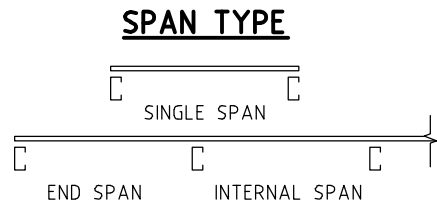
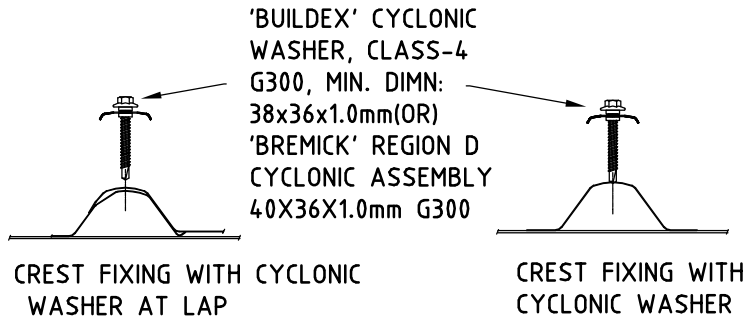
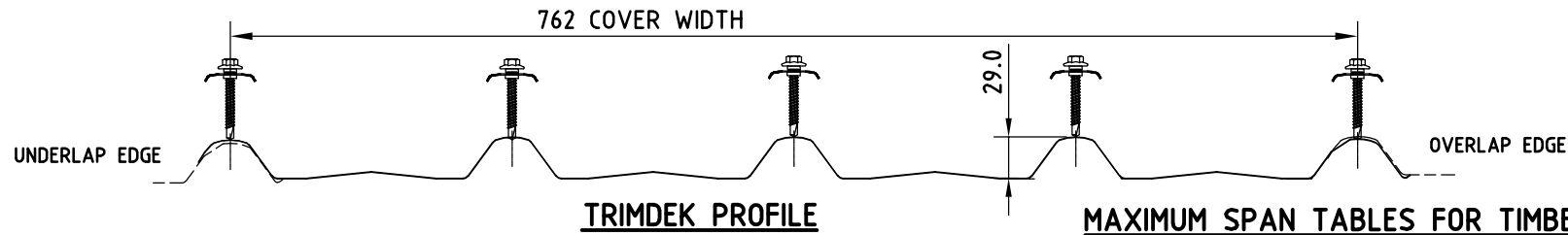


NORTHERN TERRITORY DEEMED TO COMPLY MANUAL - National Construction Code Volume 2 (Section 3.0.4 Structural resistance of materials in high wind areas)
 This product has been determined to satisfy NCC Performance Requirement P2.1.1 for structural stability and resistance.



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 |
| 450 | N/A | N/A | N/A | 11.06 | 16.05 | 16.05 |
| 600 | 10.80 | 10.80 | 10.80 | 10.80 | 15.00 | 15.00 |
| 900 | 7.03 | 7.23 | 8.02 | 7.88 | 7.65 | 8.61 |
| 1200 | 4.15 | 4.43 | 5.70 | 5.47 | 5.15 | 6.69 |
| 1500 | 2.14 | 2.40 | 3.83 | 3.56 | 3.29 | 5.05 |
| 1800 | 1.02 | 1.15 | 2.43 | 2.16 | 2.09 | 3.68 |
| 2100 | 0.77 | 0.68 | 1.49 | 1.25 | 1.85 | 2.58 |
| 2400 | N/A | N/A | N/A | 0.86 | 1.62 | 1.76 |

MAXIMUM SUPPORT SPACING (mm)

| SPAN TYPE | 0.42 BMT | 0.48 BMT |
|--------------------|----------|----------|
| SINGLE | 1100 | 1600 |
| END | 1300 | 1850 |
| INTERNAL | 1900 | 2600 |
| EAVE UNSTIFFENED | 150 | 200 |
| OVERHANG STIFFENED | 300 | 350 |

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

NOTE: CLADDING SPAN SHALL NOT EXCEED THE MAXIMUM SPAN FOR CLADDING (SHEET 1) OR THE MAXIMUM BATTEN SPACING (SHEET 2)

