SEAL ORB

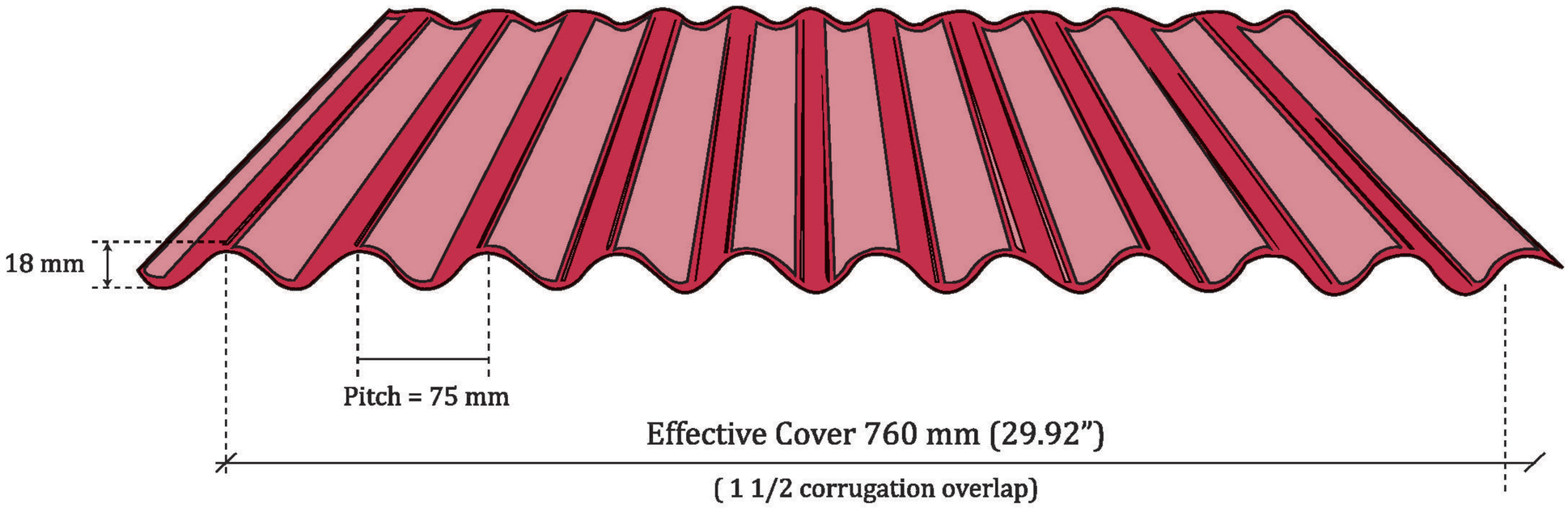
TECHNICAL INFORMATION

Available Finish

Zincalume/Aluzinc (Alum-zinc alloy coated steel)
Colorseal/Colorseal Xtra (Prepainted zinc coated steel)
Prima Maju/Clean Colorbond (Prepainted alum-zinc alloy coated steel)

Recommended Pitch

5° Minimum



Recommended Maximum Support Spacings

Base Steel Thickness (mm)	Roof			Wall
	Continuous span	Single span	Max. Cantilever	Max. span
0.38	1200	1000	100	1800
0.42	1500	1300	100	2000
0.82	2100	1830	300	2500

Profile Specification

Base steel thickness mm	Total coated thickness mm	Weight kg/m², lb/ft²		Computed on base steel thickness only: Moment of Inertia (I) cm⁴/m, in⁴/ft.		Top section modulus (Z) cm³/m, in³/ft.		Bottom section modulus (Z) cm³/m, in³/ft.	
0.30	0.35	3.36	0.687	1.56	0.011	1.73	0.032	1.73	0.032
0.38	0.42	4.25	0.869	1.97	0.014	2.19	0.040	2.19	0.040
0.42	0.47	4.81	0.984	2.23	0.016	2.48	0.046	2.48	0.046
0.82	0.86	9.62	1.967	4.46	0.033	4.96	0.092	4.96	0.092

Loading Capacity

Based on allowable stress of 10 T/in² and uniformly distributed load over continuous spans (alternate span loaded).

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Imposed Load	Kg/m²	24	48	73	97	122	146	170	195	220	244	268	293	317	341	366
	lb/ft²	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Max Span	m	3.88	2.86	2.36	2.06	1.84	1.69	1.57	1.47	1.38	1.32	1.26	1.20	1.16	1.12	1.08
	ft.	12.73	9.38	7.74	6.76	6.04	5.54	5.15	4.82	4.53	4.33	4.13	3.94	3.80	3.67	3.54
End span deflection (critical)	mm	134.3	74.7	51.5	39.3	31.3	26.5	22.9	20.2	17.6	16.3	14.9	13.4	12.6	11.8	10.9
	in.	5.29	2.94	2.03	1.55	1.23	1.04	0.90	0.80	0.69	0.64	0.58	0.53	0.50	0.46	0.43

NOTE: Since the deflection is proportional to the bending moment which in turn is proportional to the u.d.l., therefore for different imposed loads for a given span, the deflection may be computed in proportion to the magnitude of the total u.d.l. (imposed load + self weight of sheet).

