



ROOF DESIGN CAPACITY TABLES

0.42 BMT G550 CUSTOM ORB - ULTIMATE LIMIT STATE PRESSURE (kPa)

SPAN	CREST FASTENED WITHOUT CYCLONIC WASHERS			CREST FASTENED WITH CYCLONIC WASHERS		
	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
600	6.44	6.47	8.09	8.64	8.70	10.13
900	6.19	4.37	5.57	6.49	5.18	7.34
1200	4.05	2.74	3.71	4.05	3.01	5.05
1500	2.23	1.58	2.52	2.23	1.58	3.27
1800	0.72	0.9	1.99	0.72	0.90	1.99

0.48 BMT G550 CUSTOM ORB - ULTIMATE LIMIT STATE PRESSURE (kPa)

SPAN	CREST FASTENED WITHOUT CYCLONIC WASHERS			CREST FASTENED WITH CYCLONIC WASHERS		
	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
600	10.80	8.10	10.13	10.80	9.16	10.80
900	6.98	5.56	7.14	6.98	6.54	8.65
1200	4.05	3.57	4.81	4.05	5.05	6.68
1500	2.02	2.12	3.15	2.02	3.69	4.88
1800	0.88	1.22	2.14	0.88	2.46	3.25
2100	-	0.86	1.80	-	1.36	1.80

MAXIMUM BATTEN SPACING (mm) FOR CYCLONIC REGION 'C'
TOPSPAN 40 - 0.75 bmt & TOPSPAN 50 - 0.75 bmt

LOCATION ON ROOF	K1	pz kPa	MAXIMUM ALLOWABLE BATTEN SPACING (mm)			
			450	600	900	1200
ROOF EDGES	2.0	3.75	1210	1210	880	650
INTERNAL AREAS	1.0	2.4	1890	1890	1380	1020
ROOF EDGES	2.0	5.58	810	810	590	440
INTERNAL AREAS	1.0	3.57	1270	1270	930	690
ROOF EDGES	2.0	8.21	550	550	400	290
INTERNAL AREAS	1.0	5.26	860	860	630	460
ROOF EDGES	2.0	11.09	410	410	290	220
INTERNAL AREAS	1.0	7.1	640	640	460	340

MAXIMUM SPAN TABLES

BUILDING HEIGHT	TERRAIN CATEGORY	K1	pz (kPa)	CREST FASTENED WITHOUT CYCLONIC WASHERS						CREST FASTENED WITH CYCLONIC WASHERS					
				0.42 BMT						0.48 BMT					
				SINGLE	END	INTERNAL	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
UP TO 5M	1 & 2	1	4.16	1180	930	1120	1180	1040	1340	1180	1110	1310	1180	1390	1620
		1.5	5.33	1020	760	930	1020	880	1160	1060	930	1130	1060	1140	1420
		2	6.5	860	0	780	860	760	1000	940	780	980	940	900	1220
	2.5	1	3.53	1280	1050	1240	1280	1120	1450	1270	1200	1430	1270	1530	1740
		1.5	4.52	1130	870	1060	1130	990	1280	1150	1050	1250	1150	1310	1560
		2	5.52	990	730	900	990	860	1130	1040	900	1100	1040	1100	1390
3 & 4	1	2.95	1380	1160	1390	1380	1210	1570	1360	1320	1550	1360	1680	1860	
	1.5	3.78	1240	1000	1180	1240	1090	1410	1230	1160	1380	1230	1470	1700	
	2	4.61	1120	860	1050	1120	970	1270	1140	1040	1230	1140	1290	1540	
UP TO 10M	1 & 2	1	4.61	1120	860	1050	1120	970	1270	1140	1040	1230	1140	1290	1540
		1.5	5.91	930	680	850	930	820	1080	1000	850	1050	1000	1020	1320
		2	7.2	770	0	700	770	690	910	880	700	890	880	770	1120
	2.5	1	4.12	1190	940	1130	1190	1040	1350	1190	1110	1320	1190	1400	1630
		1.5	5.28	1020	770	940	1020	890	1160	1070	940	1140	1070	1150	1430
		2	6.43	870	600	790	870	770	1010	950	790	990	950	920	1240
3 & 4	1	3.65	1260	1030	1210	1260	1110	1430	1250	1180	1400	1250	1500	1720	
	1.5	4.68	1110	850	1040	1110	960	1260	1130	1030	1220	1130	1280	1530	
	2	5.71	960	700	880	960	840	1110	1020	880	1080	1020	1060	1360	

RECOMMENDED ROOFING FASTENERS

STEEL SUPPORTS

STEEL THICKNESS	CLASS 4 : SELF DRILLING & SELF TAPPING HEX HEAD SCREW WITH EDPM SEAL
1.5 - 3.0mm bmt	#14 - 10 x 42 (CREST FIX)
0.75mm bmt	#15 - 15 x 41 (CREST FIX)

