

lasting strength  
with fibre-cement

**nutec**<sup>®</sup>  
ROOFING AND CLADDING SOLUTIONS

Manufactured by  
**EVERITE**  
Established in 1941

# BUILDING PLANKS





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### Catalogue Information

The information contained in this catalogue serves as a general guide only and should not be accepted as the standard for all construction. EVERITE can assist in designs of a special nature, however, architects, engineers and specifiers must finally approve the acceptability in terms of the design and construction criteria, as well as other implications.

### About Everite and Nutec

#### ■ Everite Building Products

Everite Building Products, wholly owned by JSE listed Group Five, has been associated with the South African building industry since 1941. Producing a wide range of materials that satisfy the needs of the commercial, industrial and residential market sectors, Everite is renowned for its comprehensive range of Nutec Roofing and Cladding Solutions and includes fibre-cement roofing, cladding, ceilings and building columns amongst others.

Nutec fibre-cement high performance properties and added benefits include: the use of safe renewable fibres; considerable tensile strength with enhanced dynamic load bearing properties; excellent thermal properties; water and wind resistance; hail resistance; fire resistance and resistance to fungus, rodents and acid.

A programme of quality assurance in accordance with the requirements of the International Standards Organisation (ISO 9001:2008) is entrenched in Everite's process and management systems. Quality of all products is continuously monitored as specified by the South African National Standards and recognised international bodies.

Everite's 54 hectare manufacturing facility near Johannesburg is well located and has immediate access to all major road and rail links to national destinations and major ports. The company has branches located at major centres throughout South Africa. Nutec products are distributed through leading stockists countrywide and an established export market further endorses the international acceptance of the Nutec Roofing and Cladding Solutions range of products.

#### ■ Nutec

Nutec is the registered name for products manufactured without asbestos as a raw material. Nutec fibre cement products are manufactured using a mixture of cellulose fibre, cement, silica and water.

Through ongoing research and development, Everite Building Products are committed to provide product of world-class quality.

Accordingly, the Nutec product range is continuously reviewed not only in the interests of the end-user and superior product performance, but also with respect to its impact on the environment. Everite Building Products has over the years established a reputation for producing a variety of outstanding quality products which have been used in a wide range of external and internal applications.

### Environmental benefits of Nutec Fibre Cement

- Environmental costs incurred by using fibre cement are measurably less than for other building materials. (Low embodied energy per m<sup>2</sup>).
- Requires less energy in assembly and construction than all other wall materials except timber.
- Low energy consumption in transportation and installation.
- Environmental costs relating to ozone layer depletion, carcinogenic substances and solid waste emissions are almost negligible.
- Low environmental impact in relation to ozone layer depletion, carcinogenic substances, and solid waste emissions.
- No pesticides are involved in the manufacture or use of fibre cement.

### The benefits of Nutec Fibre Cement

- The use of safe fibres.
- Considerable tensile strength with enhanced dynamic load bearing properties.
- Cost competitive.
- Excellent thermal properties.
- Water tight and wind resistant.
- Hail resistant.
- Fire-resistant.
- Fungus and rodent resistant.
- Acid resistant.
- Complies with SABS ISO 9933.
- ISO 9001 : 2008 Quality Management System.

### The environmental benefits in the manufacturing process of Nutec Fibre Cement

- Recycling the water used in production many times.
- Recycling solid wastes.
- Using sustainable raw materials in production.

### Embodied Energy – Definition

Embodied energy is the energy consumed by all of the processes associated with the production of a building, from the mining and processing of natural resources to manufacturing, transport and product delivery. Embodied energy does not include the operation and disposal of the building material. This would be considered in a life cycle approach. Embodied energy is the 'upstream' or 'front-end' component of the lifecycle impact of a home. Fibre cement is one of the most energy efficient materials on the market and it has one of the lowest embodied energy contents per square metre of cover of any building product.

# NUTEC BUILDING PLANK FEATURES

## Nutec Building Planks

Nutec Building Plank provides an out of the ordinary solution for external and internal cladding. Usually installed in a ship lapped pattern, it is available in a plain and textured finish that gives the realistic look and feel of timber. Application possibilities range from facades for upmarket complexes to the external skin of timber-framed dwellings. Nutec Building Plank is ideally suited for upgrading facades or adding a striking look to new developments. They offer the perfect solution to add-on construction in the form of extra rooms or loft rooms, and are an economical alternative to brick and plaster gable walls on houses.

### ■ Features

- Relatively light in weight, Nutec Building Planks can be supported on light gauge metal frames or light timber structures. These factors facilitate easy handling and erection and are major benefits on projects where low mass construction is an important factor.
- It features all the intrinsic benefits of Nutec Fibre Cement.
- Nutec Building Planks are supplied in their natural colour and they can be painted on site with an acrylic PVA, or any other water-based paint without pre-treatment.
- Manufactured to the highest internal quality standards and compliance is ensured by strict quality assurance programmes in the production process as well as stringent testing in our laboratory. EVERITE products are manufactured to the requirements of ISO 9001:2008 Quality Management System.
- Nutec Building Planks can be used for the cladding of external or internal walls in timber and light weight steel frame construction. See the South African Building Code SANS 10082 for more details on timber construction.

## Safety, Handling and Storage Instructions

### General

Manufactured from Nutec fibre-cement, Nutec Building Planks do not contain asbestos fibre and are therefore excluded from the following:

- Asbestos Regulations of 2001, which forms part of the Act No. 85: Occupational Health and Safety.
- South African Code SANS 10229: Packaging of dangerous goods for road and rail transportation in South Africa.

They do not pose any adverse effects on the environment. Off-cuts and dust created during site work may be disposed off on any non-hazardous waste landfill site.

### Safety

Safety rules as per current legislation and work practices as described in General Installation Guidelines must be observed when working with the product. Although Nutec Building Planks are manufactured without asbestos fibres, it is nevertheless recommended that when working with the product, tools that create excessive dust should not be used. Ordinary carpenters' tools can be used effectively.

