Edition 8

Roofline
Windowline
Cladding

CELUFORM

LEAVES TREES STANDING

Specification Guide

...the specifier's choice of
PVC-UE roofline, windowline
and cladding products

Contents

Celuform

the UK's first manufacturer of PVC-UE building products

Head Office, Scunthorpe

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Benefits of PVC-UE & PVC-U

Celuform's popularity in the new build, specification, architectural and refurbishment sector stems from its product reliability and wide acceptance amongst the trade and the general public. Refurbishment programmes by housing associations and local authorities acknowledge Celuform products as the route to lower maintenance costs.

Key Features

Flexibility

A wide range of designs and styles to suit virtually every commercial, industrial and domestic application. With flexibility of application built in at every stage.

Durability

Long-lasting, reliable products that will not rot, split, warp or crack and that are designed to resist the elements.

Practicality

Never needs painting or preserving and will stay looking good for years to come. Easy to specify and simple to install.

Good-looking

A wide variety of colours and finishes to choose from with designs for every application.

Quality - ISO 9001

The company has a Quality Management System approved by the British Standards Institute to ISO 9001 (FM605711).

FM 605711

Environmental - ISO 14001

The company has a Environmental Management System approved by the British Standards Institute to ISO 14001 (EMS 605712).

EMS 605712

Responsible Sourcing - BES 6001

The company has a Responsible Sourcing System approved to BES 6001 (BES 605713).

BES 6001 Responsible Sourcing
www.greenbooklive.com
BES 605713

Recovinyl

Recovinyl facilitates the collection and recycling of PVC post-consumer waste from the construction and demolition sector.

REGISTERED RECYCLER

Product Guarantees

Celuform's white products are guaranteed for 20 years and woodgrains for 10 years provided that approved installation and maintenance instructions are followed. Copies of the guarantees which relate to white and foiled products are available from the Celuform marketing team.

Lead Free

Eliminating the lead content in PVC has been a matter of particular concern for responsible manufacturers in our industry. As recommended by the European Commission, UK Government and the PVC industry's Vinyl Plus initiative, some suppliers have already made the switch. Celuform is among those leading the way. As well as future proofing the product for our customers in case new legislation on material usage does come into play, we are also doing what we can now in the global drive for environmental protection.

BIM Store

Some of Celuforms' specification products are now available to browse and download from the BIM Store.

Fastrack Cad

Fastrack CAD is an online CAD database which gives architects and specifiers the opportunity to download DXF or DWG files. Celuform's library of CAD drawings which is available on-line and can be accessed and downloaded by visiting www.celuform.co.uk

NBS

The National Building Specification (NBS) is a library of clauses that can be selected and edited and used to produce project specifications. Celuform's NBS information is available on-line and can be accessed through www.thenbs.com

CE Marking

Celuform PVC-UE cladding is covered by a harmonised European standard - BS EN 13245:2008. A declaration of performance to this standard is available and the product packaging caries a 'CE marking' label.

Roofline Range & Colours

The roof perimeter and eaves are among the most exposed elements of a building. Where traditional timber components have been used, these typically need regular maintenance to prevent deterioration, renew paintwork and preserve appearances. These requirements are inevitably expensive, time-consuming and often disruptive.

CELUFORM makes it possible to eliminate these repetitive tasks. CELUFORM PVC-UE fascia boards, bargeboards and soffit systems provide an attractive and effective, low-maintenance alternative to timber.

VERSATILITY

- **For all building types** Domestic, commercial and industrial - new build or refurbishment
- **Flexible systems** Profiles and accessories adaptable to almost any configuration
- **Pitched and flat roof applications** Fascias and soffits suitable for all roof types

PRACTICALITY

- **Simple installation** Pre-formed trims and corners - requiring minimal cutting
- **Low maintenance** Permanent solutions which never need painting

PERFORMANCE

- **Durable material** Tough, impermeable and resistant to weather and decay
- **Insulating properties** Lower thermal conductivity than timber, concrete and brick (0.06 W/mK)
- **Solving ventilation needs** Systems which satisfy statutory roof ventilation requirements
- **Guarantee** 20 year product guarantee on white products and 10 year on woodgrain available on request

VISUAL APPEAL

- **Enhanced appearance** Clean sight lines, good detailing, and neat joints

The CELUFORM range of PVC-UE fascia and bargeboard systems provides a full range to suit all applications:

- **Appearance:** plain-faced - or with decorative features - square or bull-nosed profiles
- **Colour choice** *(subject to product range):* Ice White, White, Golden Oak, Mahogany, Rosewood and Ebony
- **Widths:** ranging from 150mm to 405mm (600mm in the DLR fascia capping range)
- **Profile:** including - to accept horizontal or inclined. Soffits - flat-backed options for ease of installation

A comprehensive selection of corners, end caps and joint trims ensures neat and complete finishing.

All profiles illustrated can be used in fascia or bargeboard configuration, providing a fully compatible finish around the roofline. Boards are supplied in 5-metre lengths as standard.

Profile options include:

ELITE
- 25mm bull-nosed flat-backed board
- Allows direct fixing of rainwater systems (without needing timber support)

ELITE GROOVED
- 25mm bull-nosed, 22mm thick flat-backed board
- Allows direct fixing of rainwater systems
- Groove will accept horizontal or inclined soffit boards

BULLNOSE FASCIA
- 16mm flat-backed board with 25mm bull-nose to support soffit board
- Co-extruded PVC-U skin on front and rear surfaces allows direct fixing of rainwater systems

CONQUEST
- 19mm square-edged board with fixed groove and return leg
- Allows direct fixing of rainwater systems
- Groove will accept horizontal or inclined soffit boards

VANQUISH
- 16mm square-edged board with fixed groove and return leg
- Allows direct fixing of rainwater systems (without needing timber support)
- Groove will accept horizontal or inclined soffit boards

EMPEROR
- 16mm flush square-edged board with fixed groove
- Allows direct fixing of rainwater systems
- Groove will accept horizontal or inclined soffit boards

DLR
- 9mm square-edged board with fixed groove and return leg
- Requires a new timber sub-fascia when used as a fascia board
- Can be used as cost effective bargeboard in conjunction with both CONQUEST and VANQUISH ranges

CONQUEST TORUS
- 18mm ogee board with fixed groove and return leg
- Allows direct fixing of rainwater systems

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Fascia Installation Details

This section of the guide is intended to provide you with a brief overview of the popular products in Celuform's Roofline range, where they can be used and the main criteria for installation.

Pre-Installation Considerations

Preparation:

- All access and works to comply with current and relevant Health & Safety and Construction Design Management Regulation recommendations
- Clear work area in-line with best practice before starting work, ensuring safe scaffolding access is available
- Remove first row of roof tiles where necessary
- Remove all existing fascia / soffit materials
- Replace any un-sound / rotten timber or felt and treat rafter ends with preservative
- Maintain air path for roof ventilation

Installation considerations

Installation considerations are intended to provide you with need-to-know information for the core processes of product installation.

They are not intended as an exhaustive installation guide. The information presented will provide you with a valuable resource when assessing how best to use our products in your selected application.

Fascia

Fit directly to rafter ends using polytop nails, 2 per fixing centre max 600mm centres - 65mm nails. Austenitic stainless steel (Grade A4 BS EN ISO 3506-1 : 2009). Fascia is capable of load bearing in relation to light weight gutters and the first row of roof tiles (Eaves Tiles).

Expansion gaps of 5mm per board end must be allowed for during installation.

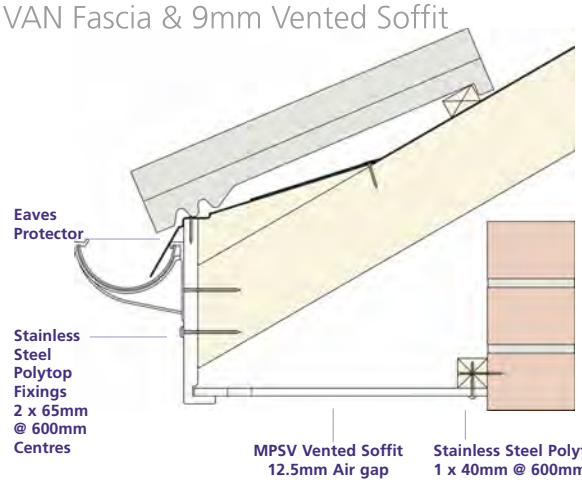
Cover joints and Corners to be secured using low modulus neutral cure silicone. BS5889 Type A.

Gutter brackets to be secured directly into the board using stainless steel screws - 10 gauge x 25mm long (parallel thread form).

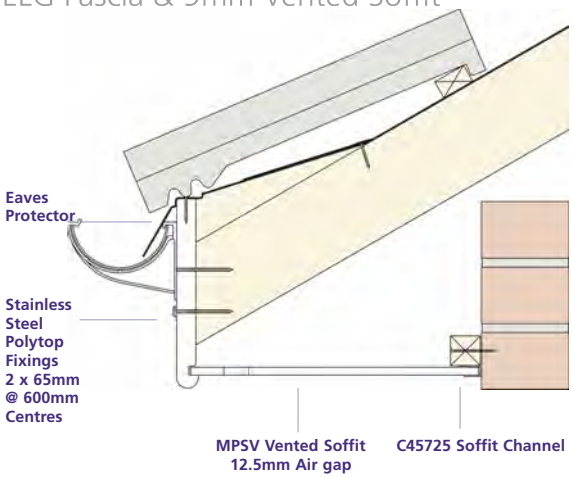
All Celuform fascia boards 16mm and over are capable of load bearing and may be used in new-build or refurbishment.

Typical Eaves Details

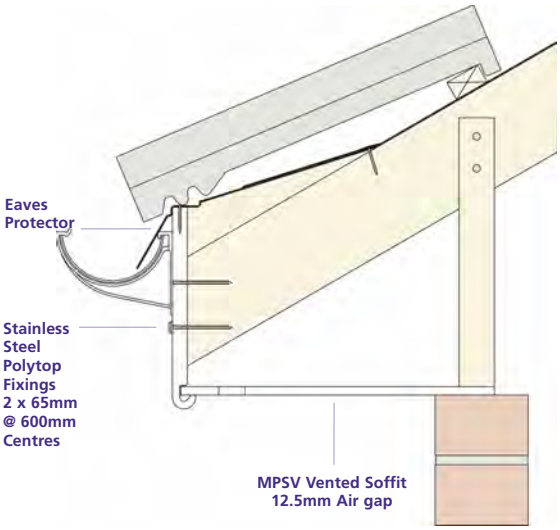
VAN Fascia & 9mm Vented Soffit



ELG Fascia & 9mm Vented Soffit



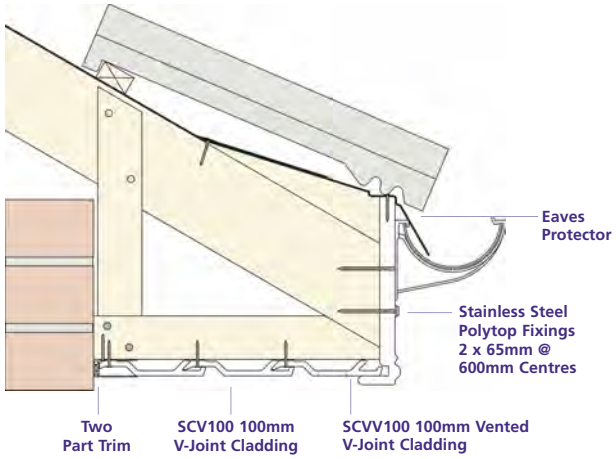
ELB Fascia & 9mn Vented Soffit



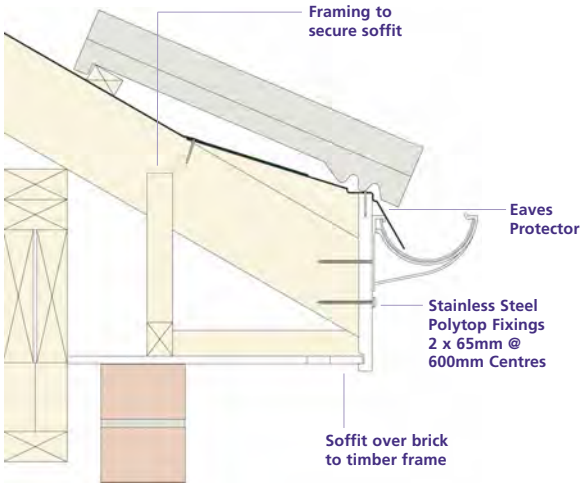
For finish options please see Current Price List.

