IN ACCORDANCE WITH NCC VOLUME 2 (SECTION P3.10.1), THIS PRODUCT SATISFIES PERFORMANCE REQUIREMENT P2.1.1 FOR CONSTRUCTION IN A HIGH WIND AREA

SPECIFICATION

This data sheet covers the use of Primeline™ Chamfer™ weatherboard in residential façade applications over a light-gauge steel frame or a timber wall frame and must be read in conjunction with current James Hardie product literature: "External Cladding Technical Specification".

Primeline™ CHAMFER™ Cladding Description:
Sheet thickness nominally 9mm; Matt smooth pre-primed surface finish; Final surface finish (coating, painting etc) must be in accordance with Hardie's product literature.

Available in 'double-board' 300mm width only; fixed with a maximum overlap of 18mm, the effective cover per board is approximately 278mm.

Stock length 4200mm; Cladding weighs approx 3.6kg/lin m.

FRAMING & SHEET INSTALLATION

Install weatherboards to steel or timber stud-frames as shown in **Figure 1** with the stud spacing taken from **Table 1** or **Table 2** depending on the design wind load.

All intermediate support studs must be a minimum of 64 x 35mm deep for metal framing and 70 x 35mm for timber.

Framing – Steel
The steel frame must be in accordance with AS 3623-1993 "Domestic Metal Framing". Studs shall be rolled steel sections not exceeding 2.0mm in thickness.

Framing – Timber:
Use of timber framing must be in accordance with AS 1684: 2010 "Residential timber-framed construction" and framing manufacturer's specifications. Use seasoned timber or else unseasoned hardwood minimum F14 grade. LVL timber may be used.

FIXING / FASTENERS

Minimum of two fasteners per weatherboard at each stud intersection. Drive screw head flush with plank surface. Locate fastener as shown in the diagrams, but never less than 12mm from top or bottom edges of the weatherboard. Minimum edge distance at ends of boards to be 25mm.

Stud clips are not available for this product.

All fixings and fastener to be minimum Class 3 finish. Use the following fasteners or approved equivalent fasteners:

Steel-Framed Construction:
Use 32mm or 40mm HardieDrive™ self-embedding head screw or 30mm Buildex 'Fibre Zip' (or 'Batten Zip') screw.

Timber-Framed Construction:
The same stud spacing designs may be applied equally using 40mm long ∅ 2.8mm fibre-cement (FC) nails. The racking capacities quoted below may be claimed provided that steel anchor rods ("cyclone rods") are used.

TABLE 1: Maximum Stud Spacing (mm) for Wind Load

AS 4055 Wind Load Classification	General Areas of Building		Within 1200mm of Building Edges	
	ULS Pressure (kPa)	Stud Spacing (mm)	ULS Pressure (kPa)	Stud Spacing (mm)
C1	-0.98 +1.05	600	-1.95	600
C2	-1.45 +1.56	600	-2.90	steel: 600 timber: 450
C3	-2.14 +2.30	600	-4.27	steel: 450 timber: 300
C4	-2.88 +3.11	450	-5.77	300

TABLE 2: Test-Proven ULS Design Pressure Capacity (kPa)

Stud Spacing (mm)	STEEL	TIMBER
600	4.2	2.7
450	5.8	4.3
300	7.0	5.8

Jointing:
In non-coastal areas, the ends of Chamfer weatherboards may be jointed off-stud by means of the 'Uniclip' accessory shown in the product literature. In coastal areas (ie within 1km of the shoreline or a large body of salt water the boards must be joined on-stud.

On-stud jointing must be done on a minimum 45mm width single stud or double 35mm width studs.

STRUCTURAL BRACING

For wall heights of both 2400mm and 2700mm, the ULS racking capacity for 1.6mm gauge steel framing is 2.4kN/m for 600mm or 450mm stud spacing and 3.6kN/m for 300mm stud spacing.

For timber framing the racking capacity is 2.4kN/m for stud centres 300mm to 600mm, provided that M12 steel anchor rods are used with their spacing determined from AS 1684.3: 2010, but never more than 2.4m apart if bracing capacity is claimed.

These capacities are achieved via the framing and external lining and thus provided regardless of whether the required internal lining has been installed. Where a 6mm JHFC (James Hardie fibre cement) internal lining is added, the capacity rises to 6.6kN/m for timber and steel framing for stud centres 300mm to 600mm (refer to the James Hardie DTC sheet for bracing).