MAXIMUM SPAN TABLES FOR TIMBER & STEEL SUPPORT >=1.5 (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 | 1150 | 1180 | 1380 | 1340 | 1290 | 1600 |
| | | 1.5 | 5.86 | 1020 | 1040 | 1170 | 1150 | 1110 | 1350 |
| | | 2 | 7.15 | 890 | 900 | 1010 | 990 | 950 | 1120 |
| | 2 | 1 | 3.44 | 1300 | 1340 | 1580 | 1520 | 1470 | 1860 |
| | | 1.5 | 4.40 | 1170 | 1200 | 1400 | 1360 | 1320 | 1640 |
| | | 2 | 5.37 | 1070 | 1090 | 1250 | 1210 | 1170 | 1440 |
| | 2.5 | 1 | 3.49 | 1290 | 1330 | 1570 | 1510 | 1460 | 1850 |
| | | 1.5 | 4.02 | 1210 | 1260 | 1470 | 1420 | 1380 | 1720 |
| | | 2 | 4.91 | 1120 | 1140 | 1320 | 1280 | 1230 | 1530 |
| | 3 | 1 | 2.86 | 1390 | 1430 | 1700 | 1640 | 1600 | 2020 |
| | | 1.5 | 3.66 | 1270 | 1310 | 1530 | 1480 | 1440 | 1800 |
| | | 2 | 4.47 | 1160 | 1190 | 1390 | 1350 | 1300 | 1620 |
| | 4 | 1 | 2.33 | 1470 | 1510 | 1830 | 1760 | 1730 | 2190 |
| | | 1.5 | 2.99 | 1370 | 1410 | 1680 | 1620 | 1570 | 1980 |
| | | 2 | 3.65 | 1270 | 1310 | 1530 | 1480 | 1440 | 1800 |
| | UP TO 10M | 1 | 1 | 5.2 | 1090 | 1110 | 1280 | 1240 | 1190 |
| 1.5 | | | 6.67 | 930 | 950 | 1070 | 1050 | 1010 | 1200 |
| 2 | | | 8.13 | 810 | 820 | 880 | 870 | 880 | 870 |
| 2 | | 1 | 4.15 | 1190 | 1240 | 1440 | 1400 | 1360 | 1690 |
| | | 1.5 | 5.32 | 1070 | 1100 | 1260 | 1220 | 1170 | 1450 |
| | | 2 | 6.48 | 950 | 980 | 1090 | 1070 | 1040 | 1230 |
| 2.5 | | 1 | 3.51 | 1290 | 1330 | 1560 | 1510 | 1460 | 1840 |
| | | 1.5 | 4.5 | 1160 | 1190 | 1390 | 1350 | 1300 | 1620 |
| | | 2 | 5.49 | 1060 | 1080 | 1230 | 1190 | 1150 | 1410 |
| 3 | | 1 | 2.86 | 1390 | 1430 | 1700 | 1640 | 1600 | 2020 |
| | | 1.5 | 3.66 | 1270 | 1310 | 1530 | 1480 | 1440 | 1800 |
| | | 2 | 4.47 | 1160 | 1190 | 1390 | 1350 | 1300 | 1620 |
| 4 | | 1 | 2.33 | 1470 | 1510 | 1830 | 1760 | 1730 | 2190 |
| | | 1.5 | 2.99 | 1370 | 1410 | 1680 | 1620 | 1570 | 1980 |
| | | 2 | 3.65 | 1270 | 1310 | 1530 | 1480 | 1440 | 1800 |
| 4 | | 1 | 2.33 | 1470 | 1510 | 1830 | 1760 | 1730 | 2190 |
| | 1.5 | 2.99 | 1370 | 1410 | 1680 | 1620 | 1570 | 1980 | |
| | 2 | 3.65 | 1270 | 1310 | 1530 | 1480 | 1440 | 1800 | |

Product Name
 TRIMDEK - ROOFING FOR CYCLONIC REGIONS - SHEET 1 OF 2

Product Description
 TRIMDEK 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

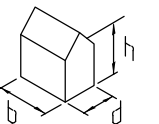


Design Criteria
 A. THE FOLLOWING CRITERIA FROM AS/NZS 1170.2:2011 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS (INCORPORATING AMENDMENT No. 1, 2, 3, 4 & 5) HAVE BEEN USED TO GENERATE THE TABLES.
 1. IMPORTANCE LEVEL 2 WITH RETURN PERIOD OF 500 YEARS
 2. VR = 66xFc = 66x1.05 = 69.3 m/sec
 3. Ms = Mt = Md = 1.0
 4. Cpe = -0.9; Cpi = +0.7 Kce & Kci = 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, 4 & 5) HAVE BEEN USED TO GENERATE THE TABLES.