TIMBER SUPPORTS

STRENGTH GROUP	CLASS 4 : TYPE 17 SELF DRILLING HEX HEAD SCREW WITH EDPM SEAL
HARDWOOD J1-J3	#14 - 10 x 50 (CREST FIX)
SOFTWOOD J4	#14 - 10 x 65 (CREST FIX)

Product Name
CUSTOM ORB: ROOFING: -
FOR CYCLONIC REGIONS

Product Description
0.42, 0.48 BMT G550 AZ150 & COLORBOND
AS 1397: 2001 & AS/NZS 2728: 2007

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

Design Criteria
THE FOLLOWING CRITERIA FROM AS/NZS 1170.2:2002 HAVE BEEN USED TO GENERATE THE TABLES.
1. IMPORTANCE LEVEL 2 WITH RETURN PERIOD OF 500 YEARS
2. Vr = 66 m/sec, Fc = 1.05
3. Ms = Mt = Md = 1.0
4. Cpe = -0.9; Cpi = +0.7
5. HEIGHT MULTIPLIERS FROM TABLE

HEIGHT (m)	TERRAIN / HEIGHT MULTIPLIER (Mz,cat)		
	1 & 2	2.5	3 & 4
<=5	0.95	0.88	0.80
<=10	1.00	0.95	0.89

- Limitations**
- THE DATA IN THIS SHEET SHALL BE APPLICABLE TO CUSTOM ORB ROOFING ONLY. PROFILE DIMENSIONS OF CUSTOM ORB AS SUPPLIED FOR INSTALLATION SHALL COMPLY WITH CUSTOM ORB PRODUCT DRAWINGS DEVELOPED BY BLUESCOPE LYSAGHT.
 - ROOF DESIGN CAPACITY TABLES & MAXIMUM SPAN TABLES HAVE BEEN DEVELOPED FOR TIMBER SUPPORTS & STEEL SUPPORTS 1.5mm BMT OR THICKER. MAXIMUM SPACES & PRESSURE SHALL NOT EXCEED THE VALUES GIVEN IN MAXIMUM BATTEN SPACING TABLE, WHERE TOPSPAN 40 OR TOPSPAN 50 WITH 0.75 BMT SUPPORTS ARE USED.
 - INSTALLATION SHALL BE IN ACCORDANCE WITH LYSAGHT CYCLONIC AREA DESIGN MANUAL.
 - MAXIMUM SPAN TABLES ARE BASED ON THE FOLLOWING PARAMETERS: MAXIMUM ROOF HEIGHT= 10M
 - MAXIMUM OVERHANG SHALL BE DETAILED ACCORDING TO CURRENT LYSAGHT ROOFING AND WALLING INSTALLATION MANUAL.
 - TOPSPAN 40 & 50 BATTENS SHALL BE CONTINUOUS OVER AT LEAST TWO SPANS, LAPPED A MINIMUM OF 40mm AT THE SUPPORT (TRUSS OR RAFTER) LOCATIONS.
 - Pz PRESSURE IN THE TABLES SHALL BE INCREASED ACCORDING TO AS/NZS 1170.2:2002 IN THE CASE OF:
- ELEVATED BUILDING ALLOWING FOR AIR FLOW UNDER
- h/b > 1.
- h/d > 1.

Accepted for Inclusion

DCM REF: m/142/01

Chairman's Signature: *Peter Russell*

Chairman's Name: PETER RUSSELL

Date of Approval: 9/7/09 Expiry Date: 9/7/12

New Expiry Signature: *[Signature]* 09/07/16

NOTES:
1. INCREASE SCREW LENGTH IF FIXING OVER INSULATION TO MAINTAIN A MIN. 3 SCREW THREADS PROTRUDING FAR SIDE OF SUPPORT.
2. FOR STRENGTH GROUPS OF TIMBER REFER TO AS 1720.2 :2006
3. DESIGN TABLES ARE BASED ON TEST RESULTS IN ACCORDANCE TO BCA REQUIREMENTS FOR "LHL" CYCLONIC TEST FOR METAL ROOFS.
4. FIXING TOPSPAN BATTENS : TO STEEL (PER SUPPORT) -0.75 BMT: 4-OFF #15-15X25 SELF DRILLING, SELF TAPPING HEX HEAD SCREW.
-1.0 BMT: 2-OFF #15-15X25 SELF DRILLING, SELF TAPPING HEX HEAD SCREW.
-1.2/1.5 BMT: 2-OFF #14-10X25 SELF DRILLING, SELF TAPPING HEX HEAD SCREW.
TO TIMBER (PER SUPPORT) -HARDWOOD : 2-OFF TYPE 17 #12-11X25 HEX HEAD SELF DRILLING.
-SOFTWOOD : 2-OFF TYPE 17 #12-11X40 HEX HEAD SELF DRILLING.

****Design Engineers Certification**
Name: CAM SECCOMBE
Rego Number: CPEng. 311079
Date: 18-06-2009
Signature: *[Signature]*
**registered as a structural engineer in Australia

****Certifying Engineers Certification**
Name: ALEXANDER FILONOV
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