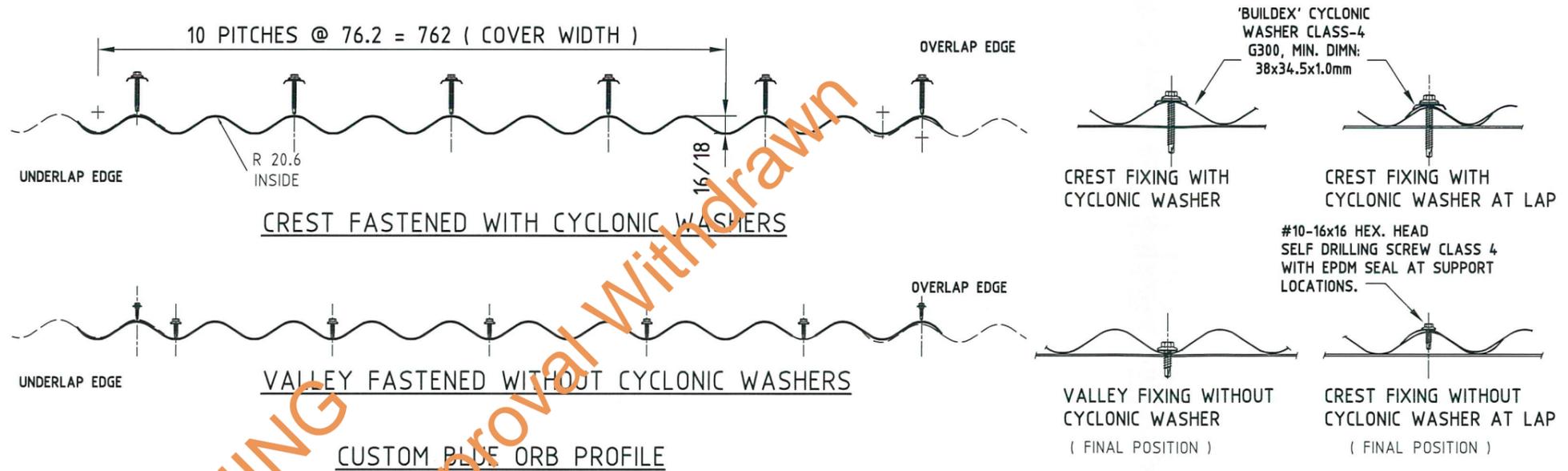


IN ACCORDANCE WITH NCC VOLUME 2 (SECTION P3.10.1) THIS PRODUCT SATISFIES PERFORMANCE REQUIREMENTS P2.1.1 FOR CONSTRUCTION IN A HIGH WIND AREA.



**Product Name**  
CUSTOM BLUE ORB - WALLING FOR CYCLONIC REGIONS

**Product Description**  
CUSTOM BLUE ORB WALLING IS MANUFACTURED FROM 0.6mm BMT G300, AM125 ZINCALUME, AM100 COLORBOND, AM150 COLORBOND ULTRA. Z600 ZINCFORM MATERIALS IS AVAILABLE AT SOME LOCATIONS.

**Manufacturer's Name**  
**LYSAGHT**  
BlueScope Limited  
A.B.N. 16 000 011 058  
Trading as Lysaght

**Design Criteria**

THE FOLLOWING CRITERIA FROM AS/NZS 1170.2:2011 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS (INCORPORATING AMENDMENT No. 1,2&3) HAVE BEEN USED TO GENERATE THE TABLES.

1. IMPORTANCE LEVEL 2 WITH RETURN PERIOD OF 500 YEARS
2.  $V_R = 66xV_c = 66x1.05 = 69.3$  m/sec
3.  $M_s = M_t = M_d = 1.0$
4.  $C_{pe} = +0.7 / -0.65$ ;  $C_{pi} = -0.65 / +0.7$   $K_{ce} \& K_{ci} = 0.9$
5. HEIGHT MULTIPLIERS FROM TABLE 4.1 OF AS/NZS 1170.2:2011 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS (INCORPORATING AMENDMENT No. 1,2&3) HAVE BEEN USED TO GENERATE THE TABLES.

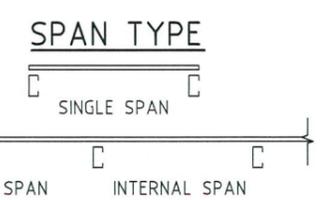
HEIGHT (m)	TERRAIN / HEIGHT MULTIPLIER ( $M_z, c_{at}$ )				
	1	2	2.5	3	4
<=5	1.05	0.91	0.87	0.83	0.75
<=10	1.12	1.00	0.92	0.83	0.75

**WALL DESIGN CAPACITY TABLES**  
ULTIMATE LIMIT STATE PRESSURE (kPa)

SPAN mm	VALLEY FASTENED WITHOUT CYCLONIC WASHERS			CREST FASTENED WITH CYCLONIC WASHERS		
	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
600	10.80	10.80	10.80	10.80	10.80	10.80
900	6.30	8.04	8.62	7.45	8.72	9.82
1200	3.38	5.88	6.64	5.28	6.64	8.62
1500	2.81	4.32	4.86	4.88	5.27	7.20
1800	2.25	3.36	3.28	4.47	4.28	5.56
2100	---	3.00	1.90	---	3.73	3.70