| HEIGHT (m) | TERRAIN / HEIGHT MULTIPLIER (Mz,ca1) | | | | |
|------------|--------------------------------------|------|------|------|------|
| | 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 |

- B. TRIMDEK 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, 4 & 5)
 - 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
 - DESIGN TABLES ARE BASED ON TEST RESULTS IN ACCORDANCE TO NCC-2019, BUILDING CODE OF AUSTRALIA REQUIREMENTS FOR "LHL" CYCLONIC TEST FOR METAL ROOFS AND RELEVANT CLAUSES OF AS4600:2018, COLD-FORMED STEEL STRUCTURES
 - PRODUCT METALLIC COATING COMPLIES WITH AS 1397-2021: 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
 - FOR STRENGTH GROUPS OF TIMBER, REFER TO AS 1720.2: 2006 TIMBER STRUCTURES PART 2: TIMBER PROPERTIES (INCORPORATING AMENDMENT No. 1).

- Limitations**
- THE DATA IN THIS SHEET SHALL BE APPLICABLE TO TRIMDEK ROOFING ONLY. PROFILE DIMENSIONS OF TRIMDEK AS SUPPLIED FOR INSTALLATION SHALL COMPLY WITH TRIMDEK PRODUCT DRAWINGS AS DEVELOPED BY LYSAGHT.
 - INSTALLATION SHALL BE IN ACCORDANCE WITH LYSAGHT CYCLONIC AREA DESIGN MANUAL AND TRIMDEK MANUAL. <https://cdn.dcs.lysaght.com/download/lysaght-cyclonic-design-manual-steel-roofing-walling-topspan>
 - MAXIMUM SPAN TABLES ARE BASED ON MAXIMUM ROOF HEIGHT = 10M.
 - MAXIMUM OVERHANG SHALL BE DETAILED ACCORDING TO CURRENT LYSAGHT ROOFING & WALLING INSTALLATION MANUAL.
 - NO PRE-BORED HOLES PERMITTED.
 - ALWAYS WALK OVER SUPPORTS IF POSSIBLE. GENERALLY KEEP YOUR WEIGHT DISTRIBUTED EVENLY OVER THE SOLES OF YOUR SHOES.
 - MAX. TRIMDEK ROOF LENGTHS AS RELATED TO ROOF CARRYING CAPACITY & ROOF PITCH SHALL BE DETERMINED USING THE TRIMDEK DESIGN & INSTALLATION GUIDE. <https://cdn.dcs.lysaght.com/download/lysaght-roofing-walling-installation-manual>
 - INCREASE SCREW LENGTH IF FIXING OVER INSULATION TO MAINTAIN A MIN. OF 3 SCREW THREADS PROTRUDING ON THE FAR SIDE STEEL SUPPORT.
 - 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. 1,2,3,4& 5) AS/NZS 1170.2: 2011 CLAUSE 5.4.1 IN THE CASE OF: ELEVATED BUILDING ALLOWING FOR AIR FLOW UNDER h/d > 0.5



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 ZIP SCREW (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 DTC (Relevant test reports etc)

- TRIMDEK 0.42 + 0.48 BMT CYCLONIC ROOF & WALL PRESSURE TESTS. PROJECT #501855. JUNE 2008. BLUESCOPE STEEL LYSAGHT No 7 FERNGROVE 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 BUILDDEX 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 Engineer
 Name: SANDEEP SHARMA
 Rego. Number: MIE AUST. 3101165
 Date: 06/12/2021
 Signature:

Must be an Australian registered structural engineer

Certifying Engineer
 Name: STEPHEN HEALEY
 NT Rego. Number: 34856ES
 Date: 08/12/2021
 Signature:

Must be a registered structural engineer in the Northern Territory

Accepted for Inclusion in Deemed to Comply Manual

DTCM drwaing number: M/324/01-02
 Chairperson Signature:
 Chairperson Name: Paul Nowland
 Date of Approval: 20/12/2021 Expiry Date: 20/12/2026