Fascia Installation Details

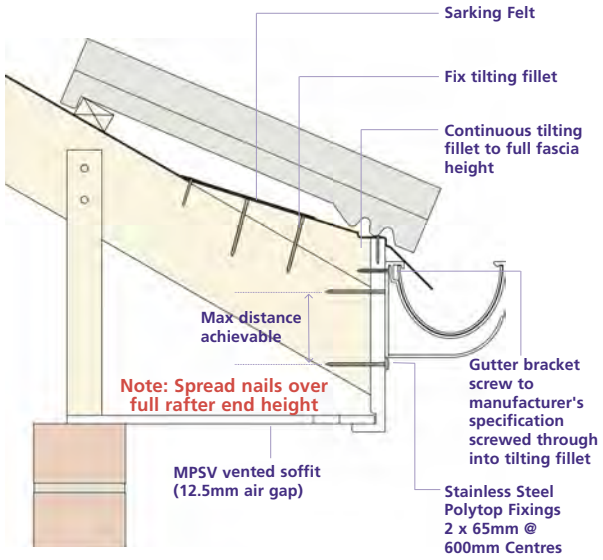
CTOR Fascia & 100mm V-Joint Cladding - Vented



EMP & MPSV Timber Frame Detail



VAN & MPSV Fascia Detail for Extreme Winters



Tongue and Groove Cladding

Shiplap and Open-V cladding planks may also be used as soffit. The Open-V version is also available in a pre-ventilated form.Vented cladding planks have a 12.5mm air gap which permit 25mm continuous ventilation to be achieved via the use of two rows of vented product. Cladding planks are secured using 30mm cladding pins.

- Joints for ELG, VAN, ELB & DLR are available in 600mm lengths in addition to shorter standard lengths.
- When using CTOR as a bargeboard the box end piece will need to be packed out to prevent the Ogee form of the bargeboard-standing proud of the box end piece.

Timber Frame

When fitting to timber frame project, be aware the soffit needs to be large enough to carry over the top of the brickwork line, back to the timber frame. Soffit widths should not exceed 300mm without additional support.

Extreme Winter Fitting Guidelines

- A continuous tilting fillet must be used.
- The fillet provides screw retention for the gutter brackets and support to the top of the fascia. It should be securely nailed into the top of each rafter
- Plastic headed, 65mm long, austenitic stainless steel (grade A4) nails, are used to fix the fascia by nailing directly into rafter ends.
- 2 fixings must be used at each fixing centre, with a maximum distance of 600mm between centres.
- Fixings should utilise as much of the height of the rafter end as possible, taking care not to split the timber and ensuring full depth nail engagement.
- Gutter bracket screws should be fixed through the PVC-UE fascia into the continuous tilting fillet.
- Gutter specification and fixings should be obtained from the gutter system manufacturer.

When considering the overall performance of the eaves area of a roof, it is important to include the roof design, the components and ultimately the imparted load from rain, snow and wind. The above guidance has been compiled to aid the roof designer in obtaining the maximum performance from the PVC-UE fascia element.

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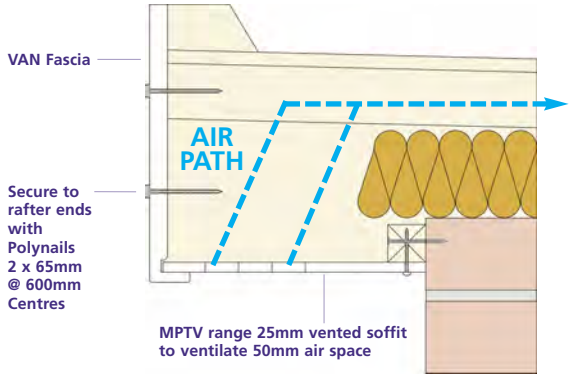
Fascia Installation Details

Flat Roof Installation

When fitting to a flat roof area, consideration must be given to allow adequate ventilation above the insulation in order to comply with building regulations. See ventilation section for a full explanation of ventilation requirements.

Flat Roof Detail



Replacement Projects

Celuform manufacture several designs of fascia capping boards which can be fitted over the top of existing timber fascias and bargeboards provided these are sound.

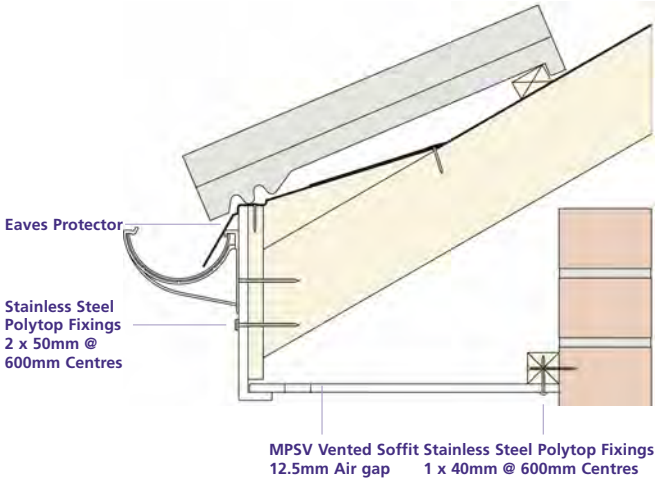
Any unsound or insecure timbers or rafter surfaces should be removed and replaced before overcapping.

Fascia capping boards are available in square, bullnose and ogee designs and fit flush to the existing sound fascias or backing boards.

Fascia capping boards also incorporate a return leg to cover the existing fascia and enclose the soffit leaving a neat finish.

All overcapping fascias can also be used for new-build work, but will require a minimum 12mm exterior grade plywood backing board (BS EN 636:2012+A1:2015) - see Fixing Summary.

DLR Fascia & 9mm Vented Soffit



VAN Fascia & 9mm Inclined Soffit

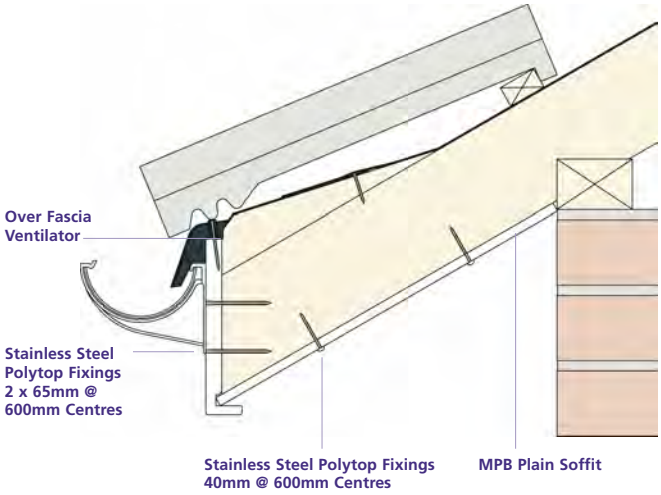
Inclined soffits

In both new-build and replacement situations, VAN or DLR fascias can be used in conjunction with inclined soffit details, as the return leg (36mm) is wide enough to provide support for the soffit board.

Soffits in this situation are normally plain, such as MPB, but can be detailled with cladding if desired.

In this instance, the use of over fascia ventilation is recommended as the ventilation slots in pre-ventilated soffits are restricted. Alternatively a soffit with increased ventilation can be selected.

The boards should be fixed to the rafters at not greater than 300mm centres across the soffit width.

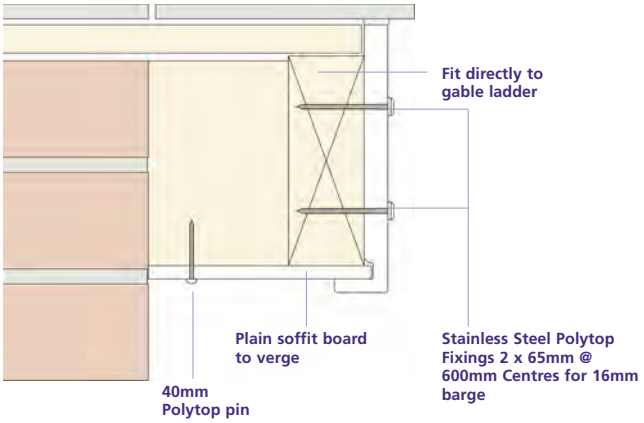


For finish options please see Current Price List.

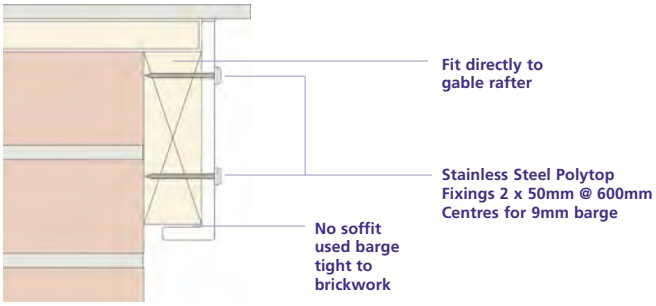
Bargeboard Installation Details

Typical Verge Details

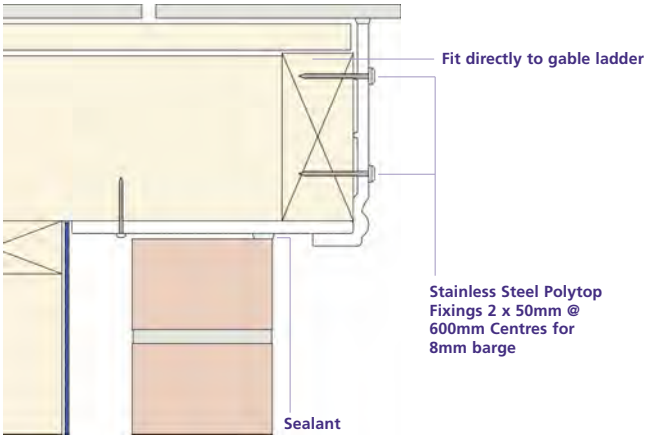
VAN - 16mm Bargeboard & Plain Soffit



DLR - 9mm Bargeboard & No Soffit



TRS - 8mm Bargeboard to Timber Frame



Bargeboard

VAN 16mm bargeboard should be installed using 65mm Polytop nails 2 per fixing centre at maximum 600mm centres. Austenitic stainless steel (grade A4 BS6105).

DLR 9mm bargeboard should be installed using 50mm Polytop nails 2 per fixing centre at maximum 600mm centres. Austenitic stainless steel (grade A4 BS6105).

> Boards less than 16mm thick boards are required to be fully supported along their length.

The joint of bargeboards meeting at a ridge should be covered using a cover joint or feature finial and secured using Low Modulus Neutral Cure Silicone

Complementary Ranges

The VAN and DLR are complememtary ranges being the same external shape.

This allows the 9mm barge to be used in conjuntion with the 16mm fascia for a more cost effective solution.

The ELG and ELB are also complememtary ranges being the same external shape.

This allows the 16mm barge to be used in conjuntion with the 22mm fascia, to be a more cost effective solution.

> NB: ELB barge can be run into a ELG box end piece to create a stepped box end feature.

Soffit Boards

Soffit

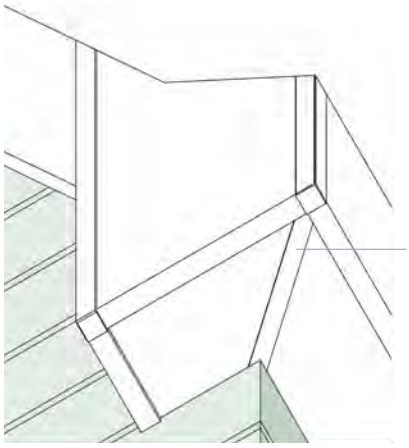
Celuform soffit boards are available in non-vented versions for use as verge soffit or as eaves soffit when other forms of eaves ventilation are to be used. They are also available in ventilated form and can contribute towards providing the necessary roof space ventilation.

- Soffit is secured at maximum 600mm centres to timber using 40mm Polytop pins, alternatively a wall side fix may be achieved using a Soffit Channel.
- In properties where the outer skin of brickwork is level with the bottom of the fascia board soffit groove, the soffit may be extended over the brickwork and clamped using timber battens secured to the rafter sides.
- Soffit widths should not exceed 300mm without additional support.
- H-section trim is used to join soffit boards.
- A soffit board channel (F trim or J trim) can be used to securely locate the soffit at the wall.
- Soffits can be detailed from standard soffit boards, or Open 'V'-Joint/Shiplap cladding.
- All Open 'V'-Joint and Shiplap cladded soffits should be fully supported and fixed to timber bearers at max 600mm centres along the soffit length
- It is recommended that cladding is detailed when designing extra wide soffits.
- The appropriate trims must be used in conjunction with cladded soffits (see Cladding section).

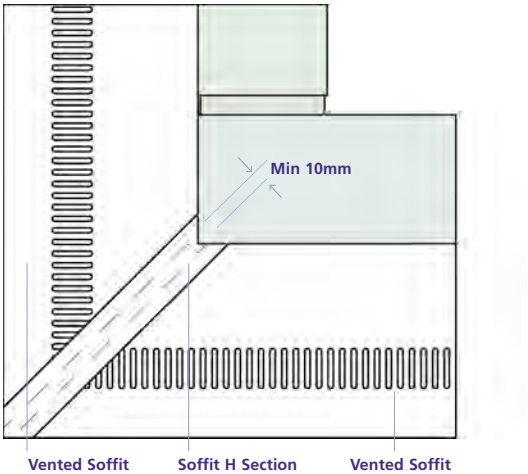
Installation

Use Stainless Steel Polytop Fixings 1 x 40mm @ 600mm Centres. Soffit widths should not exceed 300mm without additional support and fixing.

