

*20/12/96*

# PRIMELINE™ SUMMIT WEATHERBOARD 9MM THICK EXTERNAL WALL CLADDING

AS 4055	General Areas of Building		Within 1200mm of Building Edges	
Wind Load Classification	Stud Spacing (mm)	ULS Capacity (kPa)	Stud Spacing (mm)	ULS Capacity (kPa)
C2	450	2.90	450	2.90
C3	450	2.90	300	4.27
C4	450	2.90	275	5.77

**SPECIFICATION**

**PRIMELINE™ SUMMIT WEATHERBOARD CLADDING**  
9mm nominal thickness. Matt smooth, pre-primed surface finish. Available in 230mm width only. Stock length is 4200mm. Final surface finish (coating, painting etc) shall be in accordance with James Hardie's "External Fixing Manual".

**DESIGN**  
The weatherboards shall be fastened to the steel frame in accordance with the stud spacings tabulated above for the different wind conditions. The wind classifications are derived from AS 4055 of 1992 "Wind Loads For Housing" as in Table 1. Topographic classifications beyond T2 are likely to be uncommon in Darwin (refer to Clause 10 of AS 4055).

In selecting the wind classification, the designer should first determine whether the structure is in topographic classification T1 or T2 (or other up to T5), the nature of shielding (FS = full shielding, PS = partial shielding, NS = no shielding) and the applicable terrain category. The design wind speeds are given in Table 2.

The proven capacity of each system is given in the Design Table and may be used by designers for intermediate wind speeds or buildings outside the scope of AS 4055. An Ultimate Limit State material capacity reduction factor of  $\phi = 0.9$  has already been applied.

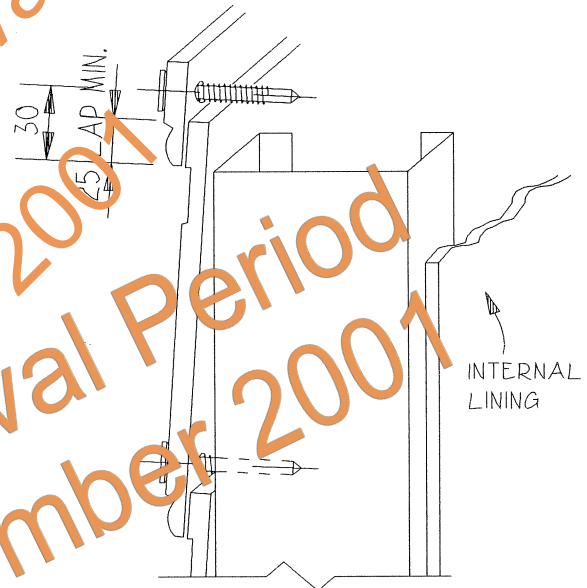
**WALL FRAME (STEEL)**  
Studs shall be mild steel sections not exceeding 1.5m in thickness. Maximum stud spacing shall be as in the Design Table.

**FASTENERS (refer to J Hardie "External Fixing Manual")**  
HARDIDRIVE™ self-embedding, head drill-point screws (or equivalent) shall be used when fastening to steel framing. Locate fasteners as shown in the diagram, but never less than 12mm from top / bottom edges of plank. Alternatively, Hardie's STUD CLIPS may be used on steel frames only. Fasten stud clips to steel studs using a short 25mm hex head Teks screws or similar. One stud clip per plank per stud.

**DESIGN & CONSTRUCTION NOTES**

[1] It has been assumed that the weatherboard is an external wall cladding only. Internal pressures shall be resisted by internal linings. The weatherboard cladding is therefore subjected to external pressure and suction loadings only.

[2] If the permissible stress racking capacity of 1.35kN/m is to be claimed, then there should be two fasteners per plank per stud, requiring one fastener to be added to those shown in the diagram within 50mm of the top of the plank, preferably underneath the lap of the plank above.



**TIMBER FRAMED CONSTRUCTION**

The same stud spacing designs may be applied equally using 40mm long Ø 2.8mm fibre-cement (FC) nails, but do not use stud clips for wind classifications beyond C2.

Terrain Category	Topographic Classification					
	T1			T2		
	FS	PS	NS	FS	PS	NS
TC 2.5	C2	C2	C2	C2	C2	C3
TC 2	C2	C2	C2	C2	C3	C3
TC 1	C2	C2	C2	C2	C3	C3

Wind Classification in Region C	Serviceability Limit State (m/s)	Permissible Stress Method (m/s)	Ultimate Limit State (m/s)
C2	39	50	61
C3	47	60	74
C4	55	70	86



**James Hardie Building Products**

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**FIXING TO STEEL FRAMES**  
**PRIMELINE™ SUMMIT WEATHERBOARD 9mm**  
**(nominal) EXTERNAL WALL CLADDING**  
**IN THE DARWIN AREA**

## DESIGN DATA SHEET

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NORTHERN TERRITORY DEPT OF  
LANDS, PLANNING & ENVIRONMENT  
BUILDING ADVISORY SERVICES BRANCH

DWG NO.

M/221/2

Certified: *[Signature]*  
Date: .....

F.I.E. AUST, C.P.Eng  
14th November 1996

Approved: *[Signature]*

Date: *12/12/96*