### Handling

Nutec Building Planks are cement-based and may be damaged under excessively high shock loads. Reasonable care should therefore be taken to ensure that the products are not dropped or subjected to rough handling.

### Storage

Nutec Building Planks should not be exposed to the elements and under cover storage is recommended. It is recommended that products be stored covered to keep them dirt-free before installation to prevent build-up of dust that will affect paint adhesion.

A smooth level under cover area should therefore be made available where they can be stacked safely. They should be stacked clear off the ground on suitable timber supports at maximum 400 mm centres and the edges and corners protected against possible damage.

Stacking height should not exceed 500 mm with cantilever not exceeding 100 mm.

## GENERAL DESIGN CRITERIA

### General Design Criteria

#### Exposed and Windy Conditions

The data presented in this catalogue is a guide only. For normal wind loading conditions or for structures in high wind areas, an Architect or Engineer should be consulted for advice on specific fixing recommendations.

It is possible for water to be drawn upwards where walls or gables are exposed to a high degree of wind and rain. Walls exposed in this manner should be fully backed with a durable waterproofing membrane in sheet form which should be fixed between the Building Planks and the vertical studs.

#### Supporting Structure

To ensure a high standard of finish, it is essential that the supporting structure is accurate and straight.

**Warped, twisted or poor quality timber will reflect in the final appearance of the Building Planks. Use only well seasoned graded structural timber.**

Supporting timber structure used on masonry walls should not be less than 38 mm x 38 mm.

The distance between vertical supporting timber or metal studs should not exceed 600 mm. Nutec Building Planks should be lapped by a minimum of 25 mm.

#### Ventilation

When using Nutec Building Planks as cladding for timber framed housing or for cladding of masonry walls, the cavity formed should be ventilated.

In this type of construction various types of foil are usually used as a moisture barrier and as an insulator.

Ventilating the cavity will permit the evaporation of any condensate which may collect on the insulation material.

#### Fixing Accessories

A range of fixing and jointing accessories are available from EVERITE and full details are given under 'Fixing Accessories'.

#### Site Service

Site service personnel are available on request, to provide assistance on recommended storage, handling and erection of Everite's products, before and during installation.

## NUTEC BUILDING PLANKS PRODUCT RANGE

### Nutec Building Planks Product Range

#### ■ Classic Building Planks (Plain)

Product No.	Thickness mm	Width mm	Length mm	Average Mass kg
041-231	10	150	3 600	7.0
040-903	10	225	3 600	10.0

#### ■ Vermont Building Planks (Timber Grain)

Product No.	Thickness mm	Width mm	Length mm	Average Mass kg
040-907	9	150	3 600	7.0
040-908	9	225	3 600	10.0

#### ■ Finishes

Classic Building Planks (Plain)

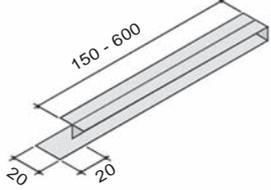
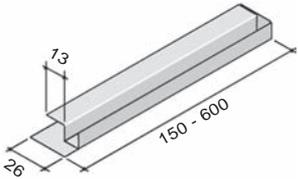
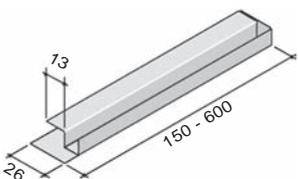
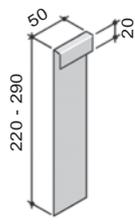
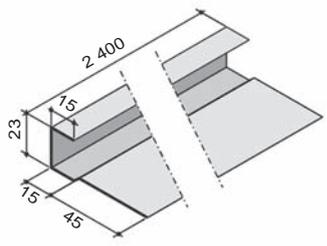


Vermont Building Planks (Timber Grain)

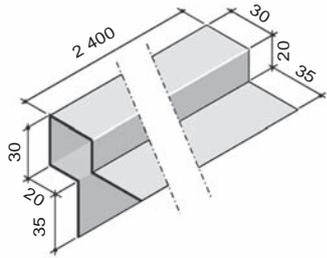


# NUTEC BUILDING PLANKS FIXING ACCESSORIES

## Nutec Building Plank Fixing Accessories

Product No.	Description	Size mm	Sketch of Article
685-240 685-241	H-profile joiner - plastic	150 x 10 225 x 10	
685-260 686-261	H-profile corner joiner- plastic	150 x 10 225 x 10	
685-100 685-101	H-profile corner joiner - steel	150 x 10 225 x 10	
686-311	Metal joiner	225 x 10	
686-310	Ref TG027 Chromaprep Metal Edge Soaker  Non-stock item: Available on order	2 400	  All dimensions in mm.

**Nutec Building Plank Fixing Accessories (cont.)**

Product No.	Description	Size mm	Sketch of Article
686-307	Ref TG030 Chromaprep External Corner Flashing  Non-stock item: Available on order	2 400	 <p style="text-align: right; font-size: small;">All dimensions in mm.</p>

■ **Fixing with Nails or Screws**

**Timber Frame**

- Use hardened steel nails with fluted shanks for best results. An alternative would be to use No. 12 x 40 mm brass wood screws with countersunk heads.
- Copper nails should be used on the coast.

**Metal Frames**

Nutec Building Planks may be fixed directly onto light gauge metal frames with self driving and tapping fixings such as No. 8 x 35 mm bugle head dry wall Teks-screw or by pre-drilling and screwing with suitable self-tapping countersunk screws.

# NUTEC BUILDING PLANKS FIXING ACCESSORIES

## Nutec Building Plank Fixing Accessories (*cont.*)

Product No.	Description	Size mm	Sketch of Article
788-290	Window / Door Reveal 20 mm Thick	2 200	
788-300	Window / Door Reveal 10mm Thick	2 200	
767-008	External Corners	3 000 mm x 50 mm x 50 mm x 6 mm	
767-004	External Corners	3 000 mm x 70 mm x 70 mm x 6 mm	
767-005	Internal Corners	3 000 mm x 30 mm x 30 mm	

All dimensions in mm.

