HARDITEX

FROM THE

Boulevard

SERIES

Streets Ahead

HARDIE'S fibre cement building products

HARDITEX

Lightweight External Cladding System

Monolithic design is today's architectural trend.

Strong, bold statements are being made in both the residential and commercial fields. Superb homes that reflect the lifestyles of the discerning, and prestigeous low-rise commercial complexes that enhance a company's image.

Developed especially for this style of architecture, Harditex is the preferred exterior cladding substrate. When comparing the benefits Harditex is an exterior cladding in its own right and does not rely solely on the texture coating for its performance as do many other systems.

The special Harditex base sheets provide a suitable base for textured coatings. The recessed edge of the Harditex sheet is designed to accommodate flexible jointing tape systems to achieve a monolithic flush finish.

The versatility of Harditex is unsurpassed for new homes, townhouses, ground level and upper storey extensions, recladding established homes, and commercial fascias.

Offering the durability and peace of mind of fibre cement, Harditex is the complete cladding system for today's architecture.

ABOVE
Built for the sun, but with privacy as the main design requirement, the use of Harditex for this family home has allowed the clean uncluttered lines of the architecture to become a feature, balanced with the luxurious plantings in the outdoor living spaces.

BELOW
Prestige and position, a company's image is reflected by its premises. The Auckland Sun's new building, another trend setting low rise commercial development.

COVER
Overlooking Auckland's harbour, this magnificent home is on the leading edge of today's designs. This look has been acheived by the use of a texture sprayed fibre cement exterior.

General Product Information

Product Characteristics

COMPOSITION

Portland cement, ground sand, cellulose fibre and water.

DURABILITY

Under normal conditions Hardie's Building Products are not affected by insects, termites, sunlight or steam and will not split or rot.

Any special conditions or unusual applications should be referred to the technical staff of **James Hardie & Coy Pty Limited** for advice.

FIRE PROPERTIES

Hardie's Building Products will not burn and have the following "Early Fire Hazard Indices" (tested to AS 1530 Part 3 - 1982).

Ignition Index	0
Flame Spread Index	0
Heat Evolved Index	0
Smoke Developed Index	0

Handling and Storage

Sheets should generally be stacked on edge or laid flat on a smooth level surface. Edges and corners should be protected from chipping.

To ensure optimum performance sheets must be stored under cover and kept dry prior to fixing. If the sheets should become wet, allow to dry thoroughly before fixing is commenced.

Design Considerations

Harditex cladding systems are suitable for both commercial and domestic applications. These should be limited to 2 storeys in height unless specific design for the attachment of the Harditex sheets to the structure is undertaken.

Unless kiln dried timber is utilised for the floor joists in a two-storey situation, a horizontal control joint will be required. Harditex should not be used in pole house construction where excessive structural movement could be encountered.

Vertical and horizontal expansion joints must be provided to limit the monolithic cladding area to 25m^2.

Material

Harditex base sheets are a light-grey fibre cement sheet. The name 'Harditex' is printed on the face together with the required nail fixing positions.

Sheet Thickness and Sizes

Dimensions shown are nominal

Length	1800mm
	2400mm
	2700mm
	3000mm
Width	1200mm
Thickness	7.5mm

Mass

The approximate mass of 7.5mm Harditex at equilibrium moisture content is 10.7 kg/m^2.

Sheet Edge Finish

The sheets are recessed on both sides and one end to take a reinforced bedded joint detail applied by the coating contractor. This allows for a monolithic finish at both the vertical and horizontal joint detail.