MAXIMUM BATTEN SPACING TABLES FOR 0.75mm & 1.0mm BMT STEEL BATTENS (mm)

| BUILDING HEIGHT | TERRAIN CATEGORY | K1 | pz (kPa) | TS4075 | | | | | | TS6175 | | | | | | TS6110 | | | | | |
|-----------------|------------------|-----|----------|-----------------------------------|------|------|------|------|-------|-----------------------------------|------|------|------|------|-------|-----------------------------------|------|------|------|------|-----|
| | | | | BATTEN SPAN (SUPPORT SPACING), mm | | | | | | BATTEN SPAN (SUPPORT SPACING), mm | | | | | | BATTEN SPAN (SUPPORT SPACING), mm | | | | | |
| | | | | ≤600 | 900 | 1200 | 1500 | 1800 | ≤1500 | 2000 | 2500 | 3000 | 3500 | 4000 | ≤1500 | 2000 | 2500 | 3000 | 3500 | 4000 | |
| UP TO 5M | 1 | 1 | 4.57 | 1135 | 805 | 525 | 400 | 270 | 785 | 585 | 320 | 245 | 205 | N/A | 785 | 585 | 470 | 360 | 260 | 205 | |
| | | 1.5 | 5.86 | 885 | 625 | 410 | 310 | 210 | 610 | 455 | 250 | N/A | N/A | N/A | 610 | 455 | 365 | 280 | 200 | N/A | |
| | | 2 | 7.15 | 725 | 510 | 335 | 255 | N/A | 500 | 370 | 205 | N/A | N/A | N/A | 500 | 375 | 300 | 230 | N/A | N/A | |
| | 2 | 1 | 3.44 | 1510 | 1065 | 700 | 530 | 360 | 1040 | 775 | 430 | 325 | 270 | 215 | 1040 | 780 | 625 | 480 | 345 | 270 | |
| | | 1.5 | 4.40 | 1180 | 835 | 545 | 415 | 280 | 815 | 605 | 335 | 255 | 210 | N/A | 815 | 610 | 490 | 375 | 270 | 210 | |
| | | 2 | 5.37 | 965 | 685 | 445 | 340 | 230 | 665 | 495 | 275 | 210 | N/A | N/A | 665 | 500 | 400 | 305 | 220 | N/A | |
| | 2.5 | 1 | 3.49 | 1490 | 1050 | 690 | 520 | 355 | 1025 | 765 | 420 | 320 | 265 | 210 | 1025 | 770 | 615 | 475 | 340 | 265 | |
| | | 1.5 | 4.02 | 1295 | 915 | 595 | 455 | 310 | 890 | 665 | 365 | 280 | 230 | N/A | 890 | 665 | 535 | 410 | 295 | 230 | |
| | | 2 | 4.91 | 1060 | 745 | 490 | 370 | 250 | 730 | 545 | 300 | 230 | N/A | N/A | 730 | 545 | 435 | 335 | 240 | N/A | |
| | 3 | 1 | 6.67 | 780 | 550 | 360 | 270 | N/A | 535 | 400 | 220 | N/A | N/A | N/A | 535 | 400 | 320 | 245 | N/A | N/A | |
| | | 1.5 | 2.86 | 1820 | 1285 | 840 | 635 | 435 | 1255 | 935 | 515 | 395 | 325 | 255 | 1255 | 940 | 755 | 580 | 415 | 325 | |
| | | 2 | 3.66 | 1420 | 1005 | 655 | 500 | 340 | 980 | 730 | 400 | 305 | 255 | 200 | 980 | 730 | 590 | 450 | 325 | 255 | |
| | 4 | 1 | 2.33 | 2230 | 1575 | 1030 | 785 | 535 | 1540 | 1150 | 635 | 480 | 400 | 315 | 1540 | 1150 | 925 | 710 | 515 | 400 | |
| | | 1.5 | 2.99 | 1740 | 1230 | 805 | 610 | 415 | 1200 | 895 | 490 | 375 | 310 | 245 | 1200 | 895 | 720 | 555 | 400 | 310 | |
| | | 2 | 3.65 | 1425 | 1005 | 660 | 500 | 340 | 980 | 730 | 405 | 305 | 255 | 200 | 980 | 735 | 590 | 450 | 325 | 255 | |
| | UP TO 10M | 1 | 1 | 5.20 | 1000 | 705 | 460 | 350 | 240 | 690 | 515 | 280 | 215 | N/A | N/A | 690 | 515 | 415 | 315 | 230 | N/A |
| | | | 1.5 | 6.67 | 780 | 550 | 360 | 270 | N/A | 535 | 400 | 220 | N/A | N/A | N/A | 535 | 400 | 320 | 245 | N/A | N/A |
| | | | 2 | 8.13 | 640 | 450 | 295 | 225 | N/A | 440 | 325 | N/A | N/A | N/A | N/A | 440 | 330 | 265 | 200 | N/A | N/A |
| | | 2 | 1 | 4.15 | 1250 | 885 | 580 | 440 | 300 | 865 | 645 | 355 | 270 | 225 | N/A | 865 | 645 | 520 | 400 | 285 | 225 |
| | | | 1.5 | 5.32 | 975 | 690 | 450 | 340 | 230 | 670 | 500 | 275 | 210 | N/A | N/A | 670 | 505 | 405 | 310 | 225 | N/A |
| 2 | | | 6.48 | 800 | 565 | 370 | 280 | N/A | 550 | 410 | 225 | N/A | N/A | N/A | 550 | 415 | 330 | 255 | N/A | N/A | |
| 2.5 | | 1 | 3.51 | 1480 | 1045 | 685 | 520 | 355 | 1020 | 760 | 420 | 320 | 265 | 210 | 1020 | 765 | 615 | 470 | 340 | 265 | |
| | | 1.5 | 4.50 | 1155 | 815 | 535 | 405 | 275 | 795 | 595 | 325 | 250 | 205 | N/A | 795 | 595 | 480 | 365 | 265 | 205 | |
| | | 2 | 5.49 | 945 | 670 | 435 | 330 | 225 | 650 | 485 | 265 | 205 | N/A | N/A | 650 | 485 | 390 | 300 | 215 | N/A | |
| 3 | | 1 | 7.46 | 695 | 490 | 320 | 245 | N/A | 480 | 355 | N/A | N/A | N/A | N/A | 480 | 360 | 285 | 220 | N/A | N/A | |
| | | 1.5 | 2.86 | 1820 | 1285 | 840 | 635 | 435 | 1255 | 935 | 515 | 395 | 325 | 255 | 1255 | 940 | 755 | 580 | 415 | 325 | |
| | | 2 | 3.66 | 1420 | 1005 | 655 | 500 | 340 | 980 | 730 | 400 | 305 | 255 | 200 | 980 | 730 | 590 | 450 | 325 | 255 | |
| 4 | | 1 | 2.33 | 2230 | 1575 | 1030 | 785 | 535 | 1540 | 1150 | 635 | 480 | 400 | 315 | 1540 | 1150 | 925 | 710 | 515 | 400 | |
| | | 1.5 | 2.99 | 1740 | 1230 | 805 | 610 | 415 | 1200 | 895 | 490 | 375 | 310 | 245 | 1200 | 895 | 720 | 555 | 400 | 310 | |
| | | 2 | 3.65 | 1425 | 1005 | 660 | 500 | 340 | 980 | 730 | 405 | 305 | 255 | 200 | 980 | 735 | 590 | 450 | 325 | 255 | |

