METROSPAN®

LIGHTWEIGHT, HIGH STRENGTH ROOFING & WALLING

A Met-TECH™ GUIDE

OCTOBER 2021

Metroll®

BETTER SERVICE • BETTER BUILDING SOLUTIONS

METROSPAN®

Cover: 700mm Height: 24mm

Metrospan® is roll formed, custom length, high tensile steel roofing and wall sheeting manufactured from 0.42mm and 0.48mm BMT COLORBOND® steel, ZINCALUME® steel and galvanised steel. Metrospan® is ideal for roofing and wall cladding on commercial and industrial buildings, roofing for new homes, home extensions, carports, garages, patios, fascia and facade work.

FEATURES & BENEFITS

- Custom lengths
- Long lengths
- Low roof pitch
- Multi-purpose

METROSPAN® - ROOFING

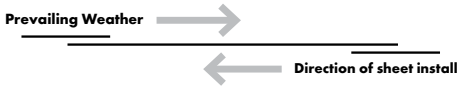
BMT mm	Steel Base Mpa	Mass Colorbond® kg/m²	Mass Zinc kg/m²	Min. Pitch°	Max Spans mm**	
					End	Internal
0.42	G550	4.68	4.61	2 (1 in 30)	1800	2400
0.48	G550	5.32	5.24	2 (1 in 30)	2200	3000

METROSPAN® - WALLING

0.42	G550	4.68	4.61	2400	3000
0.48	G550	5.32	5.24	2400	3000

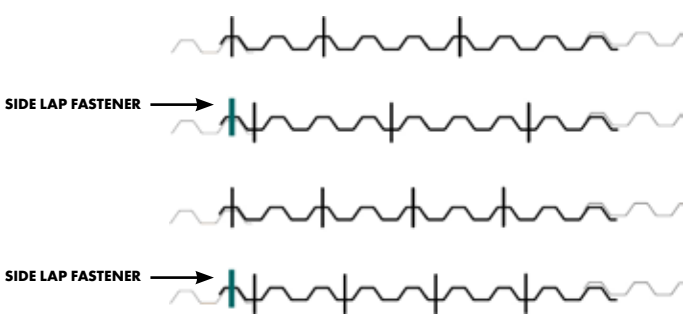
** Max. Spans are based on N2 Wind Category and 1.5mm substrate

FASTENERS



Metrospan® may be fastened to timber or steel supports. Metrospan® may be fixed with 3 or 4 fasteners per sheet to meet the values shown in this brochure. Always face side laps away from the prevailing weather.

TIMBER SUPPORTS	**ROOFING**	M6 - 11 x 65mm Roof Zips® Hex Head with seal
	WALLING	M6 - 11 x 25mm Roof Zips® Hex Head with seal
STEEL SUPPORTS 0.42mm to 1.5mm BMT	**ROOFING**	M6 - 11 x 50mm Roof Zips® Hex Head with seal
	WALLING	M6 - 11 x 25mm Roof Zips® Hex Head with seal (Valley Fix)
STEEL SUPPORTS 1.5mm to 3.0mm BMT	**ROOFING**	M5.5 x 50mm AutoTek® Hex Head with seal
	WALLING	12 - 14 x 20mm Hex Head Tek Screw



What is Met-TECH™?

Met-TECH™ is Metroll's Technical Resource Centre. It is the one stop shop for all of Metroll's product and technical information. Perfect for builders, contractors and specifiers to source all the information they may require. You can find other Met-TECH™ items on our website **www.metroll.com.au/resources**

SIDE LAPS

It is considered good practice to use fasteners on side laps, although these are generally not necessary when the sheeting is supported as indicated in the maximum span tables or for roof spans under 900mm and wall ladding spans under 1200mm. Side lap fastening should be considered if the weather resistance of the joint is questionable for any reason.

SPRING CURVING

Metrospan® can be sprung curved, concave or convex, to suit architectural applications. Care must be taken to reduce the purlin spacings as needed and to seal side laps that are below the recommended roof pitch.