## General Installation Guidelines

- Although Nutec Building Planks do not contain asbestos fibres, it is nevertheless recommended that when working with the product, tools which do not create excessive dust are used.

Ordinary carpenters' tools can be used effectively.

- The timber or metal supports for the Nutec Building Planks must be checked to ensure that they are properly secured to the main structure.
- Timber frames as used in timber framed housing must be plumb and properly secured to the masonry foundation.
- Check evenness of the area to be covered by spanning a fish line across the vertical supports in various positions.
- Nutec Building Planks can either be nailed or screwed to the timber supporting structure.
- Nutec Building Planks must be fixed to every vertical support.
- When fixing at the end of the plank, the fixing hole should be pre-drilled to avoid cracking.
- Care should be exercised when using nail guns. Ensure that the nails are not driven through the building blanks.
- Nutec Building Planks can be fixed directly onto light gauge metal supports with self drilling and tapping fixings such as No. 8 x 35 mm bugle head dry wall Teks-screws, or by pre-drilling and using a self tapping countersunk screw.
- For ease and speed of erection make two timber lap gauges. [Refer Fig. 8](#). The lap gauges eliminate levelling and measuring when each row of planks is fixed into position.

**Fixing Details for Nutec Building Planks Refer Fig. 1**

■ **Concealed Fixing**

Nutec Building Planks are fixed through the top edge concealing the nail or screw head behind the overlapping plank. This method can be used for hand driven or power driven fixing accessories and if pre-painted, no touching-up should be necessary. In extremely windy conditions the planks nailed in this manner may tend to rattle slightly, especially if planks wider than 225 mm are used.

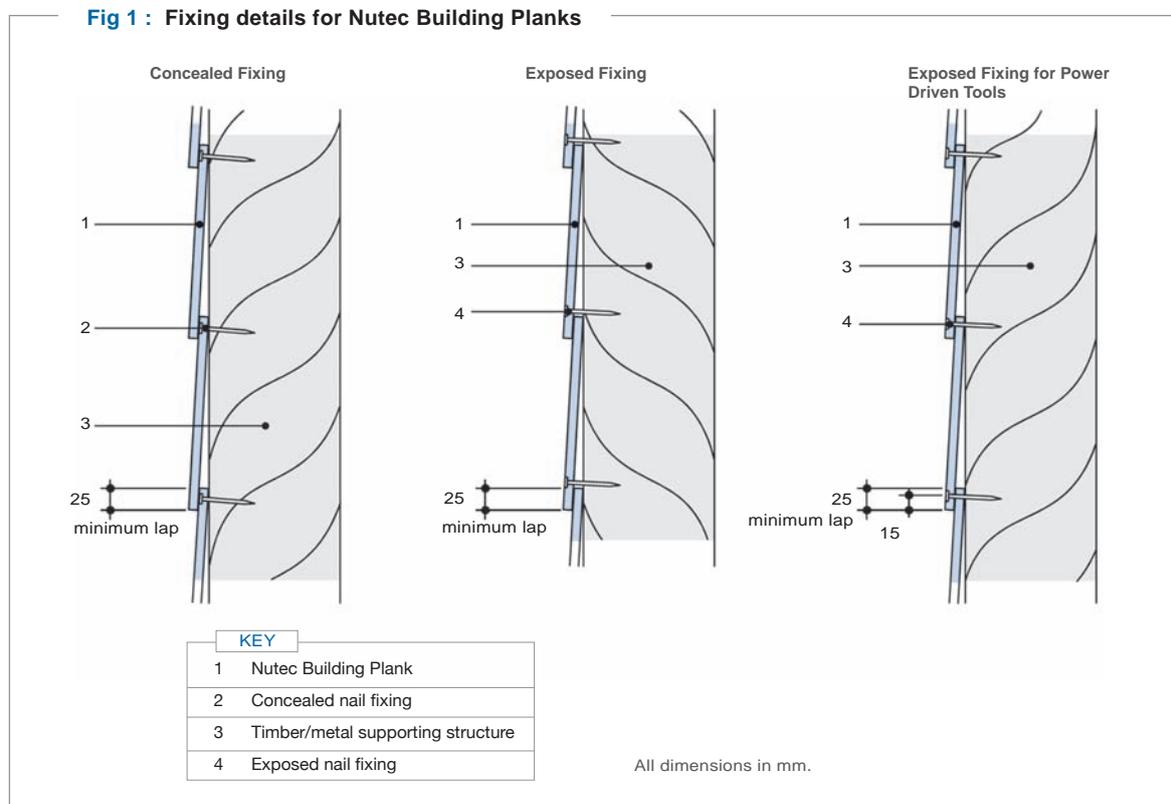
■ **Exposed Fixing**

The method illustrated will eliminate rattling in high wind areas. The exposed fixing accessory must be touched-up after fixing if planks are pre-painted or silicone can be applied between planks to avoid rattling.

**This method is not recommended for power driven fixing.**

■ **Exposed Fixing for Power Driven Tools**

The fixing method illustrated is through the overlap of the planks. It is the recommended method when using power driven tools.