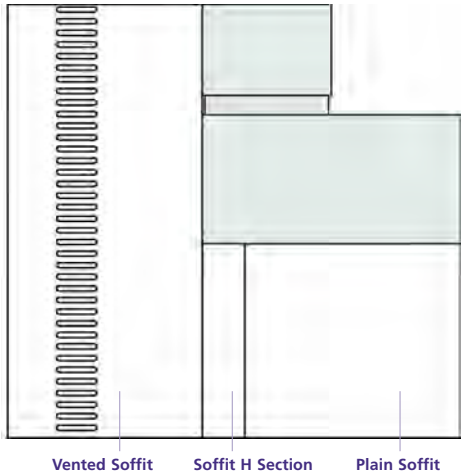
VAN & Plain Soffit to Box End Return



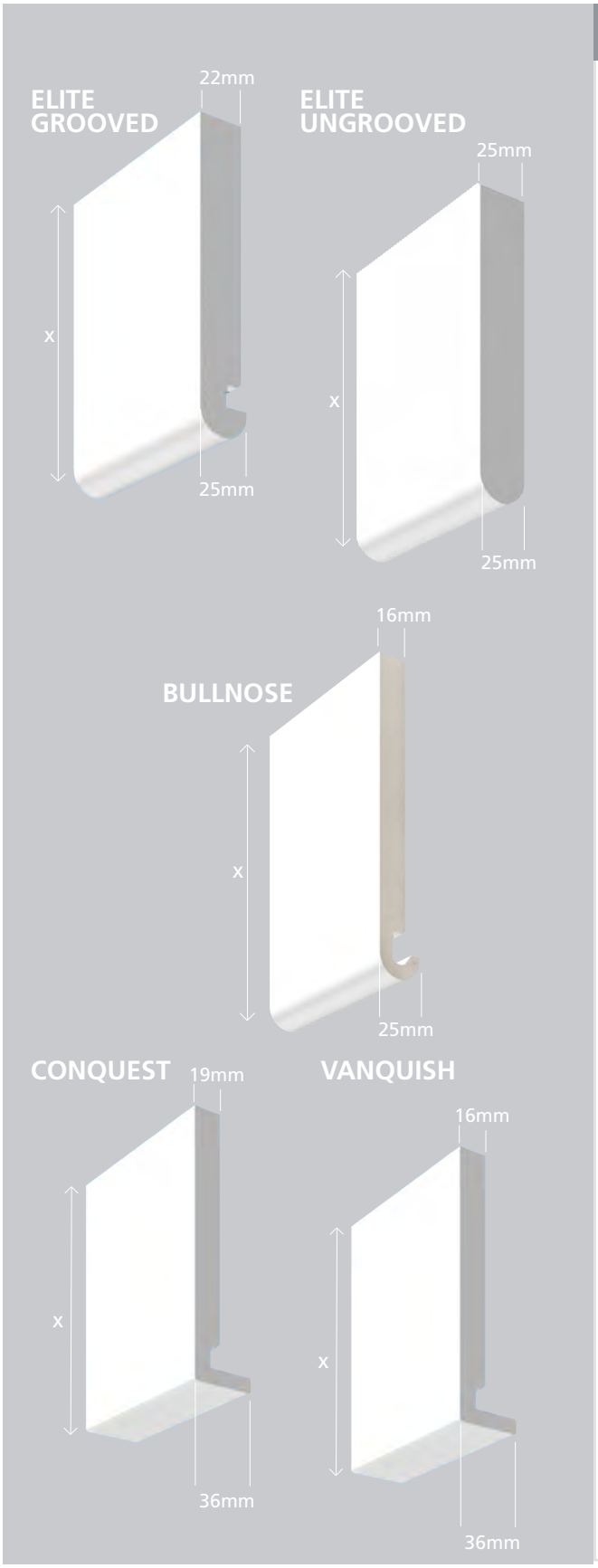
Mitred Soffit Corner



Straight Soffit Corner

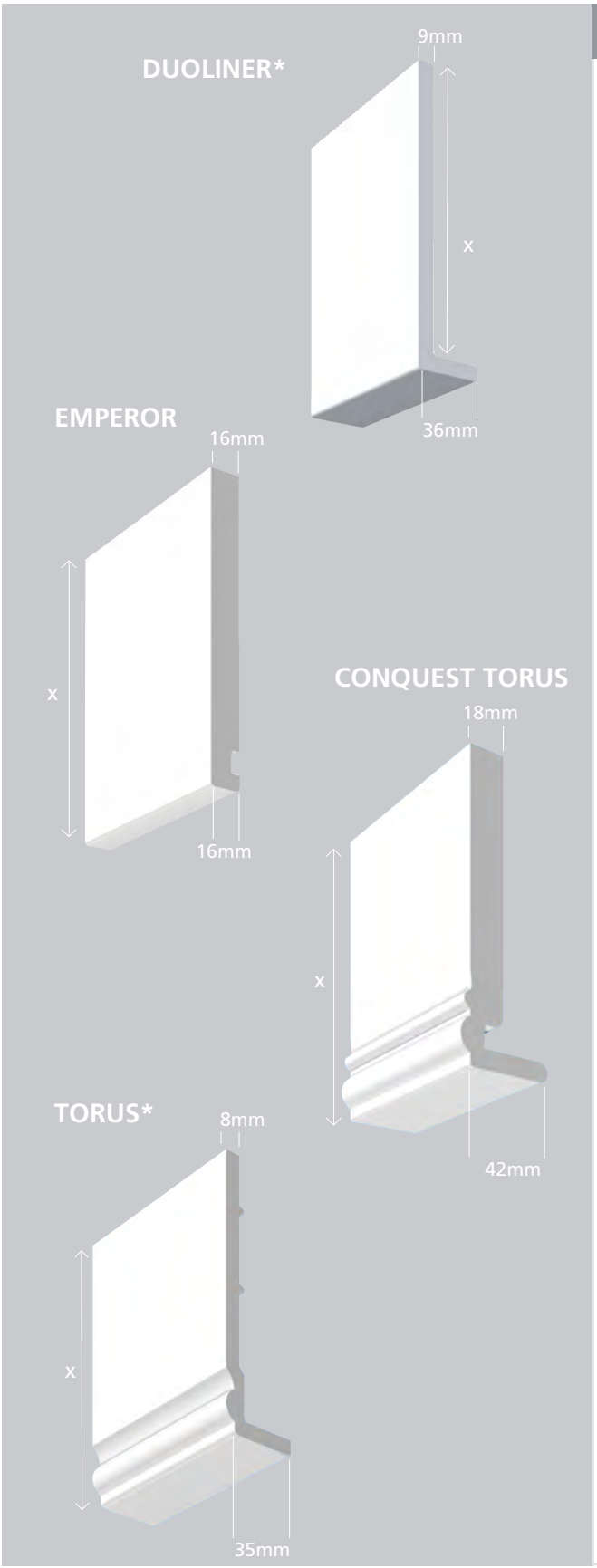


Roofline Range



	Code	Dimension X
ELG	ELG150	150mm
	ELG175	175mm
	ELG200	200mm
	ELG225	225mm
	ELG250	250mm
	ELG300	300mm
	ELG405	405mm Double Nose
	ELG405BOX	405mm Double Nose (1.25)
ELU	ELU150	150mm
	ELU175	175mm
	ELU200	200mm
	ELU225	225mm
	ELU250	250mm
	ELG300	300mm
	ELU405	405mm Double Leg
ELB	ELB150	150mm
	ELB175	175mm
	ELB200	200mm
	ELB225	225mm
	ELB250	250mm
	ELB405	405mm Double Nose
CON	CON150	150mm
	CON175	175mm
	CON200	200mm
	CON225	225mm
	CON250	250mm
	CON405	405mm Double Leg
VAN	VAN150	150mm
	VAN175	175mm
	VAN200	200mm
	VAN225	225mm
	VAN250	250mm
	VAN355	355mm Double Leg
	VAN405	405mm Double Leg
	VAN405BOX	405mm Double Leg (1.25m)

Roofline Range



Code		Dimension X
DLR*	DLR100	100mm
	DLR125	125mm
	DLR150	150mm
	DLR175	175mm
	DLR200	200mm
	DLR225	225mm
	DLR250	250mm
	DLR300	300mm
	DLR400	405mm
	DLR400BOX	405mm Single Leg (1.25m)
	DLR450	450mm
	DLR600	605mm
EMP	EMP150	150mm
	EMP175	175mm
	EMP200	200mm
	EMP225	225mm
	EMP250	250mm
	EMP405	405mm Double Leg
CTOR	CTOR150	150mm
	CTOR175	175mm
	CTOR200	200mm
	CTOR225	225mm
	CTOR250	250mm
	CTOR405	405mm Double Leg
TRS*	TRS150	150mm
	TRS175	175mm
	TRS200	200mm
	TRS225	225mm
	TRS250	250mm
	TRS405	405mm Double Leg

*These products can be used as fascia boards with a minimum 12mm exterior grade plywood backing board

Box End Installations

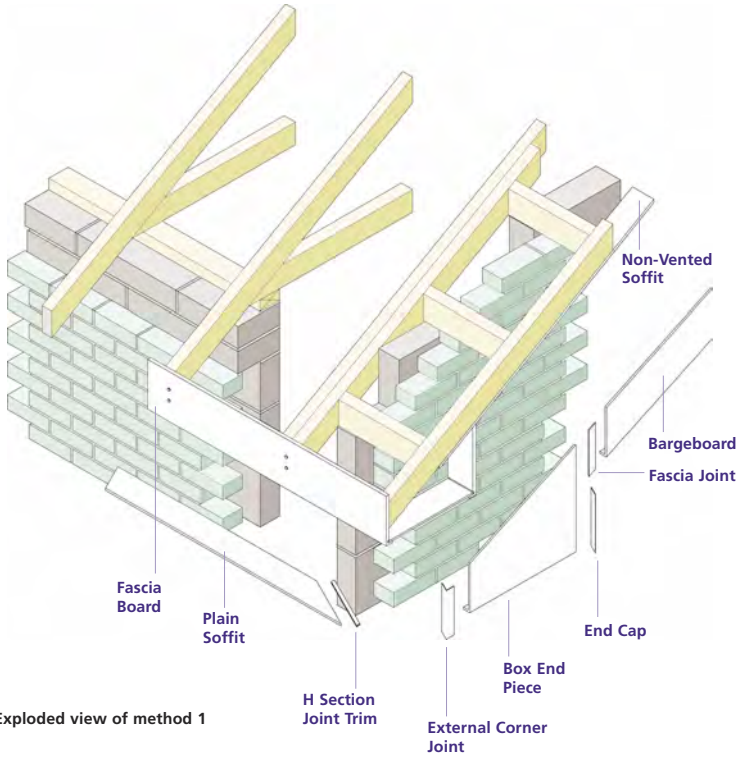
Boxed Ends

To provide a neat and weathertight area at the point where Fascia and Bargeboard meet, it is necessary to construct a box end.

A box end piece is cut from wide Bargeboard material (nominally 405mm) to suit the roof pitch and overhang requirement. When using DLR bargeboard large box end details may be obtained by using the extra wide product of 600mm width.

The soffit forming the base of the box end must match the eaves soffit and is mitred at the joint, using H-section as a jointing trim.

Box ends are supported using a preservative treated timber framework.



*Exploded view of method 1

Boxed End Methods

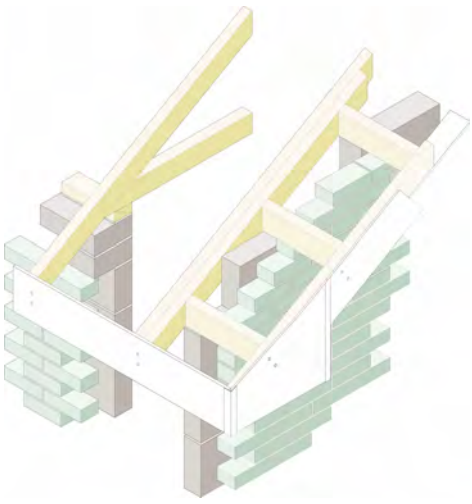
The jointing of the bargeboard into the box end piece can be achieved in two ways.

Method 1

The bargeboard is cut plumb directly above the back edge of the box. A fascia joint with a piece removed is then used to cover the vertical joint. The exposed rear corner is then covered using the relevant end cap.

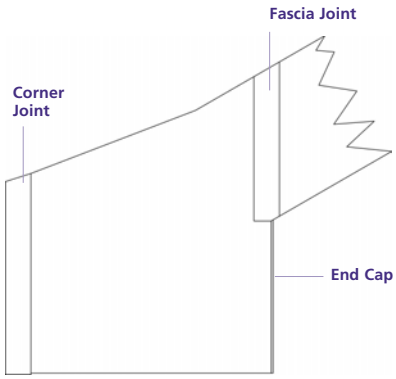
Method 2

The bargeboard is cut plumb directly above the back edge of the box. A corner joint with a piece of one face removed is then used to cover the back corner and bargeboard box end piece joint.