BATTEN SPACING TABLE NOTES:

- MAXIMUM SPACING COULD BE GOVERNED BY CAPACITY OF BATTENS AND THEIR CONNECTIONS TO SUPPORTING RAFTERS/TRUSSES AS WELL AS PULL-OUT CAPACITIES OF FASTENERS CONNECTING CLADDINGS TO BATTEN.
- SPACING OF BATTENS SHALL NOT EXCEED BOTH MAXIMUM SPAN AND MAXIMUM SUPPORT SPACING OF CLADDING AS GIVEN IN SHEET 1.
- FASTENER REQUIREMENTS FOR FIXING **TS4075** TO SUPPORTS IN BATTEN SPACING TABLE:
STEEL SUPPORTS:
 - 1.00mm BMT: 2x #14(M6.5)-12X30 CYCLONIC ROOF ZIPS®
 - 1.20~1.9mm BMT: 2x #14-10X25 HEX. HEAD SELF DRILLING SELF TAPPING TEKS®
TIMBER SUPPORTS:
 - 'BUILDEX' M6.5-12X30 CYCLONIC ROOF ZIPS = #14-12X30 CYCLONIC ROOF ZIPS
 - 2x 'BUILDEX' #12(M5.5)-11x40 BATTENZIPS
- FASTENER REQUIREMENTS FOR FIXING **TS6175** OR **TS6110** TO SUPPORTS IN BATTEN SPACING TABLE:
STEEL SUPPORTS:
 - STEEL SUPPORT 1.20~1.9mm BMT: 4x #14-10X25 HEX. HEAD SELF DRILLING SELF TAPPING TEKS®
TIMBER SUPPORTS:
 - 4x 'BUILDEX' #12(M5.5)-11x40 BATTENZIPS