	BMT (mm)	Min. Radius (m)	Max. Internal Purlin Spacing (mm)	Max. Radius (m)
CONVEX	0.42	20	1200	60
	0.48		1400	
CONCAVE	0.42	18	1200	60
	0.48		1400	

DRAINAGE & OVERFLOW

Max Roof Run (m) for Slopes & Rainfall Intensity					
Rainfall Intensity mm/hr.	**2°**	**3°**	**4°**	**5°**	**10°**
100	97	110	121	131	168
150	65	73	81	87	112
200	49	55	60	65	84
250	39	44	48	52	67
300	32	37	40	44	56
400	24	28	30	33	42

- Rainwater run-off and drainage capacity may place some limitations on the total length of a sheet run and must be considered during the design and construction phase of a project.
- The total length of roof sheeting; which shall include end laps, expansion joints or steps and draining the roof in one direction, shall be considered as a single roof run.
- Thermal expansion must also be considered.
- Maximum production and transport lengths may limit availability.

THERMAL EXPANSION

Change in temperature will cause all metals to expand and contract. There is minimal effect with steel roofing and walling, however care must be taken when long sheet runs and used and high temperature variations occur. Metroll recommends the following maximum runs:

	Dark Colours	Light Colours
Metrospan®	Up to 17m	Up to 24m

METROSPAN© FOOT TRAFFIC

BMT (mm)	Internal Span (mm)	End Span (mm)
0.42	2400	1800
0.48	3000	2200

- Foot traffic limits are based on AS/NZS 1170.1 for R2 - Other roofs.
- All traffic must use the designated foot traffic paths and, at all times, follow safe practices.

WALKING ON METROSPAN®

When walking on Metrospan® roof sheeting always wear flat rubber soled shoes, place feet evenly over at least two ribs, and walk on or near purlins or batten supports.

METROSPAN® OVERHANGS

The overhangs on Metrospan® are limited to the values in the following table. Overhangs have a minimum length of 50mm. Stiffened overhangs incorporate an angle or gutter attached to the sheet end.

ROOFING		
BMT (mm)	**Plain (mm)**	**Stiffened (mm)**
0.42	200	400
0.48	250	500
WALLING		
0.42	200	400
0.48	250	500

- Plain overhangs are limited to 20% of the adjacent end span.
- Stiffened overhangs are limited to 33% of the adjacent end span.

LENGTH

Metroll supplies Metrospan® cut to order as required; depending on load limit regulations set by local transport authorities. Lengths for manufacture need to be site measurements and not taken off plans. Length tolerance for Metrospan® is + 0mm, - 15mm.

MATERIAL SPECIFICATION & SCOPE

All roofing and walling should be specified on drawings as Metrospan®, manufactured by Metroll and installed in accordance with the manufacturers recommendations. Base sheet steel is G550 with specified finish.

MATERIAL COMPATIBILITY

Never use lead flashings with Metrospan® sheeting made from COLORBOND® and ZINCALUME®steels. Avoid drainage from copper roofs onto COLORBOND®, ZINCALUME® or galvanised steel roofing or rainwater products. Lead, copper, bare metal and some chemically treated timbers are not compatible with Metrospan®.

0.42mm METROSPAN® LIMIT STATE CAPACITY TABLES

Tables and values must be used in conjunction with the Design Notes to Limit State Capacity Tables.

