APEX ENGINEERING GROUP

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Sheeting Design Documentation

To whom it may concern,

The sheeting used for this structure has been designed as a category R2 sheeting with an imposed load of 0.25kPa and concentrated load of 1.4kN applied in accordance with NCC: 2022 and AS1562.1.

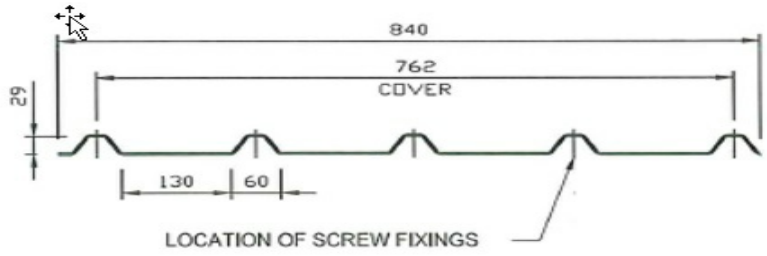
No allowance has been made for the fixing of rooftop-mounted equipment such as air-conditioning equipment directly to the cladding. Solar panels have been allowed for as per Engineering.

Metroll purlins have been designed to withstand foot traffic during installation and service. The use of appropriate cradles or cherry pickers is recommended. **As a minimum, never walk on purlins without safety mesh in place.**

When walking on Trimclad roof sheeting always wear flat rubber soled shoes and only walk over areas where purlins or batten supports are installed. Walk in either pan next to the lapped edge ribs.

Profile and Dimensions of Cladding

Metroll Trimclad Steel Sheeting is Manufactured from G550 colour coated steel or zinc-aluminium alloy coated (AZ 150) steel. In some locations galvanised (Z450) may also be available.



Specification of Materials									
Location	BMT (mm)	Steel Base (MPa)	Mass CB (kg/m²)	Mass Zinc (kg/m²)	Effective Cover	Min. Pitch	Max Spans (mm)		
							End	Internal	Overhang
Roof	0.42	G550	4.35	4.28	762	2 (1 in 30)	1300	1700	150
Roof	0.48	G550	4.93	4.81	762	2 (1 in 30)	1700	2300	150
Wall	0.35	G550	3.68	3.70	762		2900	3000	150
Wall	0.42	G550	4.35	4.28	762		3000	3000	150

Design pressures to AS/NZS 1170.2		
Location	Zone	Design Pressure (kPa)
Roof	Corner	-2.49
	Edge	-1.66
	General	-0.83
Wall	Corner	-1.80
	Edge	-1.20
	General	-0.60

Max Roof Run (m) for Slopes & Rainfall Intensity					
Rainfall Intensity (mm/hr)	Trimclad Roof Slope				
	1 in 30 (2°)	1 in 20 (3°)	1 in 12 (5°)	1 in 7.5 (7.5°)	1 in 6 (10°)
100	220	257	320	382	439
150	146	172	214	255	293
200	110	129	160	191	220

Max Roof Run (m) for Slopes & Rainfall Intensity					
Rainfall Intensity (mm/hr)	Trimclad Roof Slope				
	1 in 30 (2°)	1 in 20 (3°)	1 in 12 (5°)	1 in 7.5 (7.5°)	1 in 6 (10°)
250	88	103	128	153	176
300	73	86	107	127	146
400	55	64	80	96	110

Fastener Specifications	
Timber	14 - 10 x 65 T17
0.75 to 1.0mm Steel	M6.5 - 12 x 55 roof zips
1.2 to 4mm Steel	14 - 10 x 53 Hex Head

Testing Criteria

This information is based on the **Low-High-Low testing competed by the Cyclone Testing Station (CTS)**, School of Engineering, James Cook University. The results of this testing are outlined in the test report TS716 produced by the CTS. Ultimate cyclic wind load strength tests were NATA accredited tests.
Load testing carried out by James Cook University, cyclone testing station, report No.TS716. Product tested to AS4040.1, AS4040.3 and low-high-low as per BCA B1.2. Tests carried out: cyclonic airbox wind test for strength. Static testing for serviceability. Buildex report No. ELTR 1532.

Signed

John Ronaldson
for and on behalf of
Apex Engineering Group PTY LTD
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