**MAXIMUM SPAN TABLES (mm)**

BUILDING HEIGHT	TERRAIN CATEGORY	K1	p2 (kPa)	VALLEY FASTENED WITHOUT CYCLONIC WASHERS, 0.60BMT			CREST FASTENED WITH CYCLONIC WASHERS, 0.60BMT		
				SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
UP TO 5M	1	1	3.86	1150	1640	1680	1840	2020	2070
		1.5	4.79	1050	1400	1510	1560	1640	1920
		2	5.72	950	1230	1350	1130	1400	1770
	2	1	2.90	1450	2100	1880	1900	2100	2100
		1.5	3.60	1170	1720	1730	1850	2100	2100
		2	4.30	1100	1500	1600	1810	1790	2000
	2.5	1	2.65	1580	2100	1930	1920	2100	2100
		1.5	3.29	1240	1850	1790	1870	2100	2100
		2	3.93	1140	1620	1670	1830	1980	2060
	3	1	2.41	1710	2100	1980	1930	2100	2100
		1.5	2.99	1400	2100	1860	1890	2100	2100
		2	3.57	1180	1730	1740	1860	2100	2100
4	1	1.97	1830	2100	2080	1960	2100	2100	
	1.5	2.44	1690	2100	1980	1930	2100	2100	
	2	2.92	1440	2100	1870	1900	2100	2100	
UP TO 10M	1	1	3.86	1150	1640	1680	1840	2020	2070
		1.5	4.79	1050	1400	1510	1560	1640	1920
		2	5.72	950	1230	1350	1130	1400	1770
	2	1	2.90	1450	2100	1880	1900	2100	2100
		1.5	3.60	1170	1720	1730	1850	2100	2100
		2	4.30	1100	1500	1600	1810	1790	2000
	2.5	1	2.65	1580	2100	1930	1920	2100	2100
		1.5	3.29	1240	1850	1790	1870	2100	2100
		2	3.93	1140	1620	1670	1830	1980	2060
	3	1	2.41	1710	2100	1980	1930	2100	2100
		1.5	2.99	1400	2100	1860	1890	2100	2100
		2	3.57	1180	1730	1740	1860	2100	2100
4	1	1.97	1830	2100	2080	1960	2100	2100	
	1.5	2.44	1690	2100	1980	1930	2100	2100	
	2	2.92	1440	2100	1870	1900	2100	2100	



**RECOMMENDED FASTENERS**

FASTENER NOTATIONS: HH - HEX. HEAD, HG - HIGH GRIP, T17 - TYPE 17, TG - TOP GRIP.

STEEL SUPPORTS - CLASS 4 : SELF DRILLING & SELF TAPPING HEX HEAD SCREW WITH EPDM SEAL				TIMBER SUPPORTS - CLASS 4 : TYPE 17 SELF DRILLING HEX HEAD SCREW WITH EPDM SEAL		
LOCATION ON CLADDING	SINGLE & LAPPED THICKNESS 0.75mm UP TO 1.0mm bmt.	SINGLE THICKNESS ≥ 1.0mm UP TO 3.0mm bmt.	LAPPED THICKNESS > 1.0mm UP TO 1.9mm bmt. (3.8mm TOTAL)	LOCATION ON CLADDING	HARDWOOD (STRENGTH GROUP J1-J3)	SOFTWOOD (STRENGTH GROUP J4)
CREST	M6.5 (#14)-12x55 CYCLONIC ROOFZIPS	#14 - 10 x 42 HH	#14 - 10 x 42 HH	CREST	#12 - 11 x 50 T17 HH HG/TG	#14 - 10 x 50 T17 HH M6 -11 x 50 ROOFZIPS
PAN	M6.5 (#14)-12x30 CYCLONIC ROOFZIPS	#14 - 10 x 25 HH	#14 - 10 x 25 HH	PAN	#12 - 11 x 25 T17 HH	#14 - 10 x 50 T17 HH

