This product has been determined to satisfy NCC Performance Requirement H1P1 for structural resistance of materials and forms of construction in high wind areas

SPECIFICATION

This data sheet covers use of 6mm HardieFlex™ sheet cladding 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, namely the "External Cladding Technical Specification". The sheets must be coated in accordance with the product literature available from our website: https://www.jameshardie.com.au/productrange/hardieflex-sheet

FRAMING & SHEET INSTALLATION

Install sheets vertically to steel or timber stud-frames as shown in **Figure 1** and in accordance with the stud and fastener spacing given in **Table 1** and **Table 2** depending on the wind load classification or design pressure.

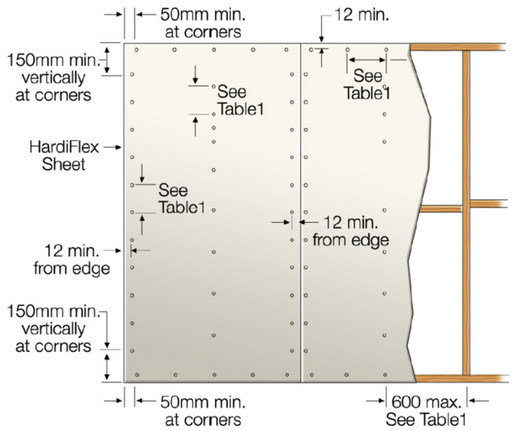

Figure 1: Sheet Fastening Spacing
(fixing to noggings not required)

Framing width at sheet joints must be a minimum of 42mm for timber and 38mm for steel. Where the studs at sheet joints are less than this, provide double 35mm wide studs at sheet joints. Ensure that double studs are fastened together and flush at the outside face.

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

All sheet edges and joints must be supported by framing.

Framing – Steel
The steel wall frame (minimum 64 x 35mm studs) must be in accordance with NCC 2022 Clause H1D6 Item (3). Studs to be rolled steel sections not exceeding 2mm in thickness.

Framing – Timber:
Use of timber framing must be in accordance with AS 1684: 2021 "Residential timber-framed construction" and framing manufacturer's specifications. Use seasoned timber or else unseasoned hardwood minimum F14 grade. LVL timber may be used.

Spacing of the M12 cyclone rods to be determined from AS 1684.3: 2021, but never more than 2.4m apart if bracing capacity is claimed.

Jointing:
HardieFlex sheets are normally jointed with a PVC straight joint mould and finished at corners with surface mounted PVC corner moulds. Sheet joints must coincide with the centre line of the framing member.

TABLE 1: Maximum Stud, Batten & Fastener Spacing for Wind Pressure Design to AS 4055: 2021

Wind Load	General Areas of Building					Within 1200mm of Building Edges				
AS 4055 Classification (Cyclonic)	Max Design Pressure (kPa)	Can Battens Be Fixed Off-Stud?	Stud / Batten Spacing (mm)	Batten Fastener Spacing (mm)	Sheet Fastener Spacing (mm)	Max Design Pressure (kPa)	Can Battens Be Fixed Off-Stud?	Stud / Batten Spacing (mm)	Batten Fastener Spacing (mm)	Sheet Fastener Spacing (mm)
C1	-0.98 +1.05	YES	600 or 450	300	200	-1.95	YES	450 or 400	300	200
C2	-1.45 +1.56	YES	600 or 450	300	200	-2.90	YES	450 (steel) 400 (timber)	200	150
C3	-2.14 +2.30	NO	450 or 400	300	200	-4.27	NO	300	200	150
C4	-2.88 +3.11	NO	450 or 400	200	150	-5.77	NO	300	150	100

TABLE 2: ULS Design Pressure Capacity

Stud / Batten Spacing (mm)	**Sheet** Fastener Spacing (mm)	ULS Capacity (kPa) to **Timber Framing**	ULS Capacity (kPa) to **Steel Framing**	**Batten** Fastener Spacing (mm)	Can Battens be Fixed Off-Stud?
600	200	1.69	1.69	300	YES
	100	1.95	1.95	300	YES
450	200	2.38	2.44	200	YES up to 2.95kPa for steel frame, but 2.60kPa for timber
	150	3.17	3.70	200	
	100	3.98	3.98	200	
400	200	2.68	3.12	200	YES up to 3.32kPa for steel frame, but 2.93kPa for timber
	150	3.57	4.16	200	
	100	5.03	5.03	200	
300	200	3.57	4.16	200	NO
	150	4.76	4.97	200	NO
	100	7.14	7.14	150	NO

FIXING / FASTENERS

Fixings and fastener may be minimum Class 3 finish if concealed and/or sealed, but must be Class 4 if exposed to the elements. Use the following fasteners or approved equivalent fasteners:

Fasteners - Steel Framing:
Use 30mm Buildex FibreTeks® or 32mm HardieDrive® screws.

Fasteners - Timber Framing:
Use a 2.8 x 30mm galvanised fibre cement nail.

Fasteners – On-Stud Cavity Battens:
To steel framing, use 41mm HardieDrive CSK screws or Tri-Fixx 10-12 x 100 self-drilling bugle-head screws.
To timber framing, use Paslode 65 x 2.8mm ring-shank nails.

Fasteners – Off-Stud Cavity Battens:
Fixing to steel noggings, use 2No 41mm HardieDrive screws per intersection for noggings up to 900mm max spacing. Fixing to timber noggings, use 1No 65 x 2.87mm Paslode DekFast ring-shank nail for nogging spacing up to 800mm max and 2No 65mm Dekfast nails for nogging spacing up to 900mm.

STRUCTURAL BRACING

Refer to the James Hardie DTCM sheet for structural bracing.

DETAILS & OTHER MATTERS

More extensive construction details and jointing details are provided in current James Hardie literature. 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 HardieFlex cladding, the NCC or relevant Australian Standards.

Product Name
HARDIE™FLEX SHEET

Product Description
6mm External Cladding for Walls

Manufacturer's Details
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 National Construction Code (NCC) and other applicable regulations and standards.

[2] Wind Loading
The cladding sheet must be fastened to the frame in accordance with **Table 1** for the different wind classifications, which are taken from AS 4055: 2021 "Wind Loads for Housing". The effective design wind speeds are given in Table 2.1 of AS 4055: 2021.

For design to AS/NZS 1170.2: 2021 "Part 2: Wind Actions", the 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] Hardie™Flex sheets are 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: 2021 (eg max eaves height = 6m and maximum building width = 16m), except as varied by the design engineer.

[3] Fastening: All fasteners specified must be driven flush. Do not fix fasteners closer than 12mm from panel edges, or closer than 50mm from sheet corners.

Accepted for inclusion in Deemed to Comply Manual

DTCM drawing number: M/451/01

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 "Technical Submission for the Structural Certification of 6mm HardieFlex Sheet Used as External Cladding" Version 5 dated 2 June 2025, which references various test reports and design calculations.

[2] David Beneke Consulting letter of certification 2024-35-LO-57 (Revision 3) dated 2 June 2025.

[3] Cyclone Structural Testing Station Report No.TS 471 dated 23 July 1996 "Static and Cyclic Uniform Loading of Hardiflex Cladding" and James Hardie letter to NT BASB dated 7 August 1996 regarding the outcome of testing cyclic versus static loading.

Checking Engineer
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Signature:
Must be an **Australian** registered structural engineer

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Chairperson Signature:
Chairperson Name: Elisha Harris
Date of Approval: 30/04/2026 Expiry Date: 30/04/2031

Date approved 04 June 2025