DESIGN CAPACITY TABLE NOTES:

- STEEL SUPPORT FASTENER SPECIFICATION:
 - 1.00mm BMT: #14(M6.5)-12X30 CYCLONIC ROOF ZIPS®
 - 1.20~1.9mm BMT: #14-10X25 HEX. HEAD SELF DRILLING SELF TAPPING TEKS®
 - 'BUILDEX' M6.5-12X30 CYCLONIC ROOF ZIPS = #14-12X30 CYCLONIC ROOF ZIPS
- TIMBER SUPPORT FASTENER SPECIFICATION: 'BUILDEX' #12(M5.5)-11x40 BATTENZIPS
- DESIGN CAPACITY TABLE CAN BE USED TO DESIGN TS4075, TS6175 & TS6110 WITH TIMBER SUPPORTS:
 - 2 FASTENER CONNECTION: SOFTWOOD TIMBER = 1.5mm bmt STEEL SUPPORT, HARDWOOD TIMBER = 1.9mm bmt STEEL SUPPORT.
 - 4 FASTENER CONNECTION: HARDWOOD/SOFTWOOD TIMBER SUPPORT = 1.9bmt STEEL SUPPORT.
- OUTWARD CAPACITY SHALL BE LIMITED BY THE MINIMUM VALUE BETWEEN MEMBER STRENGTH AND FASTENERS CAPACITY.
- TS4075** BATTEN SHALL BE CONTINUOUS OVER AT LEAST 2 SPANS, LAPPED 40mm MINIMUM AT THE SUPPORT (TRUSS OR RAFTER) LOCATIONS.
- TS6175** AND **TS6110** BATTENS SHALL BE CONTINUOUS OVER AT LEAST 2 SPANS, STRUCTURAL LAPPING DISTANCE AT SUPPORT IS MINIMUM 15% OF THE LONGER SPAN. NON STRUCTURAL LAPPING DISTANCE IS 40mm MINIMUM AT THE SUPPORT (TRUSS OR RAFTER) LOCATIONS.

Product Name
 TRIMDEK - ROOFING FOR CYCLONIC REGIONS - SHEET 2 OF 2

Product Description
 TRIMDEK 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

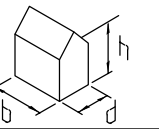
- THE FOLLOWING CRITERIA FROM AS/NZS 1170.2:2011 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS (INCORPORATING AMENDMENT No. 1, 2, 3, 4 & 5) HAVE BEEN USED TO GENERATE THE TABLES.
 1. IMPORTANCE LEVEL 2 WITH RETURN PERIOD OF 500 YEARS
 2. VR = 66xFc = 66x1.05 = 69.3 m/sec
 3. Ms = Mt = Md = 1.0
 4. Cpe = -0.9; Cpi = +0.7 Kce & Kci = 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, 4 & 5) HAVE BEEN USED TO GENERATE THE TABLES.

| HEIGHT (m) | TERRAIN / HEIGHT MULTIPLIER (Mz,cat) | | | |
|------------|--------------------------------------|------|------|------|
| | 1 | 2 | 2.5 | 3 |
| ≤5 | 1.05 | 0.91 | 0.87 | 0.83 |
| ≤10 | 1.12 | 1.00 | 0.92 | 0.83 |