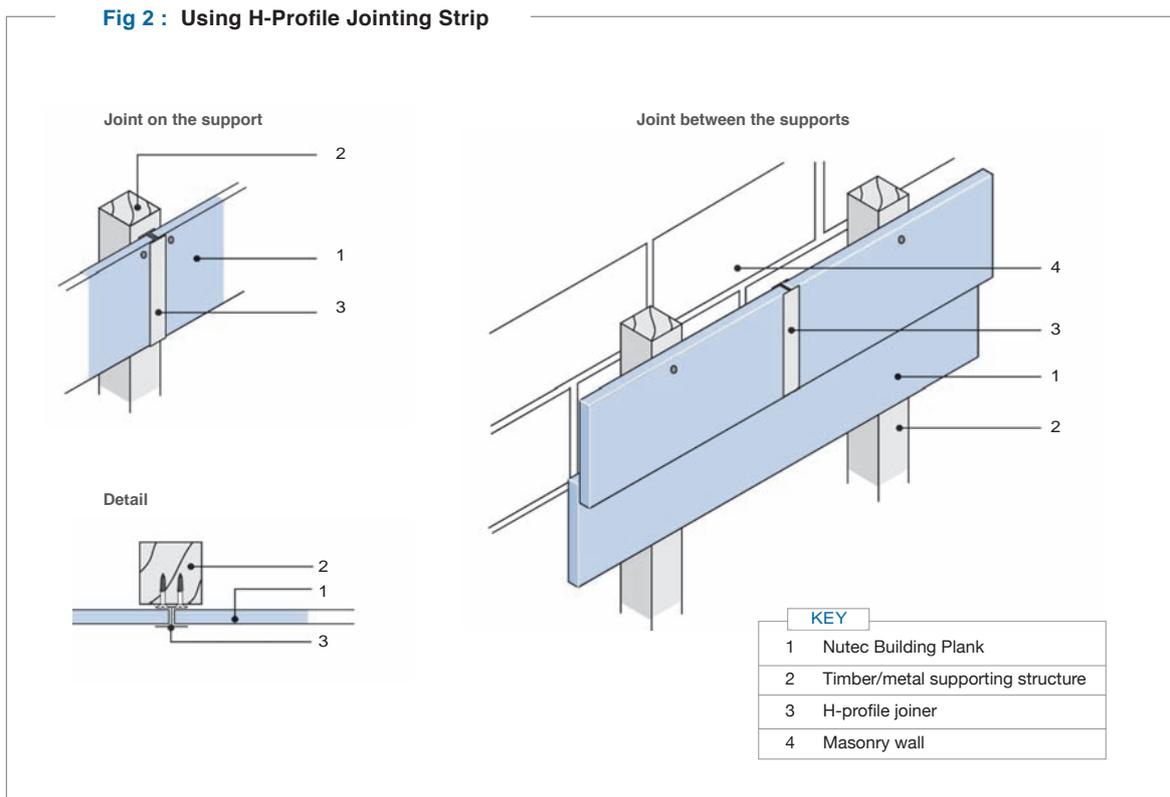


**Jointing Details for Nutec Building Planks Refer Fig. 2 and Fig. 3.**

Note : For a better finish vertical joints should preferably be staggered up the wall face.

■ **H-profile Joiner**

The H-profile joiner can be used on the support or between supports.



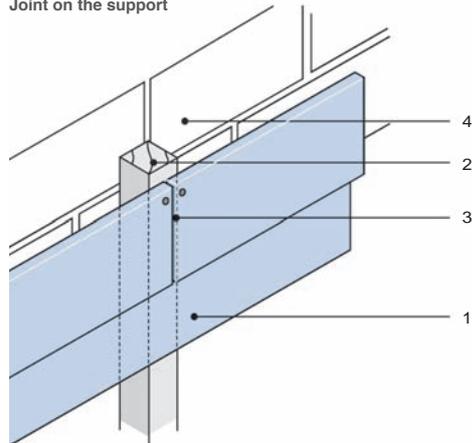
# INSTALLATION PROCEDURES

## ■ Open Joint

This is normally a 3 mm to 5 mm gap which is filled with a flexible sealant. If the open joint is used between supports, a metal flashing is used to prevent the sealant from running out at the back of the Building Planks.

**Fig 3 : Open Joint**

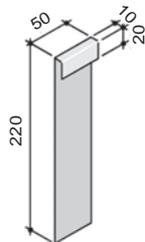
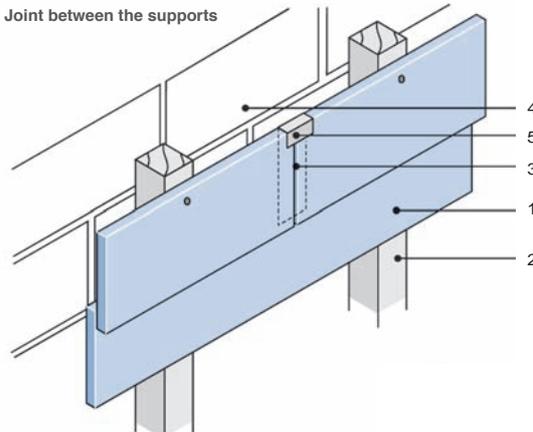
Joint on the support



**KEY**

1	Nutec Building Plank
2	Timber/metal supporting structure
3	3-5 mm gap filled with flexible sealant
4	Masonry wall
5	Metal flashing joinder

Joint between the supports



All dimensions in mm.