Accessories

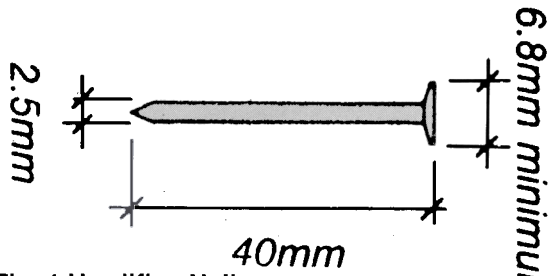
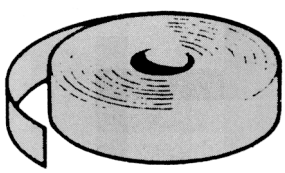


Fig. 1 Hardiflex Nail



Perforated Paper Reinforcing Tape

Fig. 2

Working Instructions

Cutting

Suitable cutting methods are 'score-and-snap', hand guillotine, hand sawing and power sawing.
'Score-and-snap' Method
'Score-and-snap' is a fast and efficient method of cutting using Hardie's special tungsten tipped 'score-and-snap' knife. Refer Fig. 3.

Procedure:

- Preferably score from the face side of the sheet.
- Position straight edge along line of cut.
- Score against straight edge and repeat action to obtain adequate depth for clean break — normally one-third of sheet thickness.
- Snap upwards to achieve break.
- Clean up edges with a rasp if necessary.

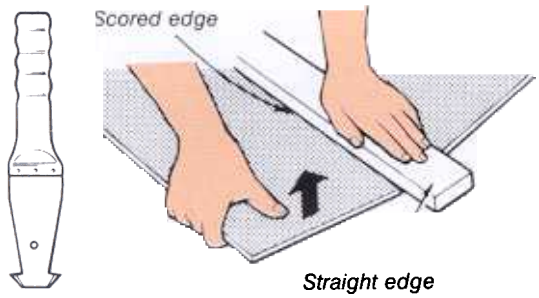


Fig. 3 'Score-and-snap' Method

Hand Guillotine Method
The Jiffy brand hand guillotine produces clean, straight edges. Make the guillotine cut on the off-cut side of line to allow for the thickness of blade.

Hand Sawing Method
Hand sawing is suitable for general cutting operations and for small cuts, notching or small penetrations. Preferably use an old handsaw. A quick forward jabbing action is best.

For neatness, mark out the cuts to be made on the face side of the sheet. Where small notches are to be made, cut the two sides with the handsaw or hand guillotine, score along the face with the 'score-and-snap' knife and snap upwards.

Power Sawing Method
Power cutting using a diamond saw blade gives an acceptable edge. All power cutting operations should be carried out in open air situations or in well ventilated spaces.

Reflected in the late afternoon sun, the Harditex walls show clearly the balance acheived between dramatic architecture and softness of texture.

Hole Forming

Small rectangular or circular holes can be achieved by drilling a series of small holes around the perimeter of the hole then tapping out the waste piece from the sheet face. Tap carefully to avoid damage to sheets and clean rough edges with a rasp.
Note: Do not form holes through sheets with cold chisels, heavy hammers or any other 'aggressive' methods. Such forceful methods will damage sheets and may cause other problems at a later date.

For larger rectangular penetrations proceed as follows:

- Mark out the penetration on the face surface.
- Drill a hole in each corner.
- Score to the outside of the holes to 1/3 sheet depth.
- Turn sheet over and score the reverse face to 1/3 sheet depth using the drill holes as a reference.
- Knock out the scored material to form the penetration hole.

External Wall Applications

Framing & Fixing Procedures

FRAMING

— All timber framing should be in accordance with NZS 3604 1984.

— Harditex should not be fixed to timber framing with a moisture content in excess of 24% and for fully air conditioned buildings moisture content must not exceed 18% in accordance with NZS 3602 1975. Kiln dried timber is preferable to minimise shrinkage.

— Studs and noggings should be a minimum of ex. 50mm wide to give sufficient width to fix sheets at joints. Studs shall be at maximum 600mm centres and noggings at 1200mm centres.

— All Harditex sheet edges must be fully supported by the framing. Framing must be rigid and not rely on the Harditex for stability.

— Vertical expansion joints must be provided at 5400mm max. centres. Independent vertical framing should be provided at joints with a 6mm gap between (Refer Fig 5).

— All studs and nogs to be checked before the Harditex is fixed for line and face accuracy to ensure the timber stud wall has a true accurate outside face to fix the sheet.

