. is primarily used for decorative finishes on walls, ceilings and soffit linings; feature walls and partitions; and screens and small awnings not subject to any foot traffic. It is a product that gives you freedom in design, allowing your creativity to blend perfectly with the practical.

However, MINI ORB® W.A.'s attractive profile makes it suitable for a myriad of original design applications, such as furniture; fencing and gates; awnings and shop fittings; and interior ceilings in both the industrial and domestic markets.



MATERIAL SPECIFICATIONS

Next generation ZINCALUME® aluminium/zinc/magnesium alloy coated steel complies with AS 1397:2011 G300, AM125 (300 MPa minimum yield stress, 125 g/m² minimum coating mass).

COLORBOND® is pre-painted steel for exterior roofing and walling. It is the most widely used. The painting complies with AS/NZS 2728:2013 and the steel base is an aluminium/zinc alloy-coated steel complying with AS1397:2011. Minimum yield strength is G300 (300 MPa). Minimum coating mass is AM100 (100 g/m²).

MATERIAL AND COLOUR AVAILABILITY

For finishes available (from plain ZINCALUME® steel to COLORBOND® pre-painted steel), please contact your nearest LYSAGHT® Service Centre.

For the local availability of colours please enquire at your nearest LYSAGHT® Service Centre.

COLORBOND® STEEL WITH THERMATECH® TECHNOLOGY

The next generation COLORBOND® steel incorporates THERMATECH® technology, which provides a new level of thermal protection by absorbing less heat. Average reduction in solar absorption across all standard colours is 5%.

Many standard COLORBOND® steel colours are 'medium to light' under the BASIX colour classification.

MASSES

	BMT (mm)	kg/m ²
ZINCALUME® steel	0.60	5.65
COLORBOND® steel	0.60	5.68

TOLERANCES

Length: +5mm, -5mm
Cover Width: +2mm, -2mm

MAXIMUM SUPPORT SPACINGS

The maximum recommended support spacings are as shown. They are based on calculations from test results on a range of MINI ORB® profiles. The tests are in accordance with AS 1562.1:1992 Design and installation of sheet roof and wall cladding: Metal, and AS 4040.2:1992 Methods of testing sheet roof and wall cladding.

These spacings may vary by serviceability and strength limit states for particular projects.

For more detailed installation advice, please refer to: LYSAGHT® Roofing and Walling Installation Guide (as current, referred to as the Installation Guide) which is available at www.lysaght.com or by calling Steel Direct 1800 641 417.

MAXIMUM SUPPORT SPACINGS (MM)

BMT	
Type of Span	0.60mm
Walls	
Single span	1500
End span	1500
Internal span	1500
Overhang	125

Tables data are based on supports of 1.0mm BMT.

Valley: 6 fasteners



Fix fasteners no less than 15mm from ends of sheets.

MINI ORB® W.A. LIMIT STATE WIND PRESSURE CAPACITIES (KPA) 0.60 BMT

Span Type	Fasteners per sheet per support	Limit State	Span (mm)				
			450	600	900	1200	1500
Single	6	Serviceability	7.85	5.40	2.10	0.95	0.58
		Strength	10.60	10.60	10.15	7.75	6.45
End	6	Serviceability	8.85	6.50	2.75	1.00	0.60
		Strength	10.60	10.60	7.50	5.45	4.40
Internal	6	Serviceability	8.85	6.85	3.60	1.85	1.05
		Strength	10.60	10.60	8.85	6.25	4.60

Data is based on 1.0mm BMT G550 steel support.

ADVERSE CONDITIONS

If this product is to be used in marine, severe industrial, or unusually corrosive environments, ask for advice from our information line.

NON-CYCLONIC AREAS

The information in this brochure is suitable for use only in areas where a tropical cyclone is unlikely to occur as defined in AS 1170.2:2011.



INSTALLATION

You will always get a better appearance by taking a little extra care to ensure an evenly finished job, with uniform light reflection. Make sure that the supporting structure is as rigid and as flat as possible.

Always use at least two people to install MINI ORB® W.A.



SUPPORT SPACINGS

For best aesthetic results on all installations, limit support spacings to 900mm maximum.

CEILING INSTALLATION

Start fixing near the centre of a sheet, on one edge, and work outwards towards the ends of the sheet.

HORIZONTAL CORRUGATIONS

Decide how the sheet width will best cover the height of the wall, giving each overlap the same number of corrugations. Overlaps of more than two or three corrugations may detract from the final look of the job.

Start fixing near the centre of a sheet, on one edge, and work outwards towards the ends of the sheet. Place successive rows of fasteners parallel with the first row, working similarly from the centre.

If the sheet is long (about 3000mm or longer), be very careful that the sheet remains straight, along its top and bottom edges.

The same considerations should be given when installing sheeting diagonally.

VERTICAL CORRUGATIONS

Follow the same general procedure as that described for horizontal corrugations. Take care when you place each row of screws, that the corrugations are not flattened, thus forcing the sheet to become wider.

CURVING INFORMATION

MINI ORB® W.A. may be spring curved down to 1500mm radius. It is suitable for pre-curving to a radius of 500mm.

Pre-curving of MINI ORB® W.A. is subject to enquiry. For details and availability of pre-curving, enquire at your nearest LYSAGHT® Service Centre.