**Corner Details for Nutec Building Planks Refer Fig. 4 and Fig 5.**

■ **External Corner Detail Using Continuous Metal Corner Joiner**

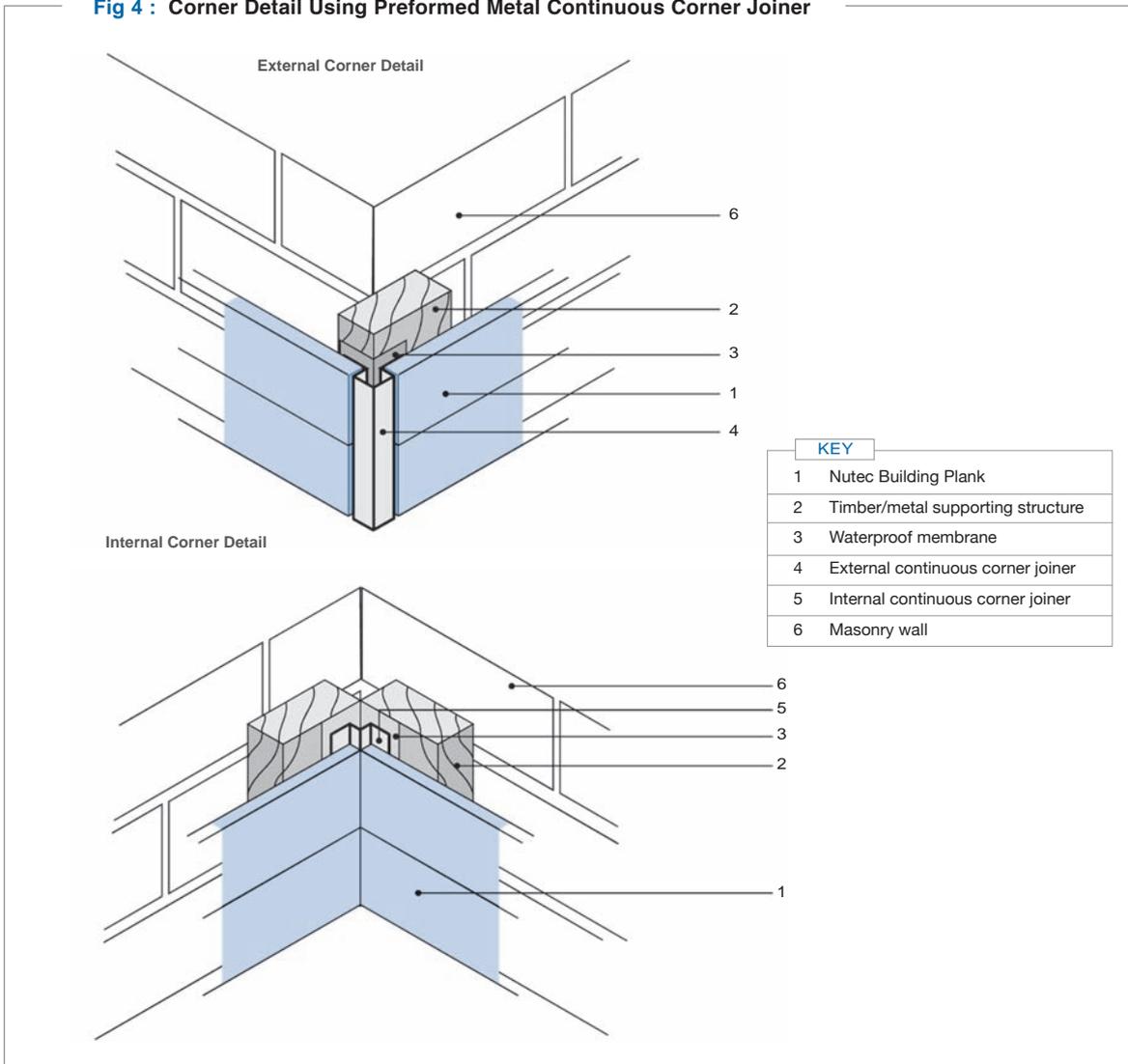
The continuous metal corner joiner is fixed over the waterproof membrane onto the timber/metal supports. *Refer Fig. 4.*

The planks must be cut square and butted up to the metal corner joiner.

■ **Internal Corner Detail Using Continuous Metal Corner Joiner**

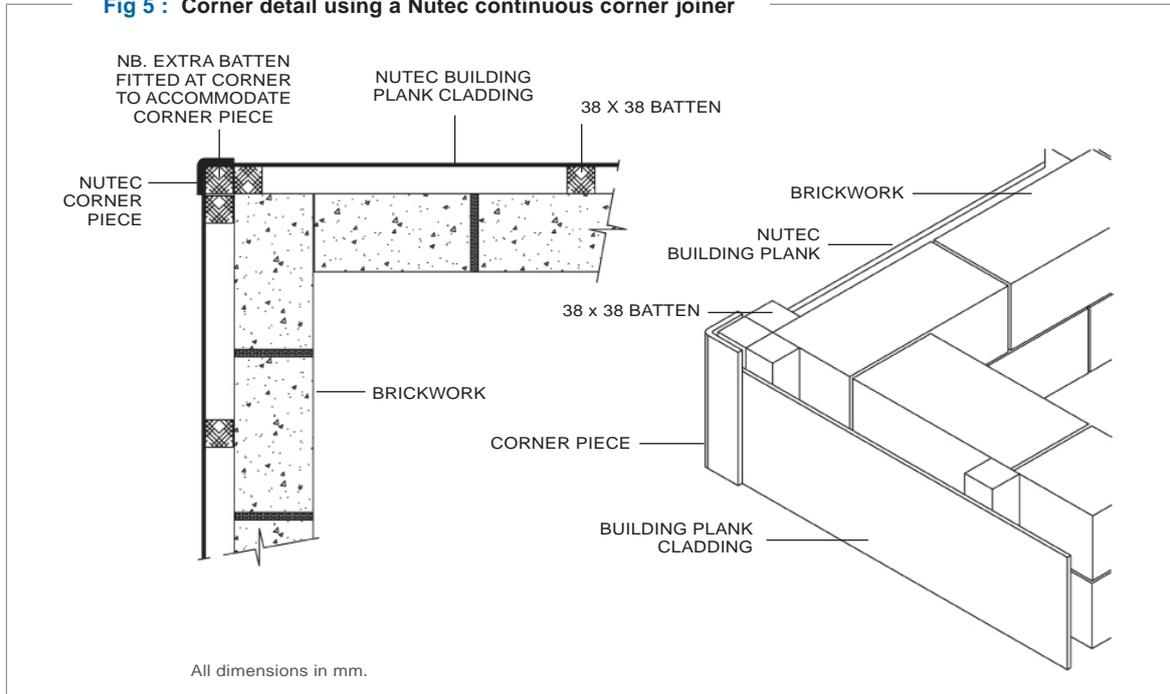
The internal metal continuous corner joiner is fixed in the same manner as the continuous external joiner. *Refer Fig. 4.*

