

SPECIFICATION

This data sheet must be read in conjunction with current James Hardie literature for Linea® Weatherboard.

LINEA® WEATHERBOARD CLADDING

16mm nominal thickness. Pre-primed surface finish. Available in 150mm and 180mm widths. Stock length is 4200mm. The effective cover for the 150mm and 180mm boards is approximately 120mm and 150mm respectively.

LINEA® WEATHERBOARD TRIM

16mm nominal thickness. Used as decorative external trim around openings and at corners. Pre-primed surface finish. Available in 84mm and 100mm widths. Stock length is 2400mm.

DESIGN

The weatherboards shall be fastened to the steel frame in accordance with the stud spacings in Table 1 for the different wind conditions. The wind classifications are derived from AS 4055 of 1992 "Wind Loads for Housing" as in Table 2. Topographic classifications beyond T2 are likely to be uncommon in Darwin (refer to Clause 10 of AS 4055).

In selecting 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 3.

The proven capacity of the system is 4.3kPa for studs at 450mm spacing and 5.8kPa for studs at 300mm. This may be used by designers for intermediate wind speeds or buildings outside the scope of AS 4055. An Ultimate Limit State (ULS) material capacity reduction factor is implicitly included.

LIMITATIONS OF USE

It has been assumed that the weatherboard is an external wall cladding only and hence internal linings must resist internal pressures. The weatherboard cladding is therefore subjected to external pressure and suction loadings only.

The design must comply with the geometric limits given in Clause 6 of AS 4055 (eg max eaves height = 3m and max building width = 16m), except as varied by the design engineer.

TABLE 1
Stud Spacing to Support Linea® Weatherboards

Wind Load Classification	General Areas Of Building	Within 1200mm of Building Edges
C2 & C3	450mm	450mm
C4	450mm	300mm

TABLE 2
Wind Classification System for Region C, Darwin

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

WALL FRAME (STEEL)

The wall frame must be in accordance with AS 3623 "Domestic Metal Framing". Studs shall be rolled steel sections not exceeding 1.6mm in thickness. A minimum stud width of 35mm is required. Maximum stud spacing shall be as in Table 1.

SPECIAL FRAMING REQUIREMENTS

[1] Additional framing may be required at internal corners and sides of openings (refer to details in current literature).

[2] Extra depth lintels may be necessary for fixing of head flashing and trim. Lintels must be located in the frame, flush externally, to adequately support the head flashing and trim.

[3] Extra packers are needed at external corners for use with Linea Weatherboard Trim boxed corners.

FIXING (refer to James Hardie "Technical Specification")

Linea Weatherboard may be fixed using the concealed-fix method whereby the board is fastened 25mm below the top edge and the fixing then concealed under the nominal 30mm lap by the board placed over the top (see Figure 2). For this method of fixing, use 40mm TRI-FIXX Steelite 8-18 wing-tip, sharpened tip screw or 30mm ITW Buildex 'Fibre Zip' (or 'Batten Zip') screw. Alternatively, the 32mm HARDIDRIVE™ self-embedding head screw may be used with 1.6mm gauge studs only.

Face fixing through the lap of two boards is required in bracing applications and whenever site conditions create undue gaps between boards at laps (see Figure 3). In this case use 52mm long special wing screw by TRI-FIXX.

Locate fasteners as shown in Figure 1, but never less than 15mm from top and bottom edges of weatherboard. The minimum edge distance at the ends of the boards is 15mm, except for gun nailing, when it is 50mm.

Fasteners must have the appropriate level of durability required for the intended building. Also, they must be compatible with all other materials that they are in contact with to ensure the durability and integrity of the assembly.

MOISTURE MANAGEMENT

Appropriate flashings and waterproofing must be used where necessary. Materials, components and their installation that are used to manage moisture in framed wall construction must, at a minimum, comply with the requirements of relevant standards and the Building Code of Australia (BCA).

VAPOUR PERMEABLE SARKING

Vapour permeable sarking must be installed under Linea Weatherboard in accordance with AS/NZS 4200.2 "Pliable building membranes and underlays - Installation" and the manufacturer's specifications. Sarking must have the following properties against AS/NZS 4200.1:

Vapour Barrier - Low or Medium
Water Barrier - High

TABLE 3
Maximum Design Gust Wind Speed (V_h) at Height h

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



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LINEA® WEATHERBOARD

16mm PRE-PRIMED EXTERNAL WALL CLADDING

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Certified: Date: 22/11/05
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DESIGN DATA SHEET

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