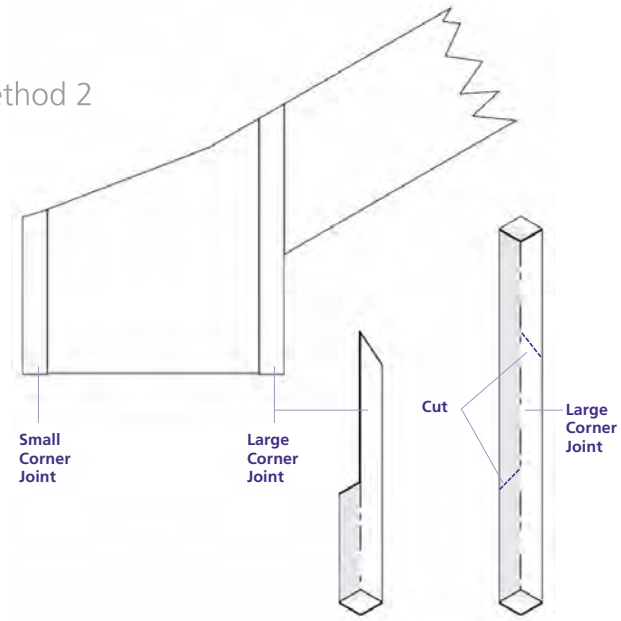


*Unexploded view of method 1

Method 1



Method 2



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Roofline Ventilation

The requirement to ventilate the roof space of a building to protect the building and people who use it from the harmful effects caused by condensation is covered by 'The Building Regulations 2000.'

Guidance on the provision of adequate ventilation is given in Approved Document C2 Resistance to Moisture (2004 edition) and detailed in BS5250: 2011 Code of practice for control of condensation in buildings.

Celuform provides a comprehensive range of products designed to comply with the requirements of these regulations.

Celuform 9mm soffit boards are available in non-vented versions for use as verge soffit or as eaves soffit when other forms of eaves ventilation are to be used.

They are also available in ventilated form and will contribute towards providing the necessary roof space ventilation.

These pre-ventilated soffits are available in 12.5mm air gap up to 600mm wide and 25mm air gap up to 400mm wide.

All soffits are covered by Celuform's British Board of Agrement Certificate No. 11/4835.

Provision of Ventilation

The illustrations opposite reflect the basic ventilation requirements normally applicable for impermeable underlays (Type HR) . For additional information including the use of vapour permeable underlays (Type LR) please refer to BS5250: 2011.

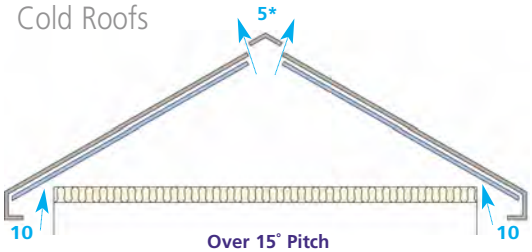
Strip Ventilators

Celuform also provides a continuous ventilator strip for eaves ventilation.

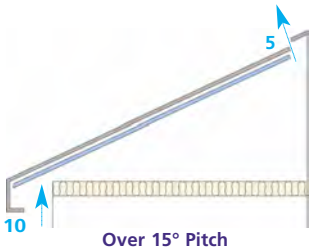
This strip is manufactured from PVC-U in 5m lengths giving ventilation equivalent to a 25mm air gap.

Provision of Ventilation

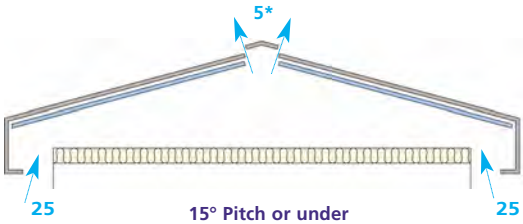
Cold Roofs



Over 15° Pitch
* For pitches over 35° or spans in excess of 10m

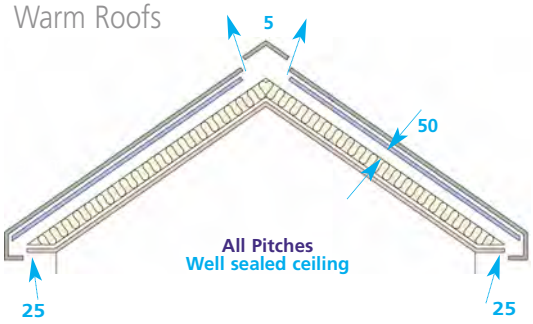


Over 15° Pitch
Pitches of 15° or less require 25mm at eaves



15° Pitch or under
* For spans in excess of 10m

Warm Roofs

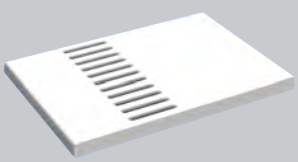


All Pitches
Well sealed ceiling

Dimensions in millimetres.

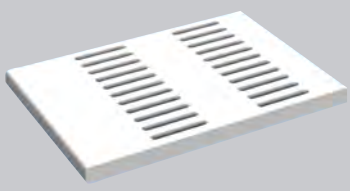
Ventilation Products

MPSV



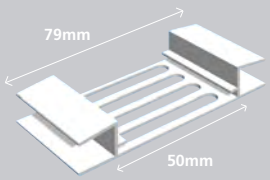
12.5mm Air Gap

MPTV



25mm Air Gap

C57975

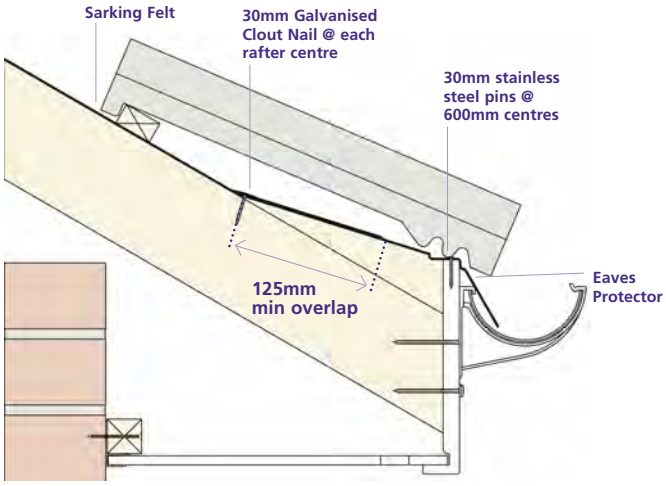


Equivalent 25mm Air Gap

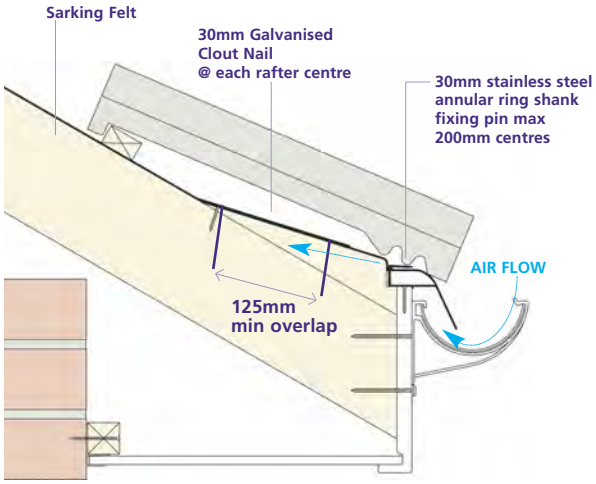
Roofline Ventilation

Ventilation and Eaves Proctection

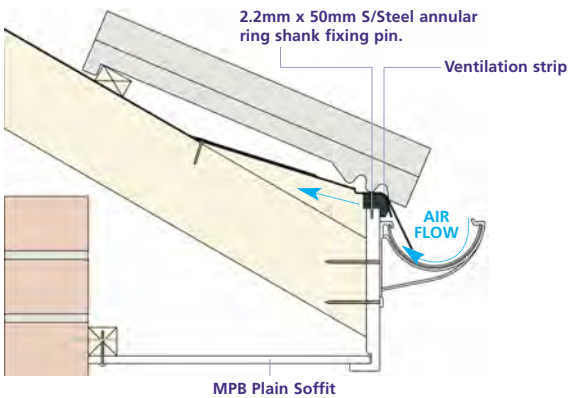
C5530EPS Eaves Protector



UNIOFV Over Fascia Ventilator & Eaves Protector



C5540250OFV Over Fascia Ventilation Strips



Eaves Protection

The Celuform Eaves Protector C5530EPS has been designed to provide a long-term solution to the problems associated with eaves decay under the roof, including the degradation of sarking felt and the secondary rotting of rafter timbers and other roof structures.

Available in 1.5m lengths the Celuform eaves protection profile consists of a durable black pigmented PVC-U profile located between the roof tiles and the PVC-UE fascia system.

Whether used on refurbishment projects or in new-build installations, the traditional sarking felt finishes before the fascia and is lapped over the eaves protector. Therefore it is not exposed to the elements and is not subject to decay.

Ventilation and Eaves Protection

A further enhancement of the idea of the eaves protector comes in the form of UNIOFV an eaves protector combined with over fascia ventilation and bird comb. The ventilation of the roof void at eaves level is provided by an upstand on the underside of the eaves protector which sits on the top edge of the fascia board.

The UNIOFV product provides ventilation equivalent to a 10mm continuous slot.

The provision of an integral bird comb provides an effective barrier against bird infiltration into the roof void when using profiled roof tiles. If flat slate tiles are to be used the comb is readily removed.

The durability and rigidity of the eaves protectors and the load bearing features of Celuform fascia boards are such that no tilting fillet is needed.

Eaves Ventilation

A simple means of providing ventilation over the fascia is also available in the form of Celuform over fascia ventilation strips.

This product is available as K712/1000 to provide ventilation equivalent to a 10mm continuous slot and as C5540250OFV to provide ventilation equivalent to a 25mm continuous slot.

As with the UNIOFV, this product is designed to sit directly on top of the fascia board.

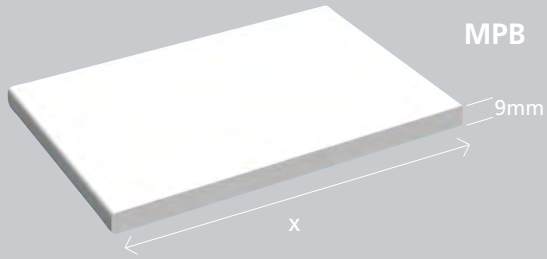
- Fix the K712/1000 with 30mm stainless steel annular ring shank fixing pin at every fixing centre.
- Fix the C5540250OFV with 50mm stainless steel annular ring shank fixing pin at every fixing centre.

CELUFORM
LEAVES TREES STANDING

Soffit Range

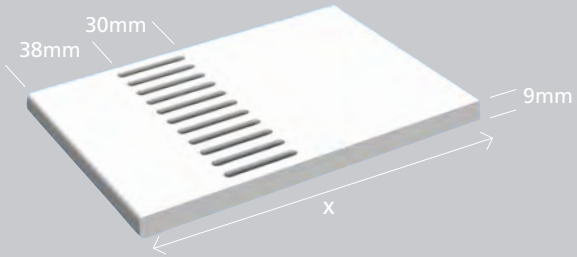
Non-ventilated Soffit

MPB



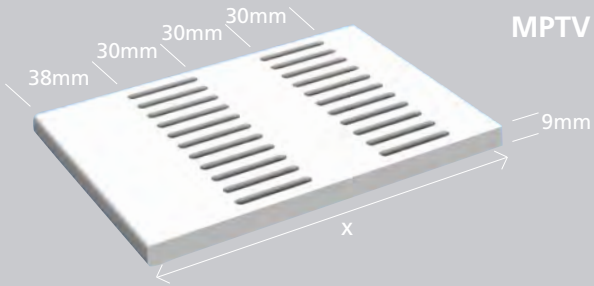
12.5mm Air Gap Pre-Ventilated Soffit

MPSV



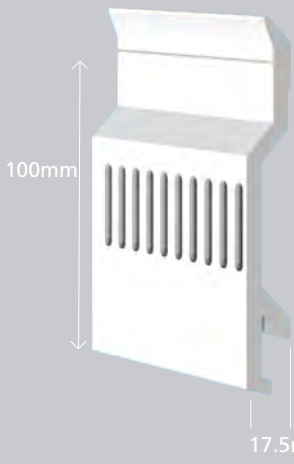
25mm Air Gap Pre-Ventilated Soffit

MPTV



12.5mm Air Gap Pre-Ventilated Cladding

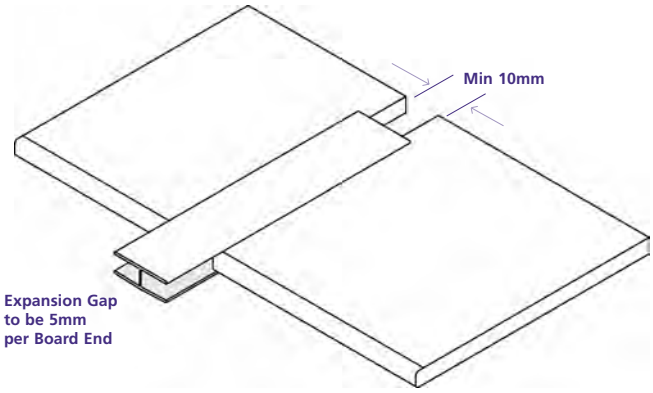
SCVV100



	Code	Dimension X
MPB	MPB100	100mm
	MPB125	125mm
	MPB150	150mm
	MPB175	175mm
	MPB200	200mm
	MPB225	225mm
	MPB250	250mm
	MPB275	275mm
	MPB300	300mm
	MPB325	325mm
	MPB400	400mm
	MPB450	450mm
	MPB500	500mm
	MPB600	600mm
MPSV	MPSV100	100mm
	MPSV150	150mm
	MPSV175	175mm
	MPSV200	200mm
	MPSV225	225mm
	MPSV250	250mm
	MPSV300	300mm
	MPSV325	325mm
	MPSV400	400mm
	MPSV450	450mm
	MPSV500	500mm
	MPSV600	600mm
MPTV	MPTV200	200mm
	MPTV300	300mm
	MPTV400	400mm
Vented Cladding		
	Code	Coverage
	SCVV100	100mm
Plain Cladding		(used in conjunction with vented cladding)
	Code	Coverage
	SCV100	100mm

Typical Jointing Details

Soffit Joint Installation



Jointing of Fascia & Bargeboard

All Celuform fascia board ranges have a series of specifically designed accesories to complement the size and shape of the fascia board.