**Fig 4 : Corner Detail Using Preformed Metal Continuous Corner Joiner**



■ **Corner Detail Using Continuous Nutec Corner Joiner**

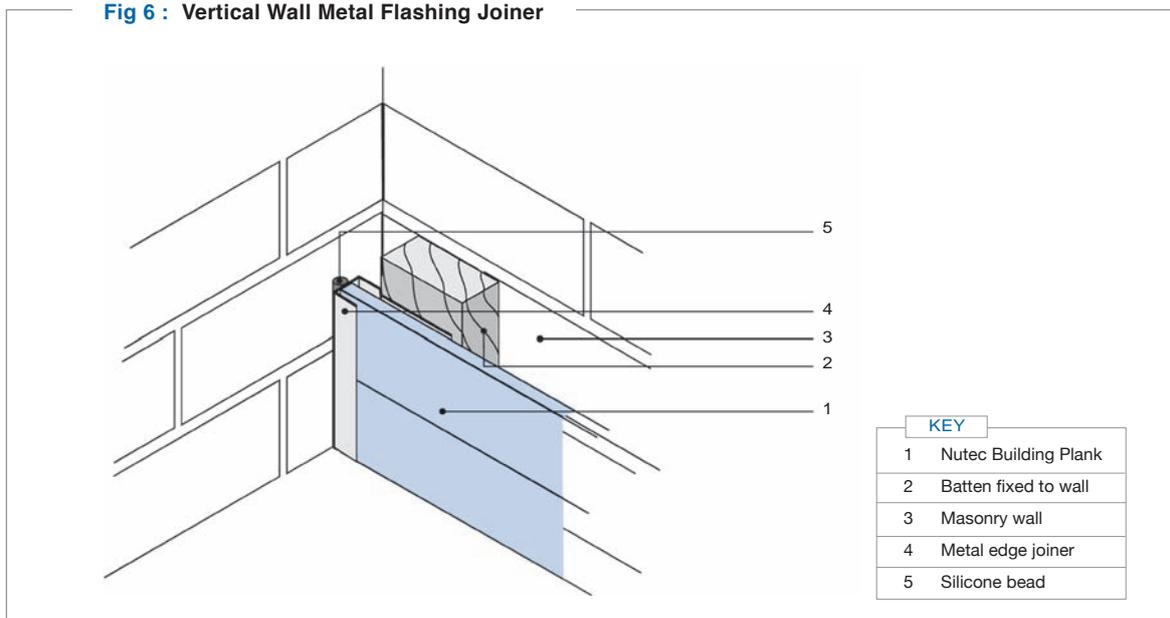
**Fig 5 : Corner detail using a Nutec continuous corner joiner**



■ **Vertical Wall Metal Edge Joiner**

This edge joiner is used when planks have to butt against a vertical wall. The flashing is nailed or screwed to the wall with a continuous silicone bead between the wall and the flashing.

**Fig 6 : Vertical Wall Metal Flashing Joiner**



## INSTALLATION PROCEDURES



Supporting timber structure used on masonry walls should not be less than 38 mm x 38 mm.



The distance between vertical supporting timber or metal studs should not exceed 600 mm.



Window ready for reveals to be installed.

## STEP BY STEP INSTALLATION

### Step by Step Guidelines

#### ■ Step one

##### Setting out Positions of Support Structure on Existing Wall

Establish a level horizontal base line where the wall cladding will commence. Along the base line mark vertical plumb lines at 600 mm centres. These lines indicate positions for the vertical support battens.

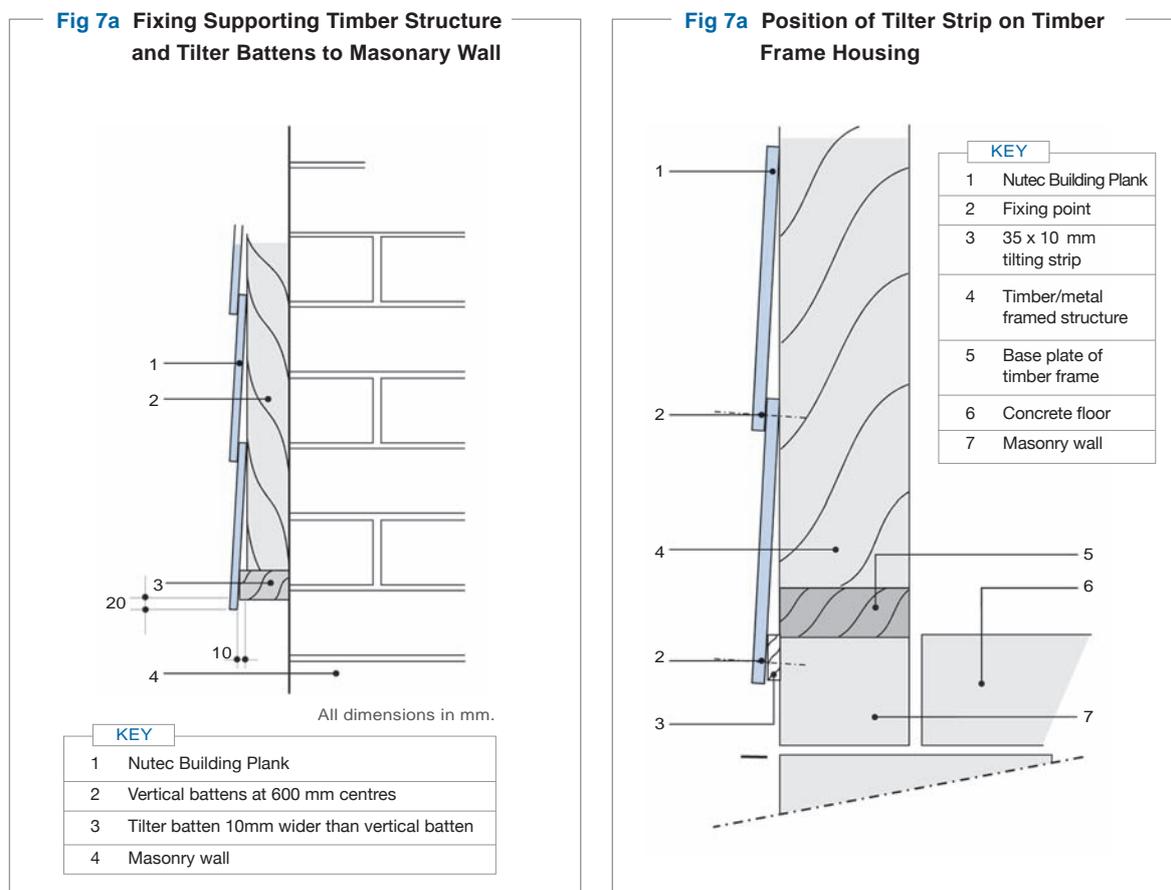
##### Fixing of Supporting Structure

On the base line using suitable wall anchors fix a horizontal tilter batten. The tilter batten should be 10mm wider than the vertical battens. *Refer Fig. 7a.*

Using suitable wall anchors, fix vertical battens butting against the tilter batten and according to the positions marked, to the wall. The vertical battens should not be less than 38mm x 38mm.