Example: To obtain the deflection of 5'-6" span and imposed load of 10 lbs/ft² , refer to column 6 in the above table which has a span closest to 5'-6" and compute as follows:-

$$\text{Approximate deflection} = \frac{(10 + 1)}{(30 + 1)} \times 1.04 = 0.369 \text{ ins.} = 9.373 \text{ mm}$$

Self weight of sheet taken as 1 lb/ft²
1 inch = 25.4 mm

SEAL ORB Metal Decking – for roof, wall, fascia and ceiling Recommended roof pitch: min. 5°

Profile : The profile shall be R**olform Seal Orb** with sinusoidal rib of **18 mm** height; effective cover of **760 mm**; the sheets shall be in custom-cut lengths fastened to supports with approved self-drilling screws complete with preassembled neoprene washers.

Material Choice:

1. Non-Colored Finish

   The material shall be Zincalume steel sheets of 0.42 mm* Base Steel Thickness (BST)

   The base steel sheets shall be with guaranteed minimum yield strength of 550 MPa with limited ductility; hot-dipped with minimum AZ150 coating (150gsm of alum/zinc alloy coating). The alloy contents of Zincalume coating shall comprise of 55% aluminium, 43.5% zinc and 1.5% silicon; material warranty shall be 25 years against perforation

2. Colored Finish (without Anti-Dirt)

(2a) The material shall be Pre-painted Hot-dipped Galvanized Iron steel sheets (Colorseal) of 0.42 mm* Base Steel Thickness (BST)

The base steel sheets shall be with guaranteed minimum yield strength of 550 MPa; hot-dipped with minimum Z15 coating (150gsm of zinc coating); factory painted and oven-baked with top coat polyester paint finish with nominal thickness of 18 micron over 5 micron corrosive inhibitive epoxy primer; reverse coat of polyester paint finish with nominal thickness of 7 micron over 5 micron corrosive inhibitive epoxy primer; material warranty shall be 10 years against perforation

Or

(2b) The material shall be Pre-painted Aluminium Zinc Alloy coated steel sheets of 0.42 mm* Base Steel Thickness (BST)

The base steel sheets shall be with guaranteed minimum yield strength of 550 MPa; hot-dipped with minimum AZ100 coating (100gsm of alum/zinc alloy coating); factory painted and oven-baked with top coat polyester paint finish of minimum 14 micron over 3 micron corrosive inhibitive epoxy primer; reverse coat of polyester paint finish of 3 micron; material warranty shall be 10 years against perforation

3. Colored Finish (with Anti-Dirt)

(3a) The material shall be Pre-painted Hot-dipped Galvanized Iron steel sheets (Colorseal Xtra) of 0.42 mm* Base Steel Thickness (BST)

The base steel sheets shall be with guaranteed minimum yield strength of 550 MPa; hot-dipped with minimum coating of 200 gsm of zinc; factory painted and oven-baked with top coat polyester paint finish with nominal thickness of 20 micron over 5 micron corrosive inhibitive epoxy primer; reverse coat of polyester paint finish with nominal thickness of 7 micron over 5 micron corrosive inhibitive epoxy primer; material warranty shall be 25 years against perforation, 10 years against excessive color fading/chalking and 5 years against dirt staining

Or

(3b) The material shall be Pre-painted Zincalume coated steel sheets of 0.42 mm* Base Steel Thickness (BST)

The base steel sheets shall be with guaranteed minimum yield strength of 550 MPa; hot-dipped with minimum AZ150 coating (150gsm of alum/zinc alloy coating); factory painted and oven-baked with top coat polyester paint finish of minimum 20 micron over 5 micron corrosive inhibitive epoxy primer; reverse coat of polyester paint finish of 5 micron over 5 micron corrosive inhibitive epoxy primer; material warranty shall be 25 years against perforation, 10 years against excessive color fading/chalking and 5 years against dirt staining

4) The metal flashing and capping shall be of the same thickness and same material as the metal roofing. Painting at site is not necessary.

NATURAL CURVED SEAL ORB Metal Decking

- with minimum roof radius of 20 metre

Note:

* *Also available in other thicknesses and subject to Mill's minimum order quantity*
Also available in other types of paint finishing and subject to Mill's minimum order quantity
For further assistance, please do not hesitate to consult our Sales & Marketing office at 03 5122 0235