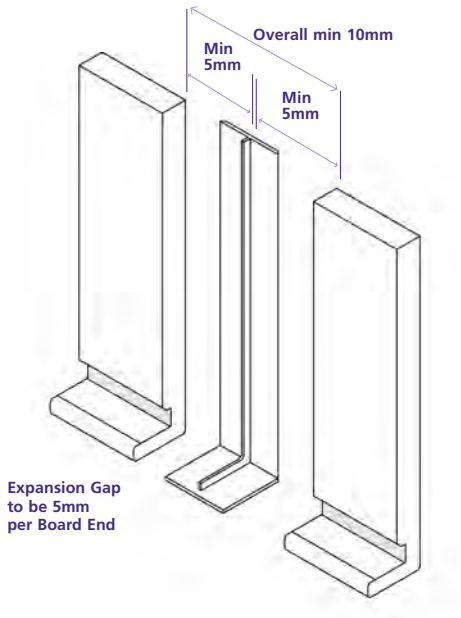
These include some of the following:

- Extra Large Corner Joints (Typically 600mm for Box ends)
- Standard Corner Joints
- Fascia Joints
- Internal Corner Joints
- End Caps

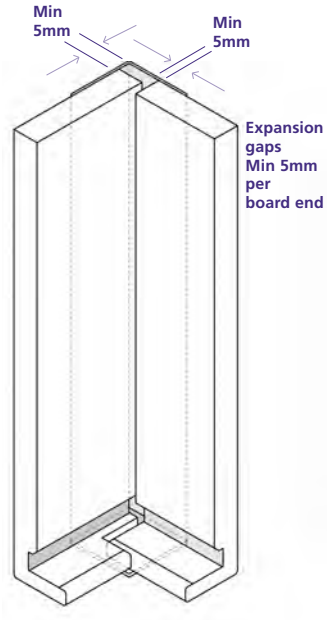
All joints should be secured using Low Modulus Neutral Cure Silicone.

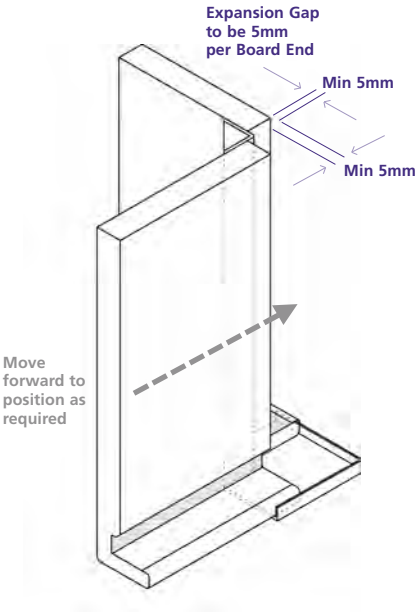
Gaps to increase to 8mm per board end for foiled products

Fascia Joint Installation

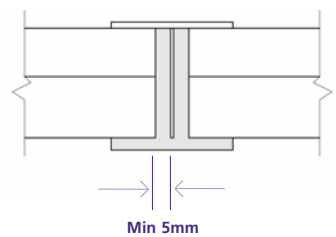


Corner Joint Installation

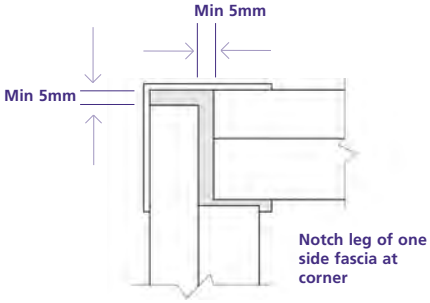




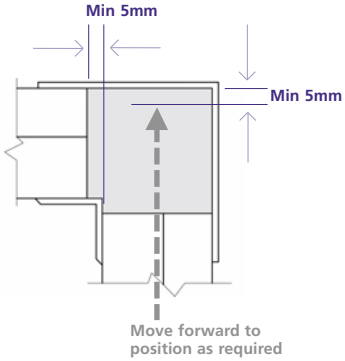
Butt Joint - Plan View



Corner Joint - Plan View



Internal Joint Plan View



CELUFORM
LEAVES TREES STANDING

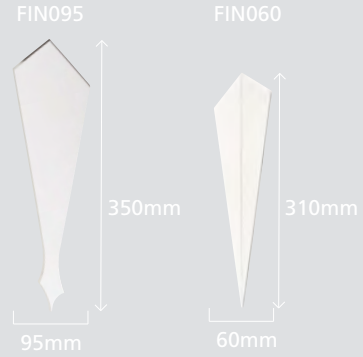
Typical Jointing Details

Apex Joint

Apex joints are made utilising a standard fascia joint from the main fascia range cut to suit. e.g. for the VANQUISH range, item CSQ JNT.

Alternatively, a decorative finial can be used to give a more aesthetically pleasing finish.

Decorative Finials



Running Gables / In-Line Pikes

Where fascia meets barge along a running gable, it is important that the same range of fascia and bargeboard is used. This will prevent a step being created.

Four typical methods are shown to the right. The exact method used will be dependent on roof pitch, layout etc.

In-Line Pike Junctions

- In-line pike junctions can be created using standard joints from the relevant ranges.
- Joints and bargeboards will need cutting to suit.
- Fascia and bardgeboard material will need to be the same type.

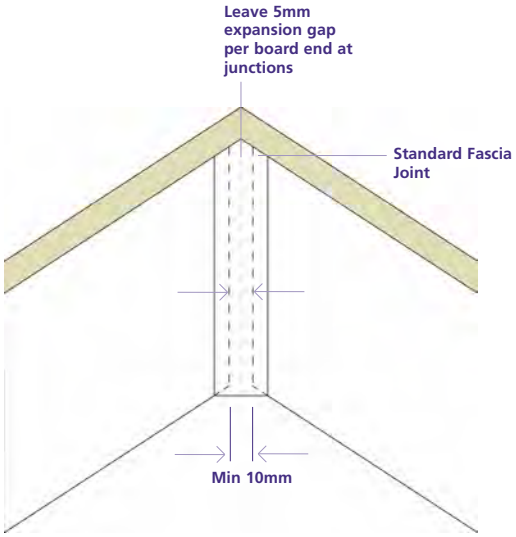
In-Line Box End Options

IIn-line boxends can be created using the same construction methods as shown previously.

It is important that the same material is used on the barge as is used on the fascia.

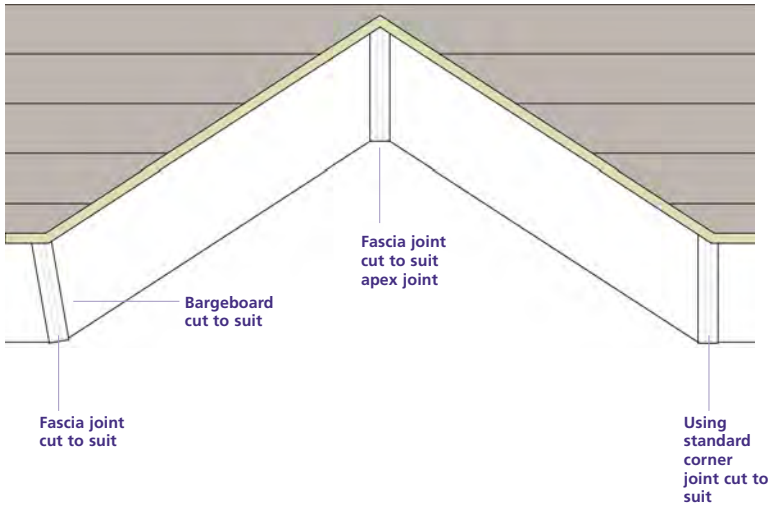
This configuration is often used to a side gable where the gable meets a roof projection.

Fascia and bardgeboard material will need to be the same type.



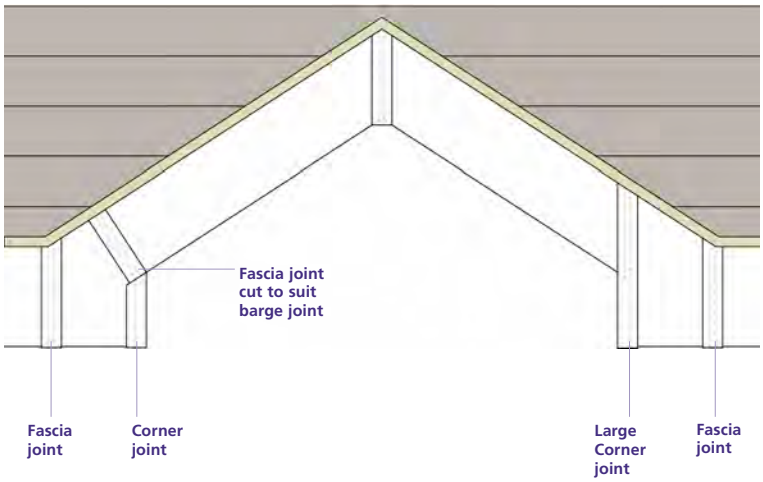
Method 1

Method 2



Method 3

Method 4



For finish options please see Current Price List.

Working with Woodgrain Products - Roofline

Working with Woodgrain products requires slightly modified procedures and installation processes. Overall, woodgrain products are as easy and convenient to fit and use as most other products in the Celuform range. However, with a little extra knowledge and care at the preparation stage, you can save yourself potential difficulties later on.

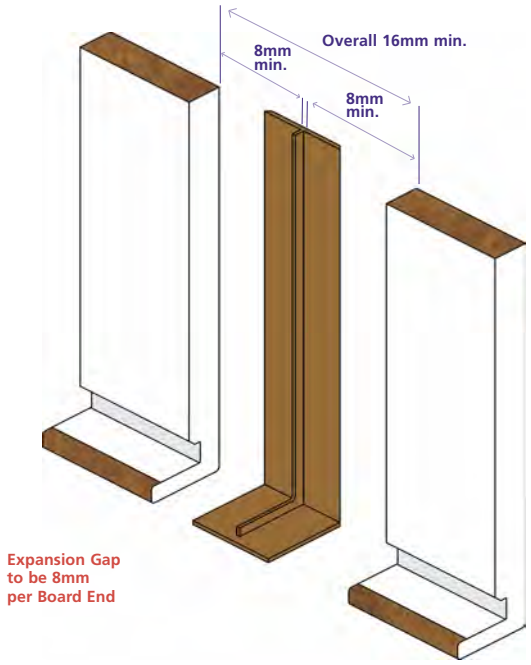
Celuform's Woodgrain foiled profiles have been extensively tested to ensure long term weatherability and are guaranteed for use both internally and externally for a period of 10 years. However, non-white systems have a different potential for heat absorption, with resultant risk of excessive expansion and contraction. In particular, with a Woodgrain foiled coating, this heat absorption can be significant, with potentially detrimental effects on long term installation. Special consideration needs to be given when installing Woodgrain products to minimise the amount of heat build up and provide for greater amounts of expansion.