**If timber is used, treated timber is recommended.**

Where timber framed housing or gable ends have to be clad, a horizontal tilting strip 35 mm x 10 mm should be fixed to the wall below the timber frame structure. *Refer Fig. 7b.*



### ■ Step three

#### Fixing of Flashing

When using a vertical metal edge joiner and the continuous metal corner joiner, these should be fixed in position before fixing of the Nutec Building Planks can be started.

### ■ Step four

#### Fixing the First Row of Nutec Building Planks

Commence fixing from an external corner, holding the edge of the building plank flush with the corner. The bottom edge of the building plank extends past the tilter batten by 20 mm. *Refer Fig. 7b.*

Check that the bottom of the building plank is level. It is important to keep the bottom level, as this will be the exposed edge. *Refer Fig. 7b and Fig. 8.*

Using nails, wood screws or dry wall screws fix the building plank at top and bottom to each batten.

Continue fixing bottom row of the building plank around the building, fitting vertical jointing strips as required. For jointing details refer *Fig. 2 and Fig. 3.*

### ■ Step five

#### Fixing the Second Row of Nutec Building Planks

To avoid straight joints in the cladding, commence the second row with half a length of the building plank.

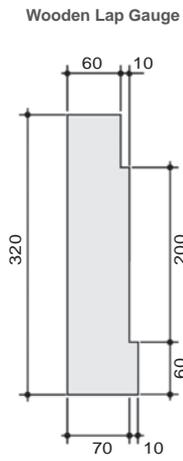
Again working from the corner, hold the lap gauges in position and place the half length of the building plank into the rebates of the gauges. *Refer Fig. 8.*

Fix the building plank to each vertical timber or metal support.

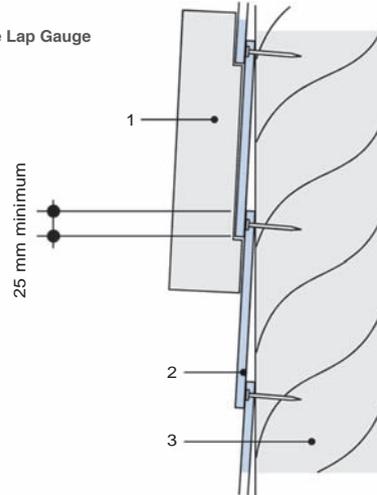
Continue fixing second row using full lengths of the building plank, fitting vertical joiners where required. Follow this method for all remaining rows until the cladding has been completed, checking levels of the building plank every third row.

# STEP BY STEP INSTALLATION

**Fig 8 : Lap Gauge**



Using the Lap Gauge



The 200 mm dimension is for the 225 mm wide plank and will alter according to the width of the planks used. These gauges can be fabricated from scrap timber.

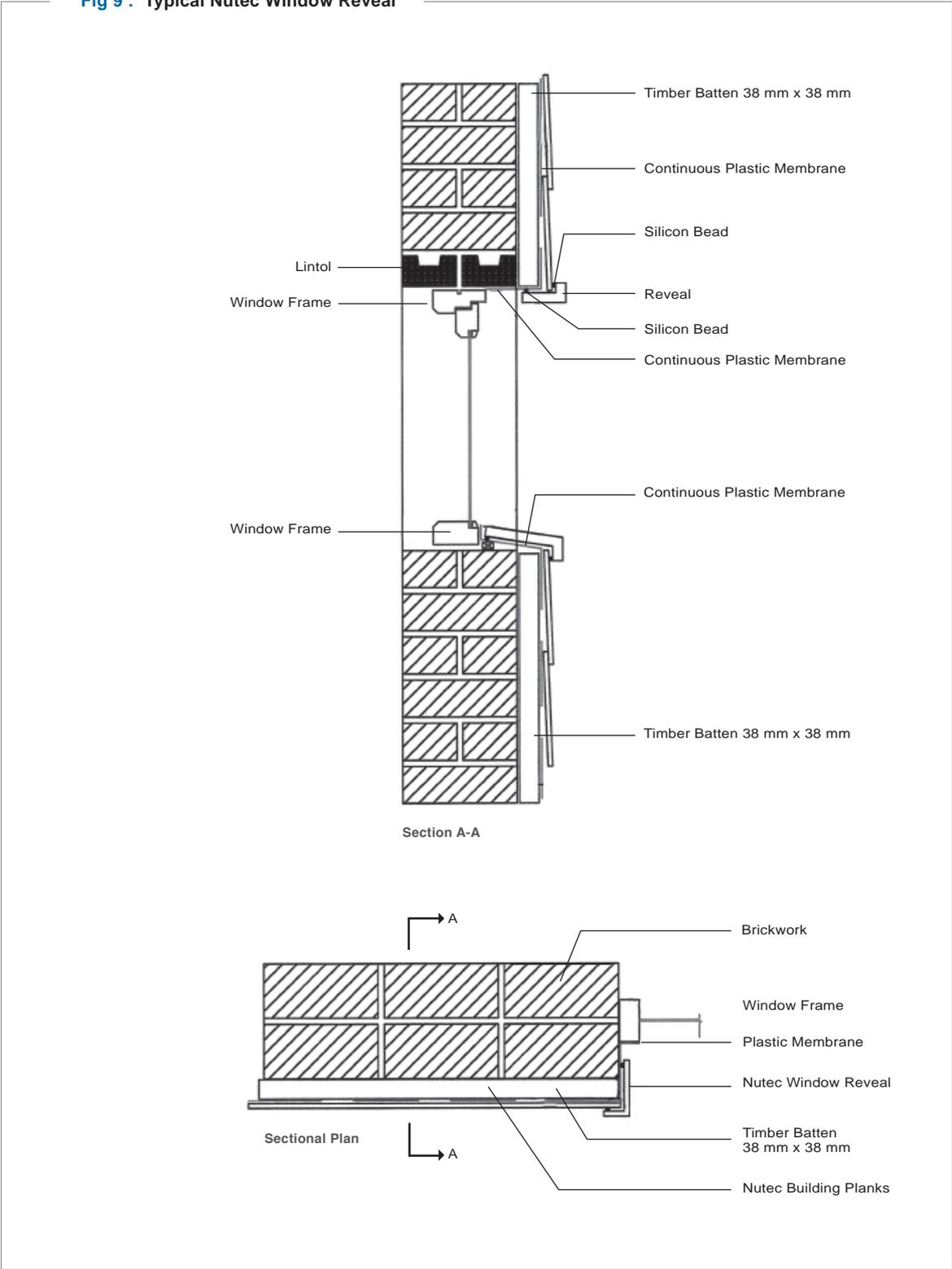
All dimensions in mm.