- TRIMDEK COMPLIES WITH AUSTRALIAN STANDARDS FOR THE FOLLOWING REQUIREMENTS:
 1. SERVICEABILITY: AS/NZS 1170.0: 2002 STRUCTURAL DESIGN ACTIONS PART 0: GENERAL PRINCIPLES (INCORPORATING AMENDMENT 1,2,3,4&5)
 2. WIND LOADING: AS/NZS 1170.2: 2011 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTION (INCORPORATING AMENDMENT No. 1, 2, 3, 4 & 5)
 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
- DESIGN TABLES ARE BASED ON TEST RESULTS IN ACCORDANCE TO NCC-2019, BUILDING CODE OF AUSTRALIA REQUIREMENTS FOR "LHL" CYCLONIC TEST FOR METAL ROOFS AND RELEVANT CLAUSES OF AS4600:2018, COLD-FORMED STEEL STRUCTURES
- PRODUCT METALLIC COATING COMPLIES WITH AS 1397-2021: 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
- FOR STRENGTH GROUPS OF TIMBER, REFER TO AS 1720.2: 2006 TIMBER STRUCTURES PART 2: TIMBER PROPERTIES (INCORPORATING AMENDMENT No. 1).

Limitations

- THE DATA IN THIS SHEET SHALL BE APPLICABLE TO TRIMDEK ROOFING ONLY. PROFILE DIMENSIONS OF TRIMDEK AS SUPPLIED FOR INSTALLATION SHALL COMPLY WITH TRIMDEK PRODUCT DRAWINGS AS DEVELOPED BY LYSAGHT.
- INSTALLATION SHALL BE IN ACCORDANCE WITH LYSAGHT CYCLONIC AREA DESIGN MANUAL AND TRIMDEK MANUAL. <https://cdn.dcs.lysaght.com/download/lysaght-cyclonic-area-design-manual-steel-roofing-walling-topspan>
- MAXIMUM SPAN TABLES ARE BASED ON MAXIMUM ROOF HEIGHT = 10M.
- MAXIMUM OVERHANG SHALL BE DETAILED ACCORDING TO CURRENT LYSAGHT ROOFING & WALLING INSTALLATION MANUAL.
- NO PRE-BORED HOLES PERMITTED.
- ALWAYS WALK OVER SUPPORTS IF POSSIBLE. GENERALLY KEEP YOUR WEIGHT DISTRIBUTED EVENLY OVER THE SOLES OF YOUR SHOES.
- MAX. TRIMDEK ROOF LENGTHS AS RELATED TO ROOF CARRYING CAPACITY & ROOF PITCH SHALL BE DETERMINED USING THE TRIMDEK DESIGN & INSTALLATION GUIDE: <https://cdn.dcs.lysaght.com/download/lysaght-roofing-walling-installation-manual>
- INCREASE SCREW LENGTH IF FIXING OVER INSULATION TO MAINTAIN A MIN. OF 3 SCREW THREADS PROTRUDING ON THE FAR SIDE STEEL SUPPORT.
- 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. 1,2,3,4& 5) AS/NZS 1170.2: 2011 CLAUSE 5.4.1 IN THE CASE OF: ELEVATED BUILDING ALLOWING FOR AIR FLOW UNDER h/d > 0.5



TS6175, TS6110 DESIGN CAPACITY TABLE - OUTWARD, CONTINUOUS/LAPPED SPAN

| SPAN (mm) | MEMBER STRENGTH (kN/m) | | 2 FASTENER CAPACITY (kN/m) SUPPORT THICKNESS (mm/bmt) | | | | 4 FASTENER CAPACITY (kN/m) SUPPORT THICKNESS (mm/bmt) | | | |
|-----------|------------------------|--------|---|-------|-----------|-------|---|-------|-----------|-------|
| | TS6175 | TS6110 | #14(M6.5)-12x30 | | #14-10x25 | | #14(M6.5)-12x30 | | #14-10x25 | |
| | | | 1.0mm | 1.2mm | 1.5mm | 1.9mm | 1.0mm | 1.2mm | 1.5mm | 1.9mm |
| ≤1500 | 4.31 | 5.88 | 1.90 | 2.48 | 3.10 | 4.12 | 2.67 | 3.59 | 4.52 | 5.41 |
| 2000 | 2.68 | 2.91 | 1.43 | 1.86 | 2.33 | 3.09 | 2.01 | 2.69 | 3.39 | 4.06 |
| 2500 | 1.48 | 2.17 | 1.14 | 1.49 | 1.86 | 2.47 | 1.60 | 2.16 | 2.71 | 3.25 |
| 3000 | 1.13 | 1.66 | 0.95 | 1.24 | 1.55 | 2.06 | 1.34 | 1.80 | 2.26 | 2.71 |
| 3500 | 0.94 | 1.20 | 0.82 | 1.06 | 1.33 | 1.76 | 1.15 | 1.54 | 1.94 | 2.32 |
| 4000 | 0.74 | 0.94 | 0.71 | 0.93 | 1.16 | 1.54 | 1.00 | 1.35 | 1.69 | 2.03 |