0.42mm METROSPAN® WITH 3 FASTENERS PER SHEET

LIMIT STATE	SPAN TYPE	SUPPORT THICKNESS (mm)	PRESSURE (kPa) FOR SPAN (mm)							
			900	1200	1500	1800	2100	2400	2700	3000
SERVICEABILITY	Internal	All	1.95	1.95	1.95	1.60	1.23	1.11	0.98	0.84
	End	All	1.90	1.90	1.61	1.46	1.14	0.98	0.81	0.65
STRENGTH	Internal	1.50+	6.90	5.38	4.40	3.46	2.60	2.19	1.86	1.65
		1.20	5.93	4.44	3.56	2.96	2.54	2.19	1.86	1.65
		1.00	5.50	4.13	3.30	2.75	2.36	2.06	1.83	1.65
		0.75	4.66	3.49	2.79	2.33	2.00	1.75	1.55	1.40
		0.55	2.96	2.22	1.78	1.48	1.27	1.11	0.99	0.89
		0.48	2.54	1.90	1.52	1.27	1.09	0.95	0.85	0.76
	End	1.50+	5.48	4.18	332	2.64	2.13	1.86	1.69	1.54
		1.20	5.33	4.00	3.20	2.64	2.13	1.86	1.69	1.54
		1.00	4.95	3.71	2.97	2.48	2.12	1.86	1.65	1.49
		0.75	4.19	3.14	2.51	2.10	1.80	1.57	1.40	1.26
		0.55	2.67	2.00	1.60	1.33	1.14	1.00	0.89	0.80
		0.48	2.29	1.71	1.37	1.14	0.98	0.86	0.76	0.69

0.42mm METROSPAN® WITH 4 FASTENERS PER SHEET

LIMIT STATE	SPAN TYPE	SUPPORT THICKNESS (mm)	PRESSURE (kPa) FOR SPAN (mm)							
			900	1200	1500	1800	2100	2400	2700	3000
SERVICEABILITY	Internal	All	4.74	4.16	3.41	2.68	1.99	1.63	1.32	1.06
	End	All	3.75	3.28	2.40	1.70	1.22	1.00	0.78	0.58
STRENGTH	Internal	1.50+	8.55	6.18	5.09	4.18	3.39	2.95	2.61	2.35
		1.20	8.55	6.18	5.09	4.18	3.39	2.95	2.61	2.35
		1.00	8.25	6.18	4.95	4.13	3.39	2.95	2.61	2.35
		0.75	6.98	5.24	4.19	3.49	2.99	2.62	2.33	2.10
		0.55	4.44	3.33	2.67	2.22	1.90	1.67	1.48	1.33
		0.48	3.81	2.86	2.29	1.90	1.63	1.43	1.27	1.14
	End	1.50+	6.90	5.46	4.53	3.76	3.08	2.72	2.44	2.21
		1.20	6.90	5.46	4.53	3.76	3.08	2.72	2.44	2.21
		1.00	6.90	5.46	4.46	3.71	3.08	2.72	2.44	2.21
		0.75	6.29	4.71	3.77	3.14	2.69	2.36	2.10	1.89
		0.55	4.00	3.00	2.40	2.00	1.71	1.50	1.33	1.20
		0.48	3.43	2.57	2.06	1.71	1.47	1.29	1.14	1.03

DESIGN NOTES

- For timber battens/purlins, use 1.50+ support thickness values.
- Type 17 screws must penetrate more than 25mm into hardwood or 35mm into softwood.
- Metal supports are produced from hi-tensile steel.
- For most economic results use longer internal spans than end spans (in a ratio of 10:8).
- Equal span systems must be designed using end span values.

0.48mm METROSPAN® LIMIT STATE CAPACITY TABLES

Tables and values must be used in conjunction with the Design Notes to Limit State Capacity Tables