**KEY**

- |   |                               |
|---|-------------------------------|
| 1 | Lap Gauge                     |
| 2 | Nutec Building Plank          |
| 3 | Timber/metal framed structure |

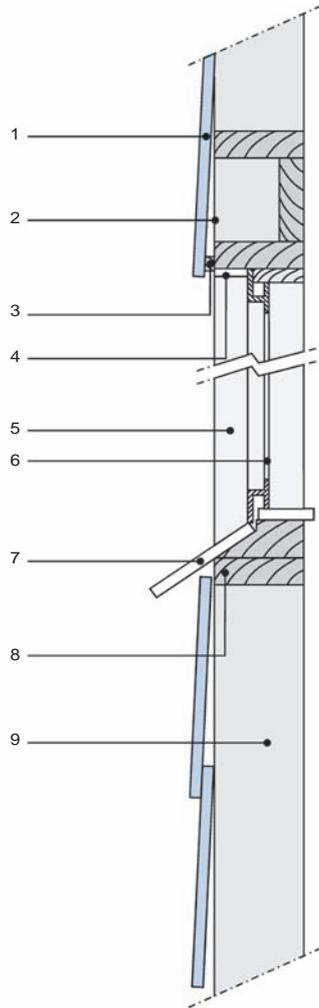
Window Reveals

Fig 9 : Typical Nutec Window Reveal



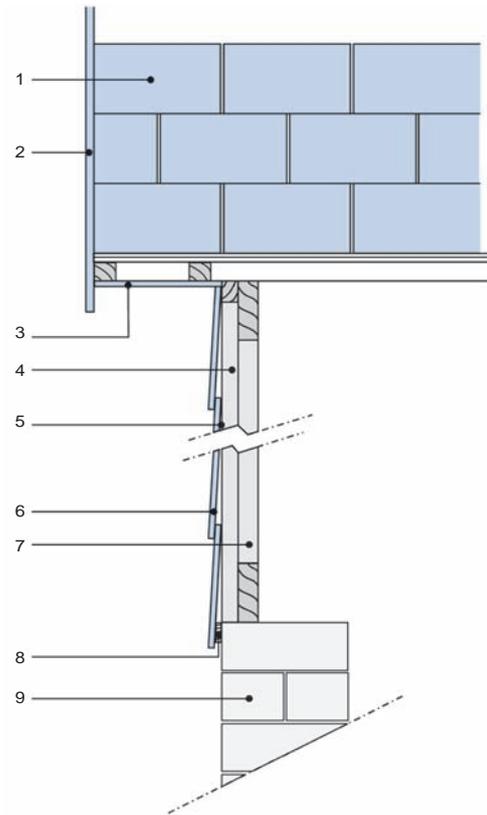
## APPLICATION EXAMPLES

**Fig 10** Typical Section through window of Timber Framed House



KEY	
1	Nutec Building Plank
2	Waterproofing membrane
3	Tilting strip
4	Soffit
5	Window surround
6	Steel window
7	Window sill
8	Timber nogging
9	Timber framed structure

**Fig 11** Typical Sectional Elevation through Gable End House



KEY	
1	Nutec Roofing Slate
2	Nutec Fascia Board
3	Gable closure
4	Vertical battens fixed to roof truss
5	Waterproofing membrane
6	Nutec Building Plank
7	Timber roof truss
8	Tilting strip
9	Masonry wall

## Mechanical and Physical Properties

### ■ Plain and textured Nutec Building Planks

Parameter	Unit	High Density Plain	Semi-High Density Plain	Medium Density Textured	Test Method
<b>Specifications</b>					
* Density (Average)	g/cm <sup>3</sup>	1,50	1,26	1,26	BS4624
<b>PHYSICAL PROPERTIES</b>					
* MOR Diagonal (Wet)	MPa	11,55	-	-	SANS 803
* MOR Diagonal (Dry)	MPa	-	9,75	9,75	SANS 803
* Linear Expansion (Maximum)	mm/m	2,47	2,47	2,47	SANS 803
<b>Typical Values</b>					
** Thermal Conductivity	W/m°C	0,19	0,19	0,19	ASTM C 518
<b>Fire Properties</b>					
** Fire Index		Class 1	Class 1	Class 1	SANS 0177 Part III
** FSI (Flame Spread Index)		0	0	0	SANS 0177 Part III
** Heat Contribution Index		0,1	<0,1	<0,1	SANS 0177 Part III
** Smoke Emission Index		<0,1	<0,1	<0,1	SANS 0177 Part III
** Surface Fire Index		<0,1	<0,1	<0,1	SANS 0177 Part III
** Non-combustibility	-	Non-combus.	Non-combus.	Non-combus.	SANS 0177 Part V
<b>Other Properties</b>					
<b>Biological Resistance</b>					
** Rodent Resistance		Class A	Class B1	Class B1	SANS 5419

\* Average values

\*\* Test reports are available

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