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OUR REF: 26099

DATE: 8/5/2026

Apex Building Products
C/o- Carl Brandon
32-36 Saltwater Circuit,
Narangba QLD 4504
e: CBrandon@apexsteel.com.au

SUBJECT: Apex Apclad Sheet – Rainwater Drainage Capacity
DRAWING NO: 26099-S01-A

We hereby state that the design calculations have been carried out in accordance with the National Code of Construction Series (BCA) and the following Australian Standards:

Act, Regulation or NCC	Section, Regulation, Part, Performance Requirement or other provision
AS/NZS 3500.3-2021	Section 3 – Roof Drainage Systems
AS1562.1:2018	Section 3.3 – Roof Drainage
National Construction Code	NCC 2022 Volumes 2 & 3

We hereby state that the following aspects of the Apex Apclad sheet comply with the codes and standards listed above:

- Rainwater Drainage Capacities for roof pitch of 2 and 3 degrees.
- Maximum Roof Lengths for Drainage for Victorian locations.

Analysis details:

- Analysis based on steady flow and Mannings Formula with roughness coefficient $n = 0.015$.
- Analysis based upon depth of flow of 75% of height of the edge of the overlap lip to the trough.
- Analysis ignores thermal limitations on maximum length, refer to Apex Steel for details.
- Analysis doesn't consider gutter and downpipe requirements, refer to Apex Steel for details.