Fixing

— A breather type building paper is to be fixed to the outside face of the framing before fixing the Harditex sheet.

— Sheets must be thoroughly dry before fixing is commenced.

— Sheet to be held firmly against stud when nailing.

— Commence fixing from centre of all sheets and work outwards to ensure they are hard against framing to eliminate any 'drumminess'.

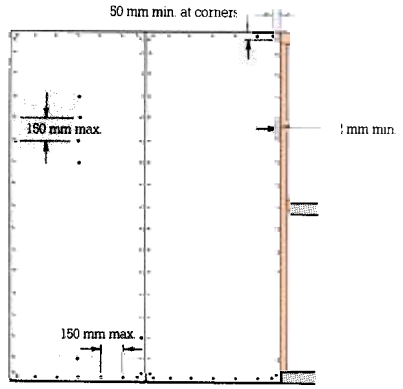


Fig. 4 Vertical Sheet Fixing

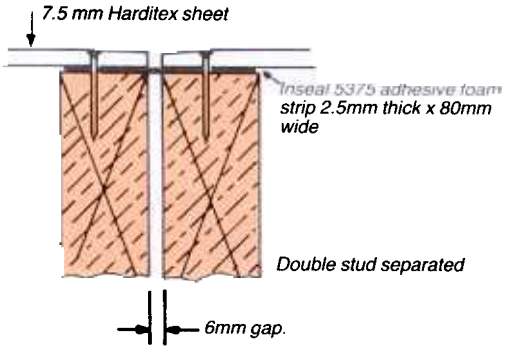


Fig. 5 Vertical Expansion Joint Detail

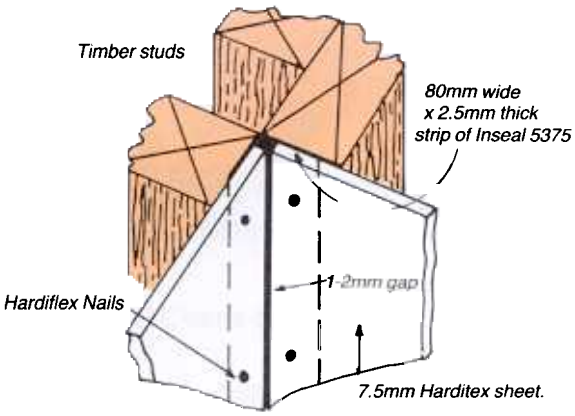


Fig. 6 Internal Corner Detail

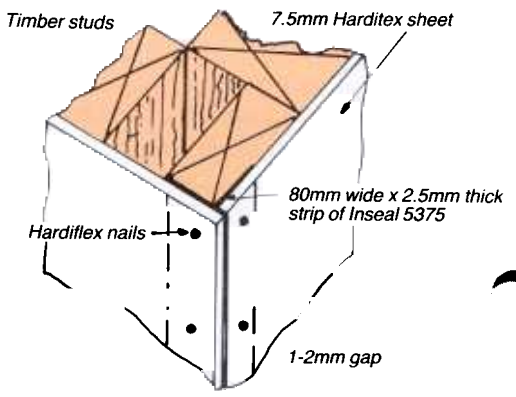


Fig. 7 External Corner Detail

— Fix in conjunction with the dot pattern on the sheet using 40mm x 2.5mm galvanised flat head Hardiflex nails at 150mm centres to the perimeter of sheets, intermediate studs and noggings. Nails must be hammer driven flush with the sheet surface. Do not fix closer than 12mm to sheet edge or 50mm to the corner of the sheet.

— At internal and external corners adhere a strip of Inseal 5375 in position before fixing sheets (Refer Fig 6, 7).

Sheet Jointing

The recessed edge of the Harditex sheet is designed to accommodate a tape-reinforced flexible jointing system, to achieve a monolithic flush finish with textured coatings.

Where sheet end joints coincide above and below door or window lines, joints may crack due to structural movement. The suggested method to accommodate this possibility is to provide additional flashing behind the joint. (Refer Fig. 9). Alternatively fix sheets across door and window openings then cut away waste sheet (Refer Fig. 10).