0.48mm METROSPAN® WITH 3 FASTENERS PER SHEET

LIMIT STATE	SPAN TYPE	SUPPORT THICKNESS (mm)	PRESSURE (kPa) FOR SPAN (mm)							
			900	1200	1500	1800	2100	2400	2700	3000
SERVICEABILITY	Internal	All	2.72	2.40	2.20	1.87	1.55	1.26	1.08	0.93
	End	All	2.45	2.25	2.10	1.73	1.38	1.06	0.87	0.69
STRENGTH	Internal	1.50+	9.00	7.05	4.92	4.01	3.26	2.62	2.27	1.99
		1.20	5.93	4.44	3.56	2.96	2.54	2.22	1.98	1.78
		1.00	5.50	4.13	3.30	2.75	2.36	2.06	1.83	1.65
		0.75	4.66	3.49	2.79	2.33	2.00	1.75	1.55	1.40
		0.55	2.96	2.22	1.78	1.48	1.27	1.11	0.99	0.89
		0.48	2.54	1.90	1.52	1.27	1.09	0.95	0.85	0.76
	End	1.50+	7.55	5.65	4.03	3.42	2.91	2.47	2.19	1.97
		1.20	5.33	4.00	3.20	2.67	2.29	2.00	1.78	1.60
		1.00	4.95	3.71	2.97	2.48	2.12	1.86	1.65	1.49
		0.75	4.19	3.14	2.51	2.10	1.80	1.57	1.40	1.26
		0.55	2.67	2.00	1.60	1.33	1.14	1.00	0.89	0.80
		0.48	2.29	1.71	1.37	1.14	0.98	0.86	0.76	0.69

0.48mm METROSPAN® WITH 4 FASTENERS PER SHEET

LIMIT STATE	SPAN TYPE	SUPPORT THICKNESS (mm)	PRESSURE (kPa) FOR SPAN (mm)							
			900	1200	1500	1800	2100	2400	2700	3000
SERVICEABILITY	Internal	All	6.50	5.44	4.00	3.20	2.44	1.77	1.42	1.14
	End	All	5.34	4.37	3.01	2.23	1.71	1.22	0.95	0.71
STRENGTH	Internal	1.50+	11.40	9.70	6.86	5.76	4.76	3.88	3.33	2.90
		1.20	8.89	6.67	5.33	4.44	3.81	3.33	2.96	2.67
		1.00	8.25	6.19	4.95	4.13	3.54	3.10	2.75	2.48
		0.75	6.98	5.24	4.19	3.49	2.99	2.62	2.33	2.10
		0.55	4.44	3.33	2.67	2.22	1.90	1.67	1.48	1.33
		0.48	3.81	2.86	2.29	1.90	1.63	1.43	1.27	1.14
	End	1.50+	9.75	7.65	5.48	4.47	3.74	3.16	2.87	2.65
		1.20	8.00	6.00	4.80	4.00	3.43	3.00	2.67	2.40
		1.00	7.43	5.57	4.46	3.71	3.18	2.79	2.48	2.23
		0.75	6.29	4.71	3.77	3.14	2.69	2.36	2.10	1.89
		0.55	4.00	3.00	2.40	2.00	1.71	1.50	1.33	1.20
		0.48	3.43	2.57	2.06	1.71	1.47	1.29	1.14	1.03

DESIGN NOTES

- For timber battens/purlins, use 1.50+ support thickness values.
- Type 17 screws must penetrate more than 25mm into hardwood or 35mm into softwood.
- Metal supports are produced from hi-tensile steel.
- For most economic results use longer internal spans than end spans (in a ratio of 10:8).
- Equal span systems must be designed using end span values.