TS4075 DESIGN CAPACITY TABLE - OUTWARD, CONTINUOUS SPAN

| SPAN (mm) | MEMBER STRENGTH (kN/m) | 2 FASTENER CAPACITY (kN/m) SUPPORT THICKNESS (mm/bmt) | | | | 4 FASTENER CAPACITY (kN/m) SUPPORT THICKNESS (mm/bmt) | | | |
|-----------|------------------------|---|-------|-----------|-------|---|-------|-----------|-------|
| | | #14(M6.5)-12x30 | | #14-10x25 | | #14(M6.5)-12x30 | | #14-10x25 | |
| | TS4075 | 1.0mm | 1.2mm | 1.5mm | 1.9mm | 1.0mm | 1.2mm | 1.5mm | 1.9mm |
| ≤600 | 7.98 | 5.51 | 7.19 | 8.99 | 11.93 | 7.75 | 10.41 | 13.09 | 15.69 |
| 900 | 4.72 | 3.68 | 4.79 | 5.99 | 7.95 | 5.16 | 6.94 | 8.73 | 10.46 |
| 1200 | 2.41 | 2.76 | 3.59 | 4.49 | 5.96 | 3.87 | 5.21 | 6.54 | 7.84 |
| 1500 | 1.83 | 2.21 | 2.88 | 3.60 | 4.77 | 3.10 | 4.16 | 5.24 | 6.27 |
| 1800 | 1.25 | 1.84 | 2.40 | 3.00 | 3.98 | 2.58 | 3.47 | 4.36 | 5.23 |

- NOTES:**
- REFER TO "TOPSPAN 61 ROOFING BATTENS FOR CYCLONIC REGIONS" & "TOPSPAN 4075 ROOFING BATTENS FOR CYCLONIC REGION FOR BATTEN" DTCM DRAWINGS FOR DIMENSIONS, SPACING, SPANS, CONNECTIONS DETAILS AND TEST REPORTS.
 - 'FULL SCALE TOPSPAN 4075,6175,6110 ROOFING BATTENS TESTING TO BUILDING CODES OF AUSTRALIA'S LOW-HIGH-LOW CYCLONIC TEST', REGIME. INDEX No. 5.1.2 - REPORT 04, AUGUST 2010, BLUESCOPE LYSAGHT No. 27 STERLING RD, MINCHINBURY 2770 AUSTRALIA.
 - 'WITHDRAWAL CAPACITIES OF TOPSPAN BATTEN TO TIMBER SUPPORT CONNECTIONS USING BUILDEX BATTENZIPS M5.5 - 11 x 40 FASTENERS', INDEX No. 5.1.2 - REPORT 06, DECEMBER 2010, BLUESCOPE LYSAGHT No. 27 STERLING RD, MINCHINBURY 2770 AUSTRALIA.
 - 'PULLOUT CAPACITIES OF SCREW FASTENED CONNECTIONS THROUGH LYSAGHT TOPSPAN BATTENS TO STEEL PURLSINS', INDEX No. 5.4.3 - REPORT 01, NOVEMBER 2010, BLUESCOPE LYSAGHT No. 27 STERLING RD, MINCHINBURY 2770 AUSTRALIA.

Checking Engineer
 Name: SANDEEP SHARMA
 Rego. Number: MIE AUST. 3101165
 Date: 06/12/2021
 Signature:

Certifying Engineer
 Name: STEPHEN HEALEY
 NT Rego. Number: 34856ES
 Date: 08/12/2021
 Signature:

Must be an Australian registered structural engineer
 Must be a registered structural engineer in the Northern Territory

Accepted for Inclusion in Deemed to Comply Manual

DTCM drawing number: **M/324/01-02**

Chairperson Signature:

Chairperson Name: **Paul Nowland**

Date of Approval: **20/12/2021** Expiry Date: **20/12/2026**