- Limitations**
1. THE DATA IN THIS SHEET SHALL BE APPLICABLE TO CUSTOM BLUE ORB WALLING ONLY. PROFILE DIMENSIONS OF CUSTOM BLUE ORB AS SUPPLIED FOR INSTALLATION SHALL COMPLY WITH CUSTOM BLUE ORB PRODUCT DRAWINGS AS DEVELOPED BY LYSAGHT.
  2. WALL DESIGN CAPACITY TABLES & MAXIMUM SPAN TABLES HAVE BEEN DEVELOPED FOR TIMBER SUPPORTS & STEEL SUPPORTS 1.5mm BMT OR THICKER. FOR STEEL SUPPORT LESS THAN 1.5mm BMT, REFER TO APPROPRIATE DTCM SHEET FOR MAXIMUM BATTEN SPACING.
  3. INSTALLATION SHALL BE IN ACCORDANCE WITH LYSAGHT CYCLONIC AREA DESIGN MANUAL AND CUSTOM BLUE ORB MANUAL.
  4. MAXIMUM SPAN TABLES ARE BASED ON MAXIMUM ROOF HEIGHT = 10M.
  5. MAXIMUM OVERHANG SHALL BE DETAILED ACCORDING TO CURRENT LYSAGHT ROOFING & WALLING INSTALLATION MANUAL.
  6. P2 (PRESSURE) IN THE TABLES SHALL BE INCREASED ACCORDING TO AS/NZS 1170.2:2011, STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS (INCORPORATING AMENDMENT No. 1,2 & 3) AS/NZS 1170.2: 2011 CLAUSE 5.4.1 IN THE CASE OF: ELEVATED BUILDING ALLOWING FOR AIR FLOW UNDER:  $-h/b > 1$ ,  $-h/d > 1$ .
  7. NO PRE-BORED HOLES PERMITTED.
  8. CUSTOM BLUE ORB COMPLIES WITH AUSTRALIAN STANDARDS FOR THE FOLLOWING REQUIREMENTS:
    - A. SERVICEABILITY: AS/NZS 1170.0: 2002 STRUCTURAL DESIGN ACTIONS PART 0: GENERAL PRINCIPLES (INCORPORATING AMENDMENT 1,2,3,4&5)
    - B. WIND LOADING: AS/NZS 1170.2: 2011 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTION (INCORPORATING AMENDMENT No. 1,2&3)
  9. SERVICEABILITY LIMIT STATE PRESSURES CAN BE OBTAINED BY MULTIPLYING WALL DESIGN CAPACITY TABLES BY A FACTOR 0.46.
  10. INCREASE SCREW LENGTH IF FIXING OVER INSULATION TO MAINTAIN A MIN. OF 3 SCREW THREADS PROTRUDING ON THE FAR SIDE STEEL SUPPORT.
  11. FOR STRENGTH GROUPS OF TIMBER, REFER TO AS 1720.2: 2006 TIMBER STRUCTURES PART 2: TIMBER PROPERTIES (INCORPORATING AMENDMENT No. 1).
  12. DESIGN TABLES ARE BASED ON TEST RESULTS COMPATIBLE TO AS 4040.3 - 1992 METHODS OF TESTING SHEET ROOF AND WALL CLADDING METHOD 3: RESISTANCE TO WIND PRESSURES FOR CYCLONE REGIONS.
  13. PRODUCT METALLIC COATING COMPLIES WITH AS 1397-2011 : CONTINUOUS HOT-DIP METALLIC COATED STEEL SHEET AND STRIP - COATINGS OF ZINC AND ZINC ALLOYED WITH ALUMINIUM AND MAGNESIUM & AS/NZS 2728: 2013 PREFINISHED/PREPAINTED SHEET METAL PRODUCTS FOR INTERIOR/EXTERIOR BUILDING APPLICATIONS - PERFORMANCE REQUIREMENTS

Accepted for Inclusion

Notes covering basis of DTCM sheet (relevant test reports etc).

1. CUSTOM BLUE ORB 0.6 BMT CYCLONIC ROOF & WALL PRESSURE TEST. PROJECT #501855, JUNE 2008. BLUESCOPE STEEL LYSAGHT. No 7 FERNGROVE PLACE, CHESTER HILL 2162 NSW - AUSTRALIA.
2. STATIC & CYCLIC FATIGUE WITHDRAWAL CAPACITIES OF THE SELF DRILLING SCREWS IN TIMBER SUPPORTS: REPORT 5.5.2 - REPORT No 05. DECEMBER 2001. BLUESCOPE LYSAGHT No 27 STERLING RD. MINCHINBURY 2770 NSW AUSTRALIA.
3. CYCLIC PULL OUT CAPACITIES OF BUILDEX #14 - 12 X 55 CYCLONIC ROOFZIPS SCREWS. REPORT, 5.1.2 - REPORT 05 JUNE 2010. BLUESCOPE LYSAGHT No 27 STERLING RD. MINCHINBURY 2770 NSW AUSTRALIA.
4. SCREW PULL OUT CAPACITIES TO BUILDING CODE OF AUSTRALIA LOW-HI-LOW CYCLONIC TEST REGIME: REPORT:5.1.2 - REPORT 02. SEPTEMBER 2009. BLUESCOPE LYSAGHT No 27 STERLING RD. MINCHINBURY 2770 NSW AUSTRALIA.

**\*\*Checking Engineers Certification**

Name: Jack Huang  
Rego Number: MIE Aust. 2592775  
Date: 26/09/2016  
Signature:

**\*\*Certifying Engineers Certification**

Name: Stephen Healey  
NT Rego Number: 34856ES  
Date: 27.September.2016  
Signature:

**\*\*registered as a structural engineer in Australia**      **\*\*registered as a structural engineer in Northern Territory**

DTCM REF: M/308/p1

Chairman's Signature:

Chairman's Name: Peter Russell

Date of Approval: 03/10/2016      Expiry Date: 02/10/2021