The following additional fixing details must be followed when installing Woodgrain products:

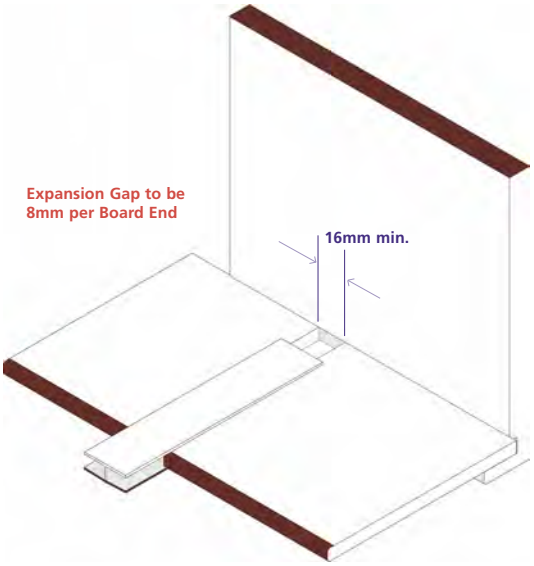
Fascias/Bargeboard

1. Increase expansion gap from 5mm for white to 8mm.
2. All installations to take place at ambient temperatures - between 5°C and 25°C.
3. All pre-installed products to be kept away from direct sunlight, preferably indoors, at all times.
4. All joints to be made with Woodgrain corners and butt joints.

Foiled Fascia Joint Installation Details



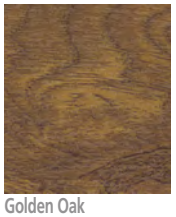
Foiled Soffit Joint Installation Details

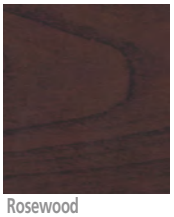


Woodgrains


Mahogany


Ebony


Golden Oak


Rosewood

Premiergrains


Anthracite Grey


Creamgrain

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Fixing Summary - Roofline

Fascia (thickness)	Fixing detail	Fixing type	Product ref.
8 - 10mm Fascia Capping	Detail with 12mm min exterior grade plywood backing board (BS EN 636:2012+A1:2015)	50mm Polytop Nails 50mm Polytop Screws	SS-50N
16mm - 25mm Fascias	Full replacement	65mm Polytop Nails 65mm Polytop Screws 50mm Polytop Screws	SS-65N

Soffit	Fixing detail	Fixing type	Product ref.
9mm Soffit	Soffit bearers recommended	40mm Polypins	SS-40P

Cladding boards used as Soffit	Fixing detail	Fixing type	Product ref.
100mm Open V Joint	Timber soffit bearers	30mm Cladding Pins	SS-30-CP
150mm Shiplap Cladding		20mm Cladding Trim Nails for cladding trims Application as cladding system	SS-20-CN

Eaves Protection & OFVS systems	Fixing detail	Fixing type	Product ref.
UNIVENT & AEROVENT (K712/1000)	600mm centres	30mm Cladding Pins	SS-30-CP
TOPGUARD (C5530EPS)	200mm centres	30mm Cladding Pins	SS-30-CP
TOPVENT MAX (C5540 250 OFV)	200mm centres	50mm stainless steel annular ring shank	SS-50N

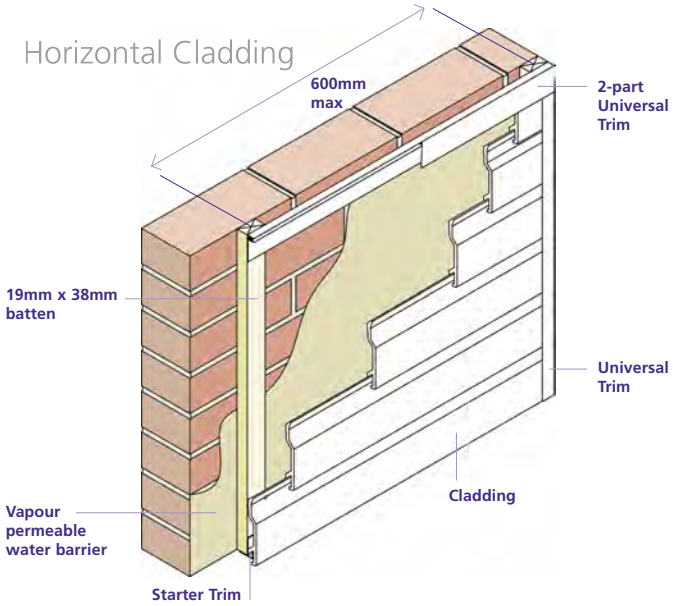
NOTE: Unless otherwise stated, all fascia/soffit fixing centres should not exceed 600mm centres

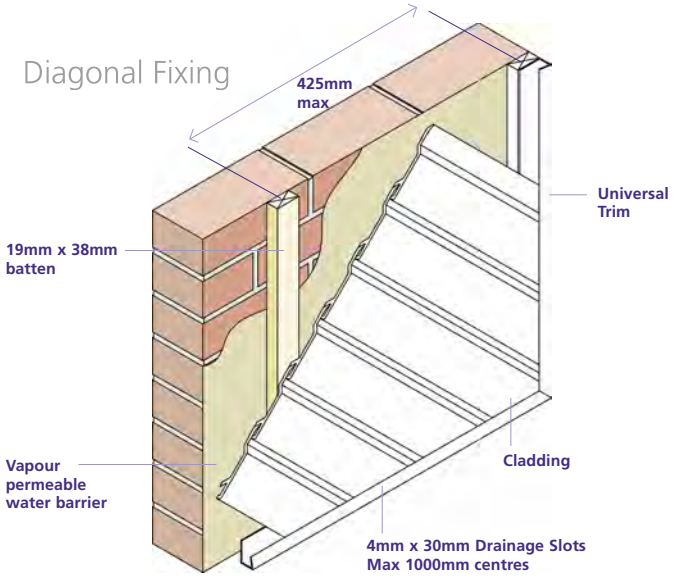
General		
Expansion Gap	White Foils & Colours	5mm per board end 8mm per board end
Fixing Centres	Replacement Fascia - 16mm+	2 per fixing centre, max 600mm centres, 65mm polytop nails (or 65 / 50mm x 4mm shank screws), austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009).
	Overcap fascia - 8mm+	2 per fixing centre, max 600mm centres, 50mm polytop nails (or 40mm x 4mm shank screws), austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009).
	Soffit	Per fixing centre, max 600mm centres, 40mm polytop pins (or 40mm x 4mm shank screws), austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009).
Soffit Boards	Soffit wider than 300mm	Soffits up to 300mm wide require no additional fixing. Soffit boards over 300mm wide should be fixed at maximum 600mm centres along their length and 300mm centres across their width. Fix to adequate timber bearers.
Load Bearing	Fascia 16mm+	16mm - 25mm boards will support all eaves tiles in common usage in the UK (up 10kg load per 1m length of fascia) provided that the boards are installed within the requirements of the BBA certificate.
	Fascia <16mm	All fascia less than 16mm require a minimum 12mm exterior grade plywood backing board.
Joint Fixing		Low modulus neutral cure silicone BS5889 Type A.
Gutter Fixing	For 16 - 25 mm boards	Fix gutter brackets directly into the board using, for each bracket, at least 2 x 10 gauge x 25mm long (parallel thread form) austenitic s/steel screws, ensuring that the screws penetrate the rear face of the board and that the bracket spacings do not exceed one metre.
Gutter Fixing	For 9mm boards	For the 9 mm board, gutter brackets are screwed through the fascia board onto rafter feet or other timber support.

White Cladding Installations

Celuform's cladding systems are ideal for a wide variety of internal and external applications. The system is offered complete with all trims, fixings and components to ensure a high quality, aesthetically appealing finish. Cladding is an ideal means of covering large areas with a durable, maintenance free solution which will stay looking good for years. It never needs painting and is highly suitable for areas where future access could prove difficult or costly. The design features within the system mean that cladding offers a visually appealing alternative to traditional materials, whether in domestic or commercial applications.

Popular products within the cladding range and the principal elements of installation are detailed here.





TECHNICAL CONSIDERATIONS - Installation

The Celuform co-extruded PVC-UE cladding system is suitable for horizontal, vertical and diagonal fixing, as a decorative & protective external facing, over a timber stud or masonry wall.

When used over a sheathed timber stud frame or over a masonry or block substrate, the cladding should be fixed to preservative treated, good quality timber battens (measuring not less than 19mm by 38mm) rigidly fixed to the substrate at 600mm centres or closer.

Installation takes place by fixing trims around the periphery of the area to be clad followed by installation of the cladding planks.

Planks are fixed using stainless steel annular ring shank nails positioned in the groove which runs along the length of the cladding plank. Nailing takes place from the centre of each plank working outwards.

Subsequent planks are fitted over the preceding planks ensuring that the tongue-and-groove joint is firmly closed so that the nail heads are concealed by the overlap. To avoid distortion in service, care should be taken not to install the cladding in extremes of temperature (i.e. below 5°C or above 25°C) and to allow adequate expansion gaps of 5mm per plank end for expansion.

The cladding must be installed to provide a minimum ventilated air space of 19mm between the cladding and the backing wall. This satisfies both NHBC requirement for a minimum 10mm wide ventilation cavity and the Foundation 15 clause for a minimum 19mm cavity to be maintained between claddings and sheathing.

Horizontal battens used to support trims at the base of installations or at window heads, require 10mm diameter drainage holes at 1000mm centres.

CELUFORM
LEAVES TREES STANDING

White Cladding Installations

When cladding is used in exposed locations (eg buildings above 10 metres in height, buildings on unprotected sites or in open countryside) it is recommended that batten spacing be reduced, particularly at the corners of the building, in order to increase the resistance to wind suction. the cladding is suitable for use above ground-floor level, and at ground-floor level in private areas where there is some incentive to exercise care.

It is not recommended for use at ground-floor level in public areas where it may be exposed to vandalism and general misuse. PVC-UE cladding installations are not air, water or water vapour tight. When used on timber stud walls the product must be backed by a breather membrane acting as a vapour-permeable water barrier, incorporated behind the cladding under the supporting battens.

This barrier must meet the requirements of BS5250: 2011 and have a vapour resistance less than 0.6 MNsg-1.

Where the product is used as a decorative facing attached to weathertight masonry walls, a water barrier is not necessary as the amount of water that will penetrate the cladding will be small and will not have an adverse effect on the wall.

Behaviour in relation to fire

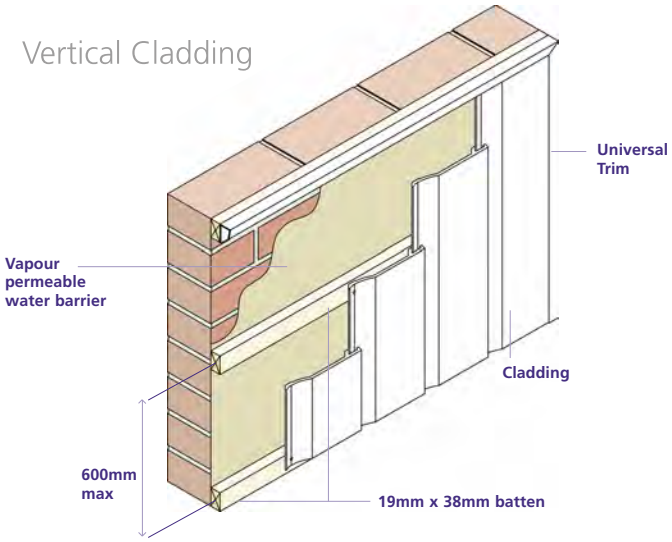
When tested to BS476: Part 6: 1981 Celuform white PVC-UE cladding planks achieved a fire propagation index of 15.4 with sub indices and of 7.6, 6.4 and 1.4 respectively.

Celuform PVC-UE cladding is suitable for use as cladding on the external walls of buildings less than 20m in height (England & Wales) or 15 metres in height (Scotland) provided that the wall is 1 metre or more from the relevant boundary.

The product is suitable for use on the external walls of buildings in Northern Ireland less than 15 metres in height provided the wall is 1 metre or more from the relevant boundary, but excluding use on buildings of purpose group VII (assembly buildings) having more than one storey, at situations up to 7.5m above the finished surface of any adjoining roof or other part of the building to which persons have access.

The product is suitable for use as a cladding on the external walls of buildings 20 metres or more in height (England & Wales) or 15 metres or more in height (Scotland) provided that the wall is 1 metre or more from the relevant boundary and the cladding does not extend higher than 20 metres (England & Wales) or 15 metres (Scotland).

Vertical Cladding



The product is suitable for use on external walls of buildings in Northern Ireland which are 15 metres or more in height provided the wall is 1 metre or more from the relevant boundary and the cladding does not extend higher than 15 metres, but excluding use on buildings of purpose group VII (assembly buildings) having more than one storey, at situations up to 7.5 metres above the finished surface of any adjoining ground, or of any adjoining roof or other part of the building to which persons have access.

When tested in accordance with BS476: Part 7: 1987, the white co-extruded material achieved a Class 1Y rating.

Although the surface spread of flame across the surface of the PVC is limited, the material does tend to char and may fall away when exposed to fire. Due consideration should always be given to any combustible material behind the cladding, which may become exposed in the event of a fire.

CE Marking

CE Marking requires that cladding be tested for its reaction to fire. Celuform PVC-UE cladding with PVC-U skin achieves a Classification of Reaction to Fire Performance: D-s3, d2/AVM.