0.42mm METROSPAN® SPAN CHART

Tables and values must be used in conjunction with the Design Notes

FASTENER FREQUENCY	SPAN TYPE	SUPPORT THICKNESS (mm)	ROOF SPANS (mm) FOR WIND CATEGORY						WALL SPANS (mm) FOR WIND CATEGORY					
			N1	N2	N3	N4	N5	N6	N1	N2	N3	N4	N5	N6
3/SHEET	Internal	1.50+	2400	2400	2050	1600			3000	3000	2500	1950	1450	
		1.20	2400	2400	1950	1300			3000	3000	2500	1750	1200	
		1.00	2400	2400	1800	1200			3000	3000	2400	1650	1100	
		0.75	2400	2400	1550	1050			3000	3000	2050	1400	950	
		0.55	2100	1500	1000				2800	2050	1300	850		
		0.48	1800	1300	850				2400	1750	1100			
	End	1.50+	1800	1800	1600	1250			2400	2400	2000	1550	1100	
		1.20	1800	1800	1550	1000			2400	2400	2000	1400	950	
		1.00	1800	1800	1400	950			2400	2400	1900	1300	850	
		0.75	1800	1800	1200				2400	2400	1600	1100		
		0.55	1650	1200					2200	1600	1000			
		0.48	1400	1000					1900	1400	850			
4/SHEET	Internal	1.50+	2400	2400	2400	1850	1250	950	3000	3000	3000	2350	1700	1250
		1.20	2400	2400	2400	1850	1250	950	3000	3000	3000	2350	1700	1250
		1.00	2400	2400	2400	1800	1250	900	3000	3000	3000	2350	1650	1200
		0.75	2400	2400	2300	1550	1050		3000	3000	3000	2050	1400	1050
		0.55	2400	2300	1450	1000	700		3000	3000	1950	1300	900	
		0.48	2400	1950	1250	850			3000	2600	1700	1150		
	End	1.50+	1800	1800	1800	1450	1000		2400	2400	2400	1850	1350	1000
		1.20	1800	1800	1800	1450	1000		2400	2400	2400	1850	1350	1000
		1.00	1800	1800	1800	1400	1000		2400	2400	2400	1850	1300	950
		0.75	1800	1800	1800	1200			2400	2400	2400	1600	1100	
		0.55	1800	1800	1150				2400	2400	1550	1000		
		0.48	1800	1550	1000				2400	2050	1350	900		

DESIGN NOTES

- Spans shown reflect the minimum value of the Serviceability, Strength and Foot Traffic tables.
- The Wind Category is based on AS 4055 and results include an allowance for local pressure factors.
- If roof pitch is less than 10 degrees, then increase the Wind Category upwards by 1, e.g. lift N2 to N3, and apply to an area not less than 1.2m from all corners.
- For timber battens/purlins use 1.5+ support thickness values.
- Fasteners must penetrate more than 25mm into hardwood or 35mm into softwood.
- Refer to the fastener location guide for correct fastener locations.
- Metal supports are produced from hi-tensile steel.
- For most economic results use longer internal spans than end spans (in a ratio of 10:8).
- Equal span systems must be designed using end span values.

0.48mm METROSPAN® SPAN CHART

Tables and values must be used in conjunction with the Design Notes

FASTENER FREQUENCY	SPAN TYPE	SUPPORT THICKNESS (mm)	ROOF SPANS (mm) FOR WIND CATEGORY						WALL SPANS (mm) FOR WIND CATEGORY					
			N1	N2	N3	N4	N5	N6	N1	N2	N3	N4	N5	N6
3/SHEET	Internal	1.50+	3000	3000	2350	1750	1200		3000	3000	2950	2200	1650	1150
		1.20	3000	3000	1950	1300	900		3000	3000	2600	1750	1200	850
		1.00	3000	2850	1800	1200	850		3000	3000	2400	1650	1100	
		0.75	3000	2400	1550	1050			3000	3000	2050	1400	950	
		0.55	2100	1500	1000				2800	2050	1300	850		
		0.48	1800	1300	850				2400	1750	1100			
	End	1.50+	2200	2200	1850	1400	950		2400	2400	2350	1750	1300	
		1.20	2200	2200	1550	1000			2400	240	2050	1400	950	
		1.00	2200	2200	1400	950			2400	2400	1900	1300	850	
		0.75	2200	1900	1200				2400	2400	1600	1100		
		0.55	1650	1200					2200	1600	1000			
		0.48	1400	1000					1900	1400	850			
4/SHEET	Internal	1.50+	3000	3000	3000	2350	1750	1350	3000	3000	3000	2900	2200	1700
		1.20	3000	3000	2950	2000	1350	1000	3000	3000	3000	2650	1800	1350
		1.00	3000	3000	2750	1850	1250	900	3000	3000	3000	2450	1650	1200
		0.75	3000	3000	2300	1550	1050		3000	3000	3000	2050	1400	1050
		0.55	3000	2300	1450	1000			3000	3000	1950	1300	900	
		0.48	2700	1950	1250	850			3000	2600	1700	1150		
	End	1.50+	2200	2200	2200	1850	1400	1050	2400	2400	2400	2300	1750	1350
		1.20	2200	2200	2200	1600	1050		2400	2400	2400	2100	1400	1050
		1.00	2200	2200	2200	1450	1000		2400	2400	2400	1950	1300	950
		0.75	2200	2200	1800	1200			2400	2400	2400	1600	1100	
		0.55	2200	1800	1150				2400	2400	1550	1000		
		0.48	2150	1550	1000				2400	2050	1350	900		

