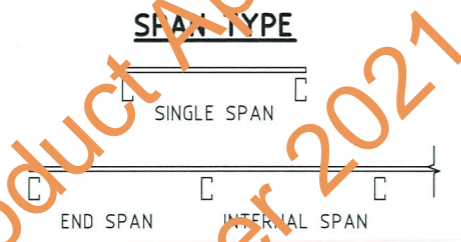
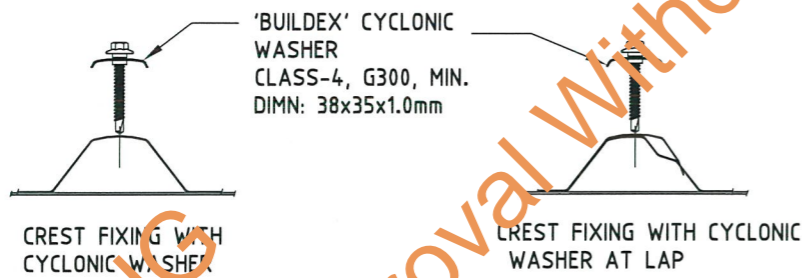
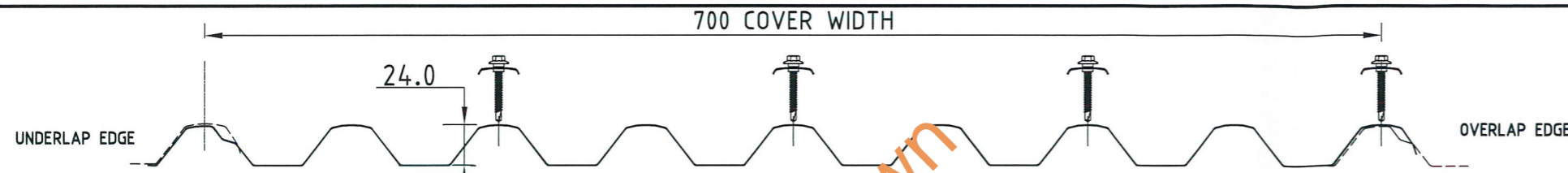


IN ACCORDANCE WITH NCC VOLUME 2 (SECTION P3.10.1) THIS PRODUCT SATISFIES PERFORMANCE REQUIREMENTS P2.1.1 FOR CONSTRUCTION IN A HIGH WIND AREA.



MAXIMUM SPAN TABLES (mm)

BUILDING HEIGHT	TERRAIN CATEGORY	K1	pz (kPa)	CREST FASTENED WITH CYCLONIC WASHERS, 0.42BMT			CREST FASTENED WITH CYCLONIC WASHERS, 0.48BMT		
				SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
UP TO 5M	1	1	4.57	1240	1260	1450	1400	1260	1670
		1.5	5.86	1080	1090	1220	1180	1090	1400
		2	7.15	930	940	1030	1010	940	1160
	2	1	3.44	1420	1440	1710	1620	1450	1950
		1.5	4.40	1270	1290	1480	1430	1290	1710
		2	5.37	1140	1150	1300	1260	1150	1490
	2.5	1	3.49	1410	1440	1700	1610	1440	1930
		1.5	4.02	1330	1350	1570	1490	1350	1790
		2	4.91	1190	1200	1390	1340	1210	1590
	3	1	2.86	1520	1570	1910	1760	1660	2110
		1.5	3.66	1380	1410	1660	1570	1410	1890
		2	4.47	1260	1280	1460	1410	1280	1690
4	1	2.33	1650	1710	2100	1940	1970	2300	
	1.5	2.99	1490	1530	1850	1730	1580	2070	
	2	3.65	1380	1410	1660	1580	1410	1890	
UP TO 10M	1	1	5.2	1160	1170	1330	1290	1170	1530
		1.5	6.67	990	1000	1100	1080	1000	1240
		2	8.13	840	840	900	890	840	1000
	2	1	4.15	1310	1330	1530	1470	1330	1760
		1.5	5.32	1140	1150	1310	1270	1160	1500
		2	6.48	1010	1020	1130	1100	1020	1280
	2.5	1	3.51	1410	1430	1700	1610	1430	1930
		1.5	4.5	1250	1270	1460	1410	1280	1680
		2	5.49	1120	1130	1280	1240	1140	1470
	3	1	2.86	1520	1570	1910	1760	1660	2110
		1.5	3.66	1380	1410	1660	1570	1410	1890
		2	4.47	1260	1280	1460	1410	1280	1690
4	1	2.33	1650	1710	2100	1940	1970	2300	
	1.5	2.99	1490	1530	1850	1730	1580	2070	
	2	3.65	1380	1410	1660	1580	1410	1890	
		3	4.96	1180	1200	1380	1330	1200	1580