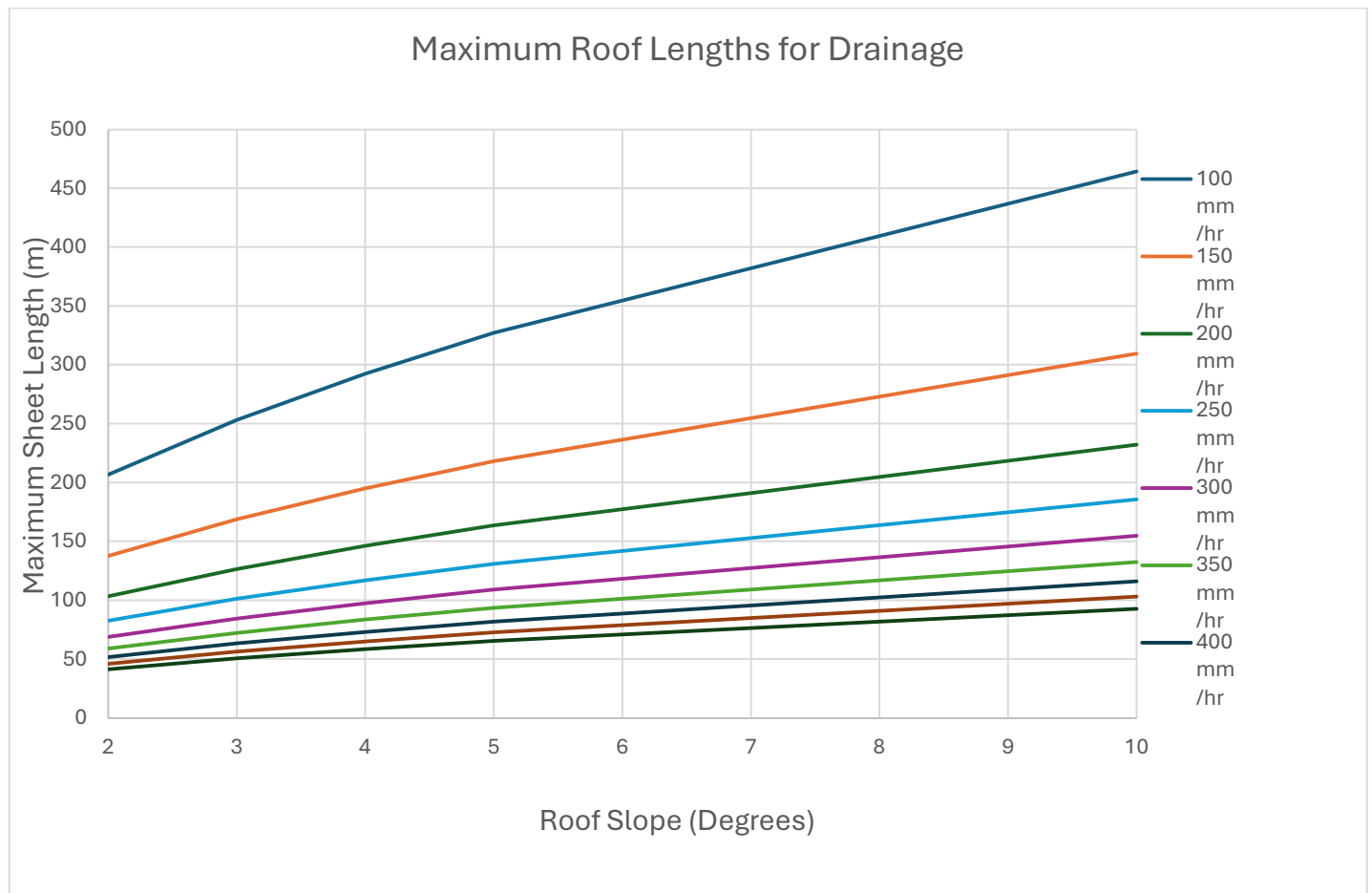
Kind regards,

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Category and Class: Civil and Structural Engineer
Registration no.: PE0002861
Signature:

Apclad – Maximum Roof Lengths for Drainage

Roof Slope (Degrees)	Rainfall Capacity (mm/hr)								
	100	150	200	250	300	350	400	450	500
2	207	138	103	83	69	59	52	46	41
3	253	169	127	101	84	72	63	56	51
4	292	195	146	117	97	84	73	65	58
5	327	218	164	131	109	93	82	73	65
10	464	310	232	186	155	133	116	103	93

Apclad – Maximum Roof Lengths for Drainage



RAINFALL REGION (VICTORIA)	ARI (ONE IN 100 YEARS) (mm/hr)	ROOF PITCH (DEGREES)	MAXIMUM RIDGE TO GUTTER LENGTH OF ROOF (m)
BALLARAT	188	2	112
BENALLA	194	2	107
GEELONG	144	2	146
HORSHAM	173	2	122
LAKES ENTRANCE	198	2	105
MELBOURNE	187	2	112
HASTINGS, MELBOURNE	145	2	145
MILDURA	218	2	96
STAWELL	186	2	113

Apclad – Maximum Ridge to Gutter Length of Roof – 2 Degrees – Victorian Locations

RAINFALL REGION (VICTORIA)	ARI (ONE IN 100 YEARS) (mm/hr)	ROOF PITCH (DEGREES)	MAXIMUM RIDGE TO GUTTER LENGTH OF ROOF (m)
BALLARAT	188	3	137
BENALLA	194	3	132
GEELONG	144	3	179
HORSHAM	173	3	149
LAKES ENTRANCE	198	3	128
MELBOURNE	187	3	138
HASTINGS, MELBOURNE	145	3	177
MILDURA	218	3	117
STAWELL	186	3	138

Apclad – Maximum Ridge to Gutter Length of Roof – 3 Degrees – Victorian Locations



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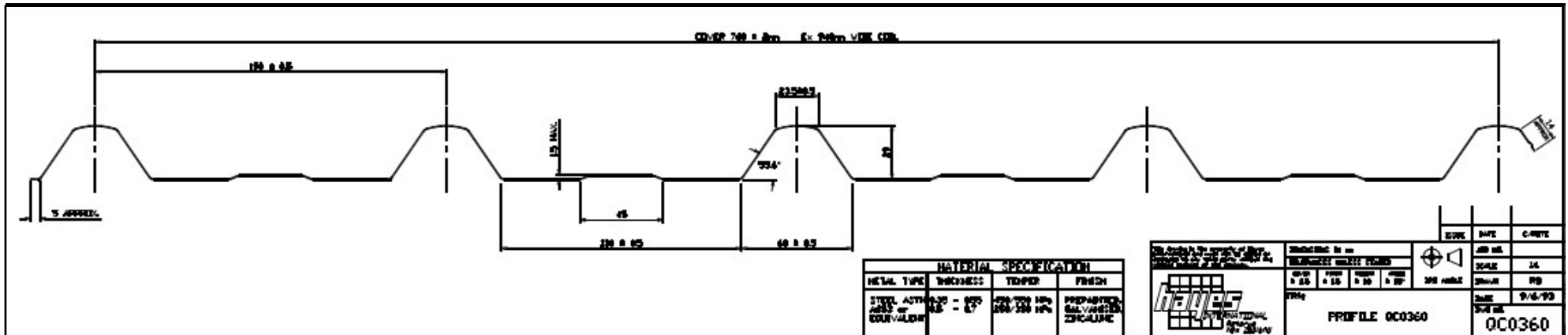


FIGURE 1. APCLAD PROFILE

Roof Pitch (degrees)	Rainwater Drainage Capacity (L/s/m)
1	0.52
2	0.73

Note: Drainage capacity has been calculated with depth of water in trough at 75% of the height of the edge of the overlap lip to the trough, as per Appendix D of AS 1562.1:2018.

FIGURE 2. APCLAD DRAINAGE CAPACITY