FASTENERS

	Fix to Steel Total thickness up to 3.0mm BMT	Fix to Timber J1-J4
Valley Fixed	RippleZips Screws M4.8-16x25	RippleZips screws M4.8-16x25

Notes:

1. For other steel thicknesses not specified please seek advice from screw manufacturer.
2. Values given are: gauge/threads per inch/lengths(mm).
3. Care is required during installation to prevent stripping of thin material.
4. Screw specification as above or equivalent fastener.
5. RippleZips screws are not available in Class 4 coating.

SHEET COVERAGE

Width of Roof (m)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	30	40	50
Number of Sheets	4	5	7	8	9	10	12	13	14	15	17	18	19	20	21	23	24	25	38	50	62

FASTENING SHEETS TO SUPPORTS

Place fasteners no less than 15mm from ends of sheets.

END LAPS

For aesthetic reasons, end laps are not recommended.

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.

SAFETY, STORAGE AND HANDLING

Handling Safety - Lysaght product may be sharp and heavy. It is recommended that heavy-duty cut resistant gloves and appropriate manual handling techniques or a lifting plan be used when handling material.

Keep the product dry and clear of the ground. If stacked or bundled product becomes wet, separate it and dry thoroughly with a clean cloth. 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.

METAL & TIMBER COMPATIBILITY

Lead, copper, free carbon, bare steel and green or some chemically-treated timber are not compatible with this product. Don't allow any contact of the product with those materials, nor discharge of rainwater from them onto the product. 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 our information line.

CUTTING

Lengths are custom cut. Check maximum and minimum with your supplier.

For cutting thin metal on site, we recommend a circular saw with a metal-cutting blade because it produces fewer damaging hot metal particles (swarf) and leaves less resultant burr than does a carborundum disc.

Cut materials over the ground and not over other materials.

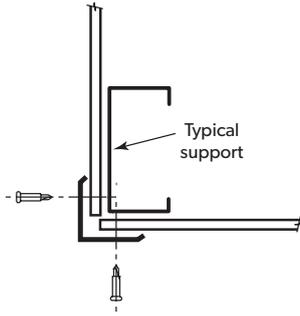
Sweep all metallic swarf and other debris from roof areas and gutters at the end of each day and at the completion of the installation. Failure to do so can lead to surface staining when the metal particles rust.

SEALED JOINTS

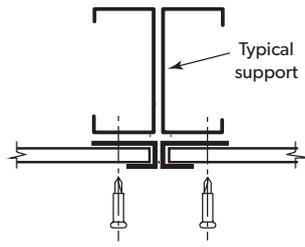
For sealed joints use screws or rivets and neutral-cure silicone sealant branded as suitable for use with galvanised or ZINCALUME® steel.

TRIMS

Trim at corner



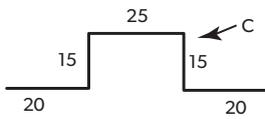
Trim at end joins



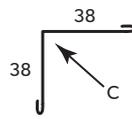
TRIMS

Contact your local Lysaght representative for availability.

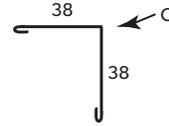
CD20 Butt joint trim-Top hat



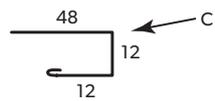
CD6 Internal corner



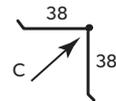
CD5 External corner



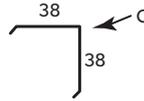
CD22 Edge trim (Subject to enquiry in SA)



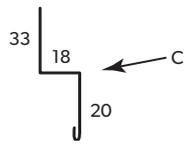
CD 26 Internal corner



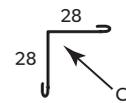
CD25 External corner



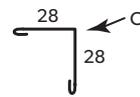
CD21 Butt joint trim-Overlap



CD24 Internal corner



CD23 External corner



C= coloured face

PRODUCT DESCRIPTIONS

- All descriptions, specifications, illustrations, drawings, data, dimensions and weights contained in this catalogue, all technical literature and websites containing information from Lysaght are approximations only. They are intended by Lysaght to be a general description for information and identification purposes and do not create a sale by description. Lysaght reserves the right at any time to:

- (a) supply Goods with such minor modifications from its drawings and specifications as it sees fit; and
- (b) alter specifications shown in its promotional literature to reflect changes made after the date of such publication.

DISCLAIMER, WARRANTIES AND LIMITATION OF LIABILITY

- This publication is intended to be an aid for all trades and professionals involved with specifying and installing Lysaght products and not to be a substitute for professional judgement.
- Terms and conditions of sale available at local Lysaght sales offices.
- Except to the extent to which liability may not lawfully be excluded or limited, BlueScope Steel Limited will not be under or incur any liability to you for any direct or indirect loss or damage (including, without limitation, consequential loss or damage such as loss of profit or anticipated profit, loss of use, damage to goodwill and loss due to delay) however caused (including, without limitation, breach of contract, negligence and/or breach of statute), which you may suffer or incur in connection with this publication.

© Copyright BlueScope Steel Limited 20 April, 2017

WWW.LYSAGHT.COM

Technical enquiries:
steeldirect@bluescopesteel.com or call 1800 641 417

LYSAGHT®, MINI ORB®, COLORBOND®, ZINCALUME® and THERMATECH® are registered trademarks of BlueScope Steel Limited, ABN 16 000 011 058. The LYSAGHT® range of products is exclusively made by or for BlueScope Steel Limited trading as Lysaght.



LYT0030 20.04.17