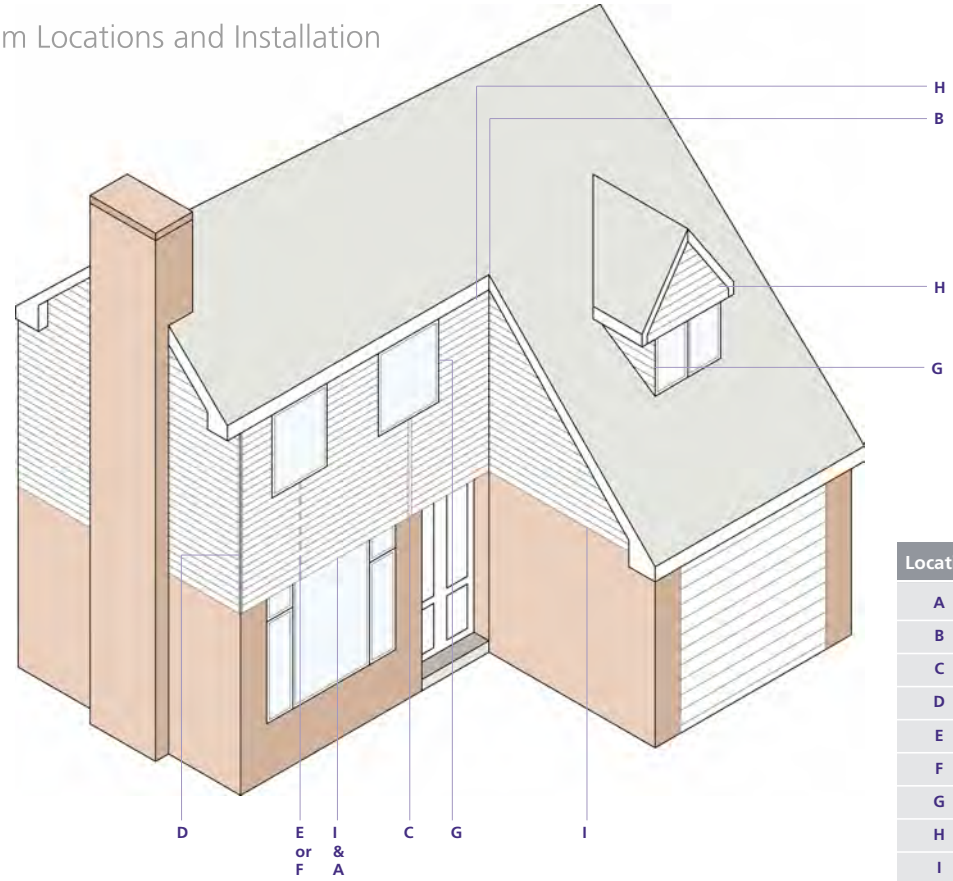
PVC cladding installed over timber framing now carries BRE A+ rating. This allows the specifier to claim the maximum three points available under the CSH for just such an external wall system.

Permissable dynamic wind pressures (Pa)

Length of fixing nail (mm)	Cladding Profile	
	100mm Open-V	150mm Shiplap
30	2650	1750
25	1750	1150

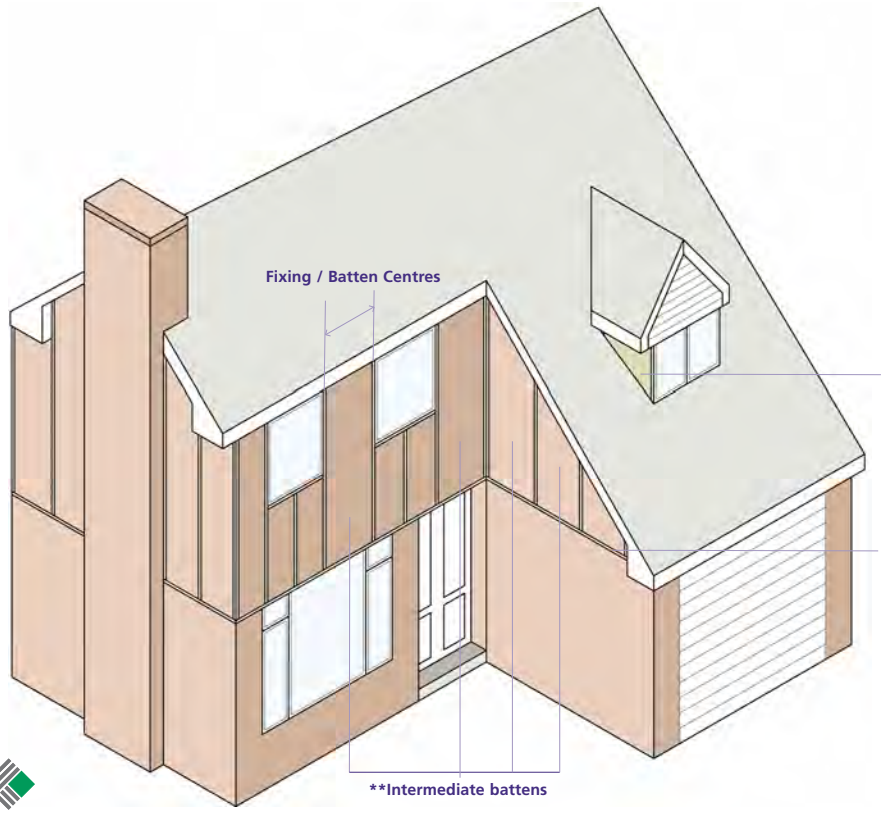
White Cladding Installations

Trim Locations and Installation



Location	Trim Required
A	Drip Trim
B	2 Part Internal Corner Trim
C	2 Part Centre Joint Trim
D	2 Part External Corner Trim
E	150mm Shiplap Cladding Butt Joint
F	100mm Open-V Cladding Butt Joint
G	Universal Trim
H	2-Part Top Edge Trim
I	Starter Trim

Batten Installation Guidelines*



Fixing / Batten Centres	
White	600mm max
Foil	400mm max
Battens	
White	19 x 38mm min. 25mm recommended
Foil	50 x 38mm min.
Batten Fixing General	
Battens to be fixed to substrate at 600mm centres max. Batten around the perimeter and all openings.	

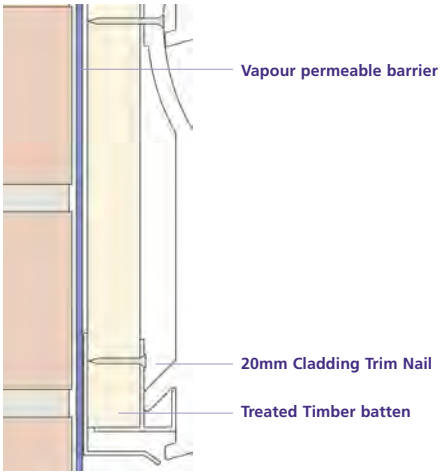
* Typical batten fixing for horizontal cladding installation
** Intermidiate battens removed for clarity

CELUFORM
LEAVES TREES STANDING

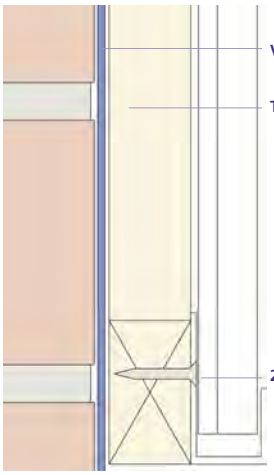
White Cladding Installations

Trims Installation

Starter and Drip Trim - Horizontal Installation

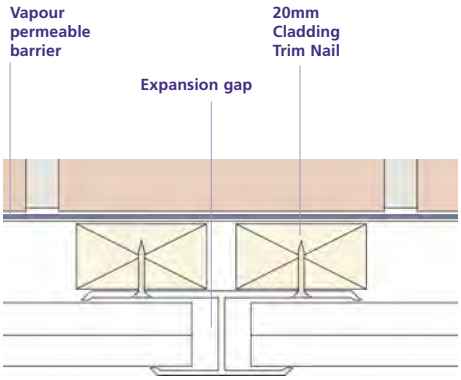


Starter Trim - Vertical Installation

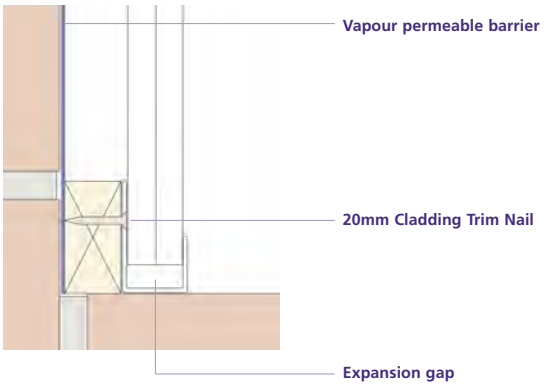


NB. Universal channel must be pre-slotted (4mm x 30mm - Max 1000mm centres) to allow for drainage

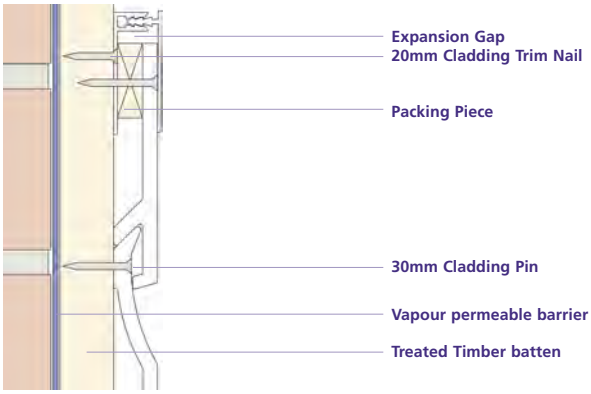
Centre Joint Trim Installation



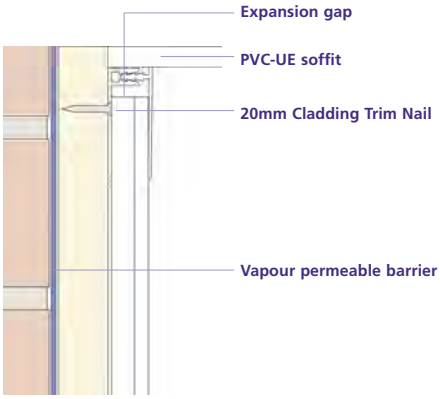
Universal Channel - General Edge Installation



2-Part Top Edge Trim - Horizontal Installation



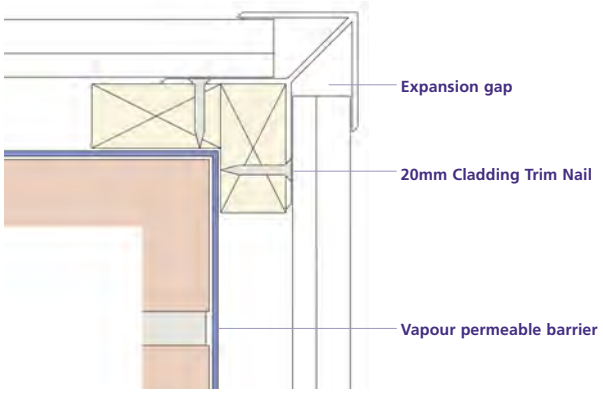
2-Part Top Edge Trim - Vertical Installation to Soffit



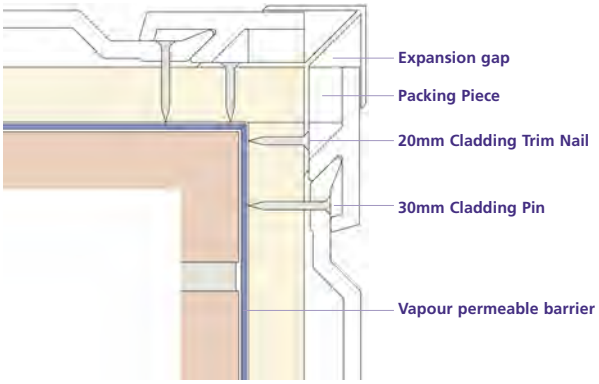
NB. Breather membrane is only required on non-moisture resistant substrates

White Cladding Installations

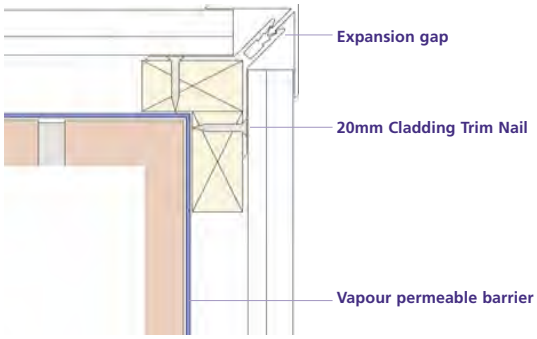
External Corner - Horizontal Installation