ROOF DESIGN CAPACITY TABLES

CLADDING CREST FASTENED WITH CYCLONIC WASHERS  
- ULTIMATE LIMIT STATE PRESSURE (kPa)

SPAN (mm)	0.42mm BMT			0.48mm BMT		
	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
600	10.80	10.8	10.8	10.80	10.8	10.8
900	7.48	7.52	8.14	8.04	7.56	8.74
1200	4.86	4.97	5.98	5.77	5.00	6.92
1500	2.95	3.13	4.30	3.99	3.13	5.34
1800	1.74	2.02	3.12	2.71	2.63	4.00
2100	1.24	1.62	2.43	1.92	2.12	2.91
2400	N/A	N/A	N/A	1.62	1.62	2.05

MAXIMUM SUPPORT SPACING (MM)

SPAN TYPE	0.42 BMT	0.48 BMT
SINGLE	1300	2000
END	1800	2200
INTERNAL	2400	3000
EAVE UNSTIFFENED	300	400
OVERHANG STIFFENED	600	700

THE MAXIMUM SUPPORT SPACING CONSIDERS LIGHT ROOF TRAFFIC FROM INCIDENTAL MAINTENANCE.

RECOMMENDED ROOF FASTENERS FOR STEEL SUPPORTS

ONLY FASTENERS NOTED CAN BE USED IN THIS DTCM SHEET.

RECOMMENDED ROOF FASTENERS FOR TIMBER SUPPORTS

SCREW NOTATION CODE:	STEEL THICKNESS	CLASS 4 : SELF DRILLING & TAPPING HEX HEAD SCREW WITH EPDM SEAL	STRENGTH GROUP	CLASS 4 : SELF DRILLING HEX HEAD SCREW WITH EPDM SEAL
HH DENOTED - HEX. HEAD	SINGLE: 1.0mm UP TO 3.0mm bmt	#14 - 10 x 50 HH (CREST FIX)	HARDWOOD J1-J3	#12 - 11 x 65 T17 HG/TG HH (CREST FIX)
T17 " - TYPE 17	SINGLE/LAPPED: 0.75mm UP TO 1.0mm bmt (total 2.0mm)	M6.5 (#14) - 12 x 55 CYCLONIC ROOF ZIPS (CREST FIX)	SOFTWOOD J4	M6 - 11 x 65 ROOFZIPS (CREST FIX)
HG " - HIGH GRIP	LAPPED: 1.0mm UP TO 1.9mm bmt (total 3.8mm)	#14 - 10 x 50 HH (CREST FIX)		#14 - 10 x 65 T17 HH (CREST FIX)
TG " - TOP GRIP				

Notes covering basis of DTCM sheet (Relevant test reports etc)

- SPANDEK 0.42 + 0.48 BMT CYCLONIC ROOF & WALL PRESSURE TESTS. PROJECT #501855. FEBRUARY 2008. BLUESCOPE STEEL LYSAGHT No 7 FERN GROVE PLACE, CHESTER HILL 2162 NSW - AUSTRALIA.
- STATIC & CYCLIC FATIGUE WITHDRAWAL CAPACITIES OF SELF DRILLING SCREWS IN TIMBER SUPPORTS. REPORT: 5.1.2-REPORT 05. DECEMBER 2010. LYSAGHT No 27 STERLING RD, MINCHINBURY 2770 NSW - AUSTRALIA.
- CYCLIC PULLOUT CAPACITIES OF BUILDEX M6.5-12X55 CYCLONIC ZIP SCREWS. REPORT: 5.1.3 - REPORT 05. JUNE 2010. BLUESCOPE LYSAGHT No 27 STERLING RD, MINCHINBURY 2770 NSW - AUSTRALIA.
- SCREW PULLOUT CAPACITIES TO BUILDING CODES OF AUSTRALIA'S LOW-HIGH-LOW CYCLONIC TEST REGIME. REPORT: 5.1.2 - REPORT 02. SEPTEMBER 2009. LYSAGHT No 27 STERLING RD, MINCHINBURY 2770 NSW - AUSTRALIA.

\*\*Checking Engineers Certification

Name: Kavitha Mysore  
Registration Number: MIE AUST. 2089547  
Date: 05/09/2016  
Signature: *M.K. Kavitha*

\*\*registered as a structural engineer in Australia

\*\*Certifying Engineers Certification

Name: Stephen Healey  
NT Registration Number: 35856ES  
Date: 27. September. 2016  
Signature: *Stephen Healey*

\*\*registered as a structural engineer in Nth. Territory

Product Name  
SPANDEK - ROOFING FOR CYCLONIC REGIONS

Product Description  
SPANDEK ROOFING IS MANUFACTURED FROM 0.42mm & 0.48mm BMT G550, AM125 ZINCALUME, AM100 COLORBOND/COLORBOND METALLIC, AM150 COLORBOND ULTRA. Z450 GALVASPAN MATERIAL IS AVAILABLE IN SOME LOCATIONS.