DESIGN NOTES

- Spans shown reflect the minimum value of the Serviceability, Strength and Foot Traffic tables.
- The Wind Category is based on AS 4055 and results include an allowance for local pressure factors.
- If roof pitch is less than 10 degrees, then increase the Wind Category upwards by 1, e.g. lift N2 to N3, and apply to an area not less than 1.2m from all corners.
- For timber battens/purlins use 1.5+ support thickness values.
- Fasteners must penetrate more than 25mm into hardwood or 35mm into softwood.
- Refer to the fastener location guide for correct fastener locations.
- Metal supports are produced from hi-tensile steel.
- For most economic results use longer internal spans than end spans (in a ratio of 10:8).
- Equal span systems must be designed using end span values.

AVAILABILITY & DELIVERY

Metrospan® is available from the national network of Metroll branches. Contact your local Metroll branch for lead times, colours and availability. Ensuring suitable arrangements are made to assist the unloading of Metroll trucks will help supply material in good order. When lifting long lengths by crane please ensure the load is evenly spread. Where a crane cannot be made available it is the customers responsibility to provide sufficient labour to assist the driver in unloading.

ADVERSE CONDITIONS

Localised environmental conditions can impact the corrosive nature of a site which may impact on material choice. Conditions that may impact on material choice include; direction of prevailing winds, rainfall intensity, duration of exposure, temperature, shelter and areas not washed by rainfall. Contact your local Metroll branch if you intend to use Metrospan® within 1 km of industrial, chemical, marine or corrosive environments.

CARE, HANDLING & STORAGE

Care should be taken at all times when handling sheets to preserve the quality of the finish. Keep packs dry, stored clear of the ground and protected from rain and moisture. Any sheets which become wet should be separated, wiped and placed in the open air to dry.

CUTTING

Cut sheets with a method and in a location so that damage is avoided to sheets and other building products. Material should be cut on the ground and not above other materials. Remove all swarf and debris from the work and installation area. Sheets may be cut using a power saw with a steel cutting blade, a power nibbler or with tin snips. Avoid using abrasive discs as these can cause edge and coating damage.

CLEAN UP

Prior to departing the work site remove all foreign debris, screws, rivets and especially any swarf created by drilling or cutting from the roof surface and/or inside gutters. Failure to do so may result in premature corrosion of the roof or gutters.

QLD

Cairns	07 4054 0888
Townsville	07 4779 8266
Mackay	07 4968 1255
Rockhampton	07 4920 0900
Bundaberg	07 4155 5999
Toowoomba	07 4634 6144
Sunshine Coast	07 5493 7872
Brisbane	07 3375 0100

NSW

Lismore	02 6622 6677
Tamworth	02 6765 4799
Newcastle	02 4954 5799
Sydney	1300 766 346
Dubbo	02 6883 4800
Wagga Wagga	02 5924 4500
Canberra	02 6298 2777

VIC

Preston	03 9480 3744
Laverton	03 8369 8300
Geelong	03 5248 2006
Ballarat	03 5335 6416
Pakenham	03 8710 9300

SA

Adelaide	08 8282 3300

TAS

Hobart	03 6335 8555
Launceston	03 6335 8555

NT

Darwin	08 8935 9555

WA

Perth	08 9365 5444
Bunbury	08 9796 9796
Albany	08 9841 6966

27 Metroll Branches Nationwide

Visit our website
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Metroll®
BETTER SERVICE • BETTER BUILDING SOLUTIONS

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