Jointing & Coating Systems

To achieve a high standard monolithic surface finish, the Harditex external cladding sheets have been developed to receive proven proprietory high-build flexible acrylic surface coatings.

As the sheet jointing, sealing and coating is an integral part of the texture coating manufacturers' system and its warranty, the work should only be undertaken by their licensed applicators.

James Hardie & Coy Pty Limited have developed Harditex as the most suitable cladding substrate for texture coating systems. The successful performance of the textured coating systems depend on numerous factors outside the company's control and therefore James Hardie & Coy Pty Limited accepts no responsibility for the coatings' performance.

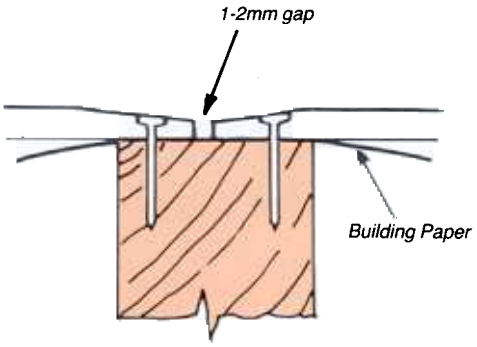


Fig. 8 Sheet Joint Detail

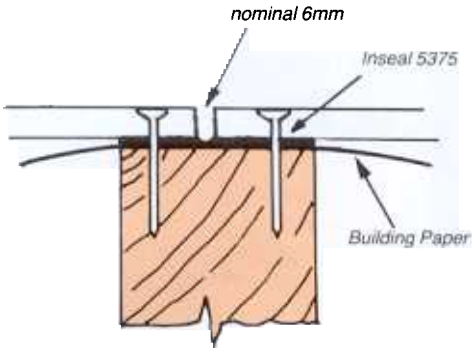
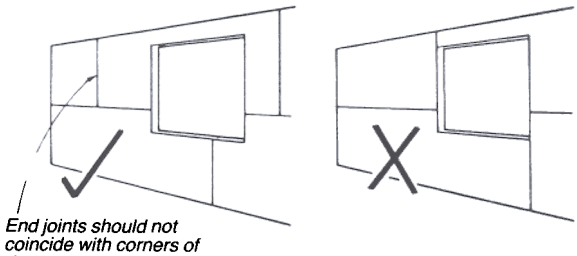


Fig. 9 Expressed Joint Detail

Two actual examples of an expressed joint

Sheet Layout for openings



End joints should not coincide with corners of door or window openings as joints may crack due to frame movement

Fig. 10

Why Fibre Cement?

- **Security**
- **Durability**
- **Fire Resistance**
- **Safety**

An artist's impression of how the strong lines of today's architecture can be acheived with the use of fibre cement

In today's economic environment any investment in residential or commercial property is a large one. Therefore all building products used, need to offer the **security** of **proven performance.**

Hardie's fibre cement building products offer such **security.**

They are products with **proven durability.** Unaffected by water, they **do not rot.** They **do not twist or warp** on the framing and they have a **zero fire rating.** This makes fibre cement one of the **safest** building materials on the market today.

For further information on the extensive range of Hardie's fibre cement building products, please contact any of the addresses below.

System Warranty

The systems recommended in this Brochure are formulated along the lines of good building practice and are intended to assist experienced tradespeople in construction procedures. However, the Brochure is not intended to be an exhaustive statement of all relevant data. Further, as the successful installation of these systems depends on numerous factors outside the Company's control (e.g. quality of workmanship, particular design requirements, etc.) the Company accepts no responsibility for or in connection with the quality of the systems, or their suitability for any purpose when installed.

All conditions, warranties, obligations and liabilities of any kind which are or may be implied or imposed to the contrary by any statute, rule or regulation or under the general law and whether arising from the negligence of the Company, its servants or agents or otherwise are hereby excluded except to the extent that the Company may be prevented by any statute, rule or regulation from doing so.

Hardie's reserve the right to revise without notice information and specification herein.

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