Manufacturer's Name

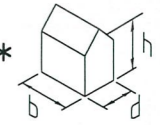
LYSAGHT  
BlueScope Steel Limited  
A.B.N. 16 000 011 058  
Trading as Lysaght



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.
- IMPORTANCE LEVEL 2 WITH RETURN PERIOD OF 500 YEARS
  - $VR = 66xFc = 66x1.05 = 69.3$  m/sec
  - $Ms = Mt = Md = 1.0$
  - $Cpe = -0.9$ ;  $Cpi = +0.7$   $Kce$  &  $Kci = 0.9$
  - 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 (Mz, cat)				
	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



Limitations

- THE DATA IN THIS SHEET SHALL BE APPLICABLE TO SPANDEK ROOFING ONLY. PROFILE DIMENSIONS OF SPANDEK AS SUPPLIED FOR INSTALLATION SHALL COMPLY WITH SPANDEK PRODUCT DRAWINGS AS DEVELOPED BY LYSAGHT.
- ROOF DESIGN CAPACITY TABLES & MAXIMUM SPAN TABLES HAVE BEEN DEVELOPED FOR TIMBER SUPPORTS & STEEL SUPPORTS 1.5mm BMT OR THICKER. FOR STEEL SUPPORT LESS THAN 1.50mm BMT, REFER TO APPROPRIATE DTCM SHEET FOR MAXIMUM BATTEN SPACING.
- INSTALLATION SHALL BE IN ACCORDANCE WITH LYSAGHT CYCLONIC AREA DESIGN MANUAL AND SPANDEK MANUAL.
- MAXIMUM SPAN TABLES ARE BASED ON MAXIMUM ROOF HEIGHT = 10M.
- MAXIMUM OVERHANG SHALL BE DETAILED ACCORDING TO CURRENT LYSAGHT ROOFING & WALLING INSTALLATION MANUAL.
- Pz (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:  $-h/b > 1$ ,  $-h/d > 1$ .
- NO PRE-BORED HOLES PERMITTED.
- SPANDEK COMPLIES WITH AUSTRALIAN STANDARDS FOR THE FOLLOWING REQUIREMENTS:
  - SERVICEABILITY: AS/NZS 1170.0: 2002 STRUCTURAL DESIGN ACTIONS PART 0: GENERAL PRINCIPLES (INCORPORATING AMENDMENT 1,2,3,4&5)
  - WIND LOADING: AS/NZS 1170.2: 2011 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTION (INCORPORATING AMENDMENT No. 1,2&3)
  - CONCENTRATED LOAD AT MAXIMUM SPAN: AS 4040.0-1992: METHODS OF TESTING SHEET ROOF AND WALL CLADDING - INTRODUCTION, LIST OF METHODS AND GENERAL REQUIREMENTS; AS 4040.1-1992: METHODS OF TESTING SHEET ROOF AND WALL CLADDING - RESISTANCE TO CONCENTRATED LOADS
- SERVICEABILITY LIMIT STATE PRESSURES CAN BE OBTAINED BY MULTIPLYING ROOF DESIGN CAPACITY TABLES BY A FACTOR 0.46.
- ALWAYS WALK OVER SUPPORTS IF POSSIBLE. GENERALLY KEEP YOUR WEIGHT DISTRIBUTED EVENLY OVER THE SOLES OF YOUR SHOES.
- MAX. SPANDEK ROOF LENGTHS AS RELATED TO ROOF CARRYING CAPACITY & ROOF PITCH SHALL BE DETERMINED USING THE SPANDEK DESIGN & INSTALLATION GUIDE.
- INCREASE SCREW LENGTH IF FIXING OVER INSULATION TO MAINTAIN A MIN. OF 3 SCREW THREADS PROTRUDING ON THE FAR SIDE STEEL SUPPORT.
- FOR STRENGTH GROUPS OF TIMBER, REFER TO AS 1720.2: 2006 TIMBER STRUCTURES PART 2: TIMBER PROPERTIES (INCORPORATING AMENDMENT No. 1).
- DESIGN TABLES ARE BASED ON TEST RESULTS IN ACCORDANCE TO BCA REQUIREMENTS FOR "LHL" CYCLONIC TEST FOR METAL ROOFS.
- 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

DTCM ref: M/311/01

Chairman's Signature: *P. Russell*

Chairman's Name: *Peter Russell*

Date of Approval: 03/08/2016 Expiry Date: 02/08/2021