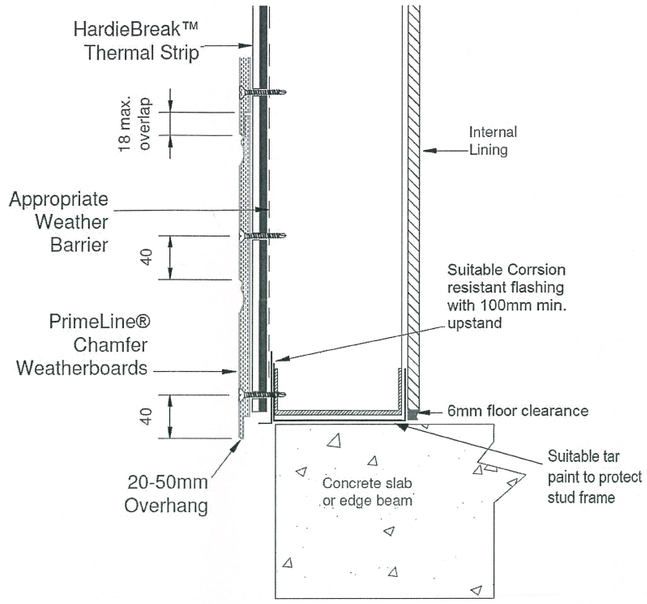

Figure 1: Fixing Detail for Timber Framing in Cyclonic Wind Regions

(the same detail applies to steel framing and the positioning of the screws)

(Note: a thermal break may be required in some situations)

DETAILS & OTHER MATTERS

More extensive construction details and jointing details are provided in current James Hardie literature for Primeline™ Chamfer™ weatherboard cladding. Refer also to the Warranty for the system in that literature.

For further details on matters such as a thermal break, an appropriate weather barrier (eg vapour permeable sarking), flashing, system accessories and finishing, refer to current James Hardie technical literature for Primeline Chamfer weatherboard, the BCA or relevant Australian Standards.

Product Name:
PRIMELINE™ CHAMFER™ WEATHERBOARD

Product Description:
9mm Pre-Primed External Wall Cladding

Manufacturer's Name:
James Hardie Australia Pty Ltd
10 Colquhoun Street, Rosehill NSW 2142

Design Criteria:

[1] General
All design and construction must comply with the appropriate requirements of the current Building Code of Australia (BCA) and other applicable regulations and standards.

[2] Wind Loading
The weatherboards must be fastened to the timber or steel frame in accordance with **Table 1** for the different wind classifications, which are taken from AS 4055: 2006 "Wind Loads for Housing". The effective design wind speeds are given in Table 2.1 of AS 4055.

For design to AS/NZS 1170: 2011 Part 2 "Wind Actions", the proven Ultimate Limit State (ULS) design capacity of the system is given in **Table 2**, noting that an ULS material capacity reduction factor ('phi') is implicitly included and no further factoring of the design capacity is needed.

Limitations:

[1] Primeline™ Chamfer™ weatherboard is an external wall cladding for residential use only. This cladding has been designed for external pressure and suction loadings only. The designer must ensure that the framing is capable of resisting simultaneously the internal and external design pressures (ie **an internal lining is required**).

[2] To use Table 1, the design must comply with the geometric limits given at Clause 1.2 of AS 4055: 2066 (eg max eaves height = 6m and maximum building width = 16m), except as varied by the design engineer.

[3] Gun nailing must not be used for bracing systems.

Accepted for Inclusion

DTCM ref: M/273/01

Chairman's Signature:

Chairman's Name: STEVEN J EHRLICH

Date of Approval: 30/07/2015

Expiry Date: 30/07/2020

Notes covering basis of DTC (relevant test reports etc):

The nominated structural capacity of the system is based on the following documentation:

[1] James Hardie Advice Note dated 28 September 2010 "Addendum to Submissions on the Fixing of Planks & Weatherboards" for the ULS design pressure capacity.

[2] James Hardie Advice Note dated 25 September 2001 "The Fixing of Planks & Weatherboards in Australian Wind Conditions".

[3] James Hardie Advice Note dated 13 December 2006 "The Fixing of PrimeLine Weatherboards in Australian Wind Conditions".

[4] James Hardie Test Report TS017-03 "Uniform Load Testing to ASTM E72- 80..." dated 14 July 1998.

[5] "Summary of Uniform Pressure Testing of 9mm Thick PrimeLine Summit Weatherboard", Clayton Frick, 31 May 1999, revised 29 August 2005.

*Design Engineers Certification

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