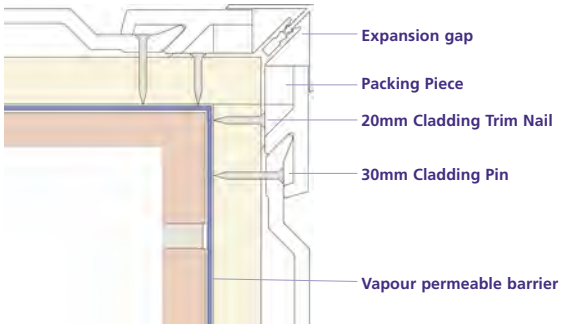
External Corner - Vertical Installation



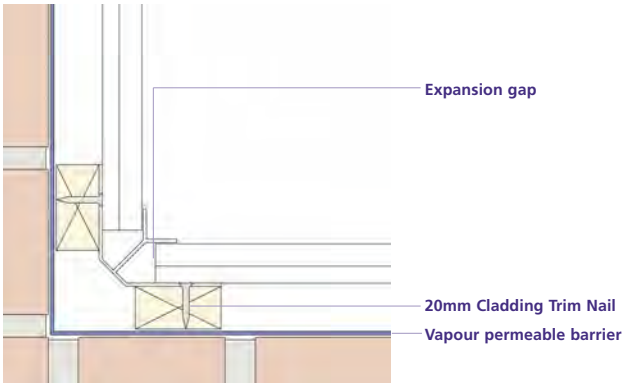
2-Part External Corner - Horizontal Installation



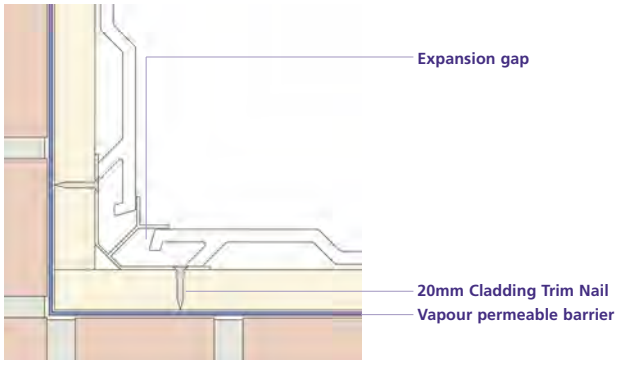
2-Part Corner - Vertical Installation



Internal Corner - Horizontal Installation



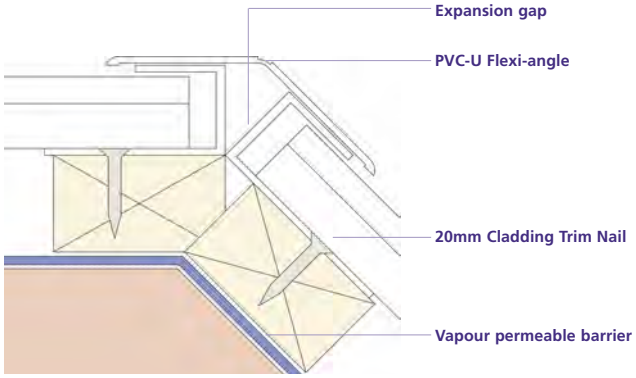
Internal Corner - Vertical Installation



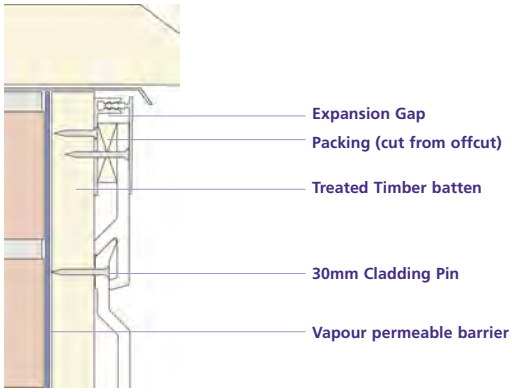
NB. Breather membrane is only required on non-moisture resistant substrates

White Cladding Installations

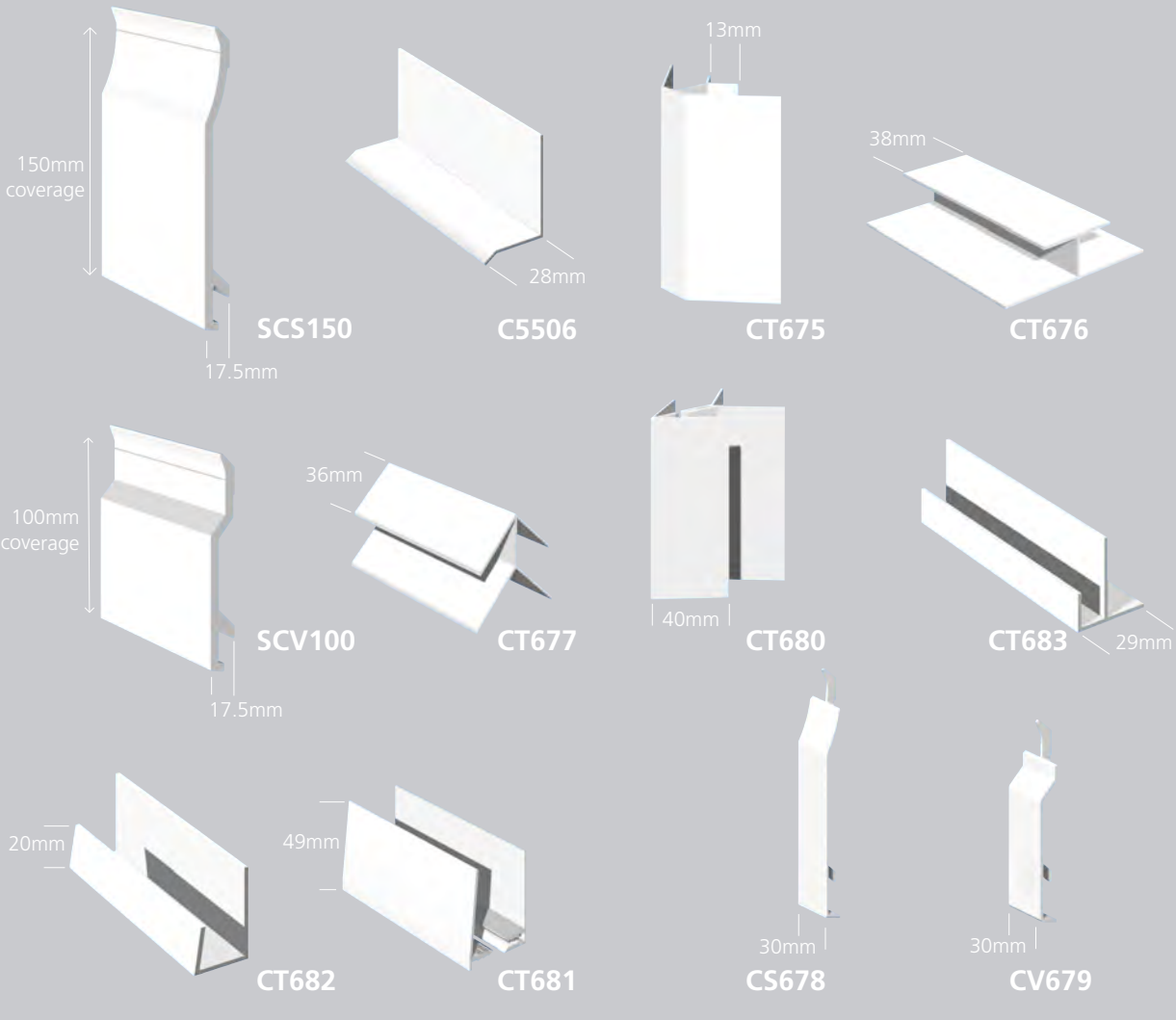
Variable External Angle - Horizontal Installation



2-Part Top Edge Trim Installation to Window Cill



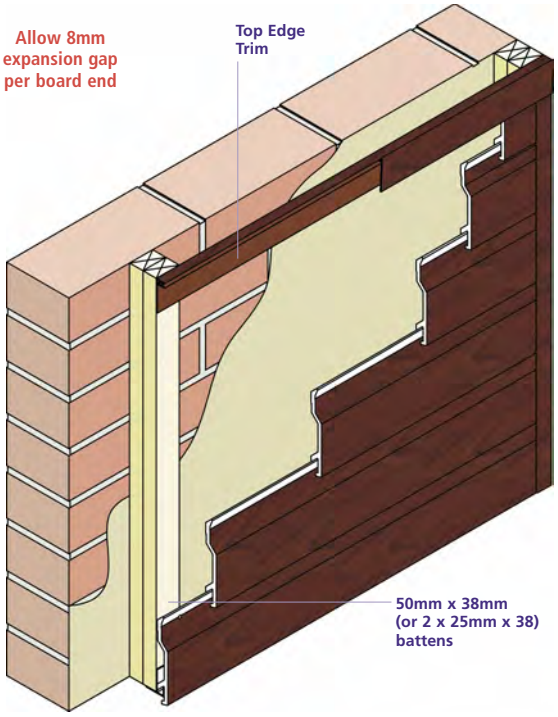
Cladding System



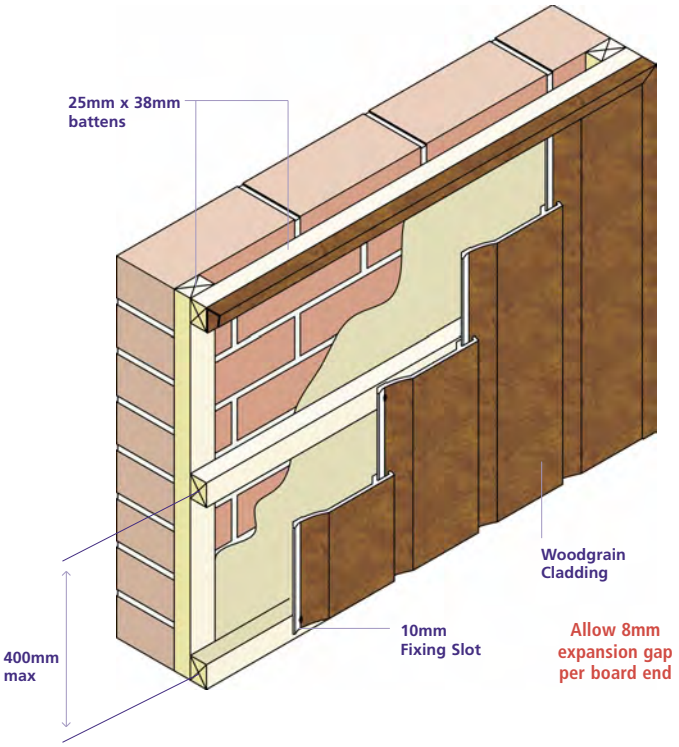
NB. Breather membrane is only required on non-moisture resistant substrates

Foiled Cladding Installations

Installation Detail - Horizontal Cladding



Installation Detail Vertical Cladding (counter batten)



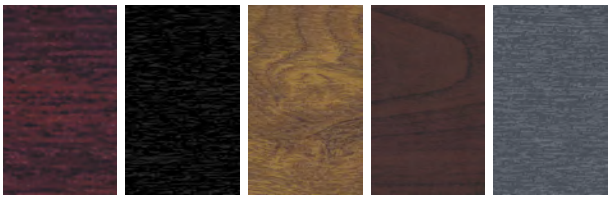
Working with Woodgrain cladding requires some modified procedures and installation processes. The following fixing details must be followed when installing Woodgrain cladding products:

1. Allow a minimum of 50mm air space behind the back of all cladding installations.
2. Using the Universal Channel or Starter Trim with Batten Cover at both the top and base of each cladding face, allow a 10mm air gap at the top and bottom of each cladding unit in order to generate air flow behind the installation. When installing cladding vertically the use of counter battens is required.
3. Install 5m (max.) cut lengths and fix firmly at the centre of each cut length with Cladding pins as recommended for white profile. All subsequent fixings, at maximum 400mm centres from the central fixing point, into fixing slots. These fixing slots should be 10mm long, with a width of 0.5mm wider than the cladding nail shank. Fix with a large headed nail as recomended for white profile ie 30mm stainless steel annular ringshank nails (SS-30-CP)
4. Jointing of boards to be made with 676 cover joint trim, allowing an 8mm expansion gap at every board end.
5. Installations to take place at ambient air temperature - between 5°C and 25°C.
6. All pre-installed products to be kept stored away from direct sunlight, preferably indoors, at all times.
7. All end finishing cover strips etc. should allow an 8mm expansion gap between the end of the cladding profile and the cover stop.

These precautions will allow airflow behind the cladding which helps to reduce excessive heat build-up.

They also allow a free expansion and contraction of the profile along the profile length from a central fixed point. Expansion gaps at joints and finishing strips also allow for freedom of expansion.

CE Marking requires that cladding be tested for its reaction to fire. Celuforms PVC-UE cladding with PVC-U skin and Laminate Foil achieves a Classification of Reaction to Fire Performance: E.



Mahogany | Blackgrain | Golden Oak | Rosewood | Anthracite Grey

NB. Breather membrane is only required on non-moisture resistant substrates

Fixing Summary - White & Foiled Cladding

Fixing Details		
Batten fixings	into masonry: into steel: into timber:	Hammer screws Self-tapping screws Plated woodscrews.
Cladding fixings	30mm stainless steel Cladding Pins.	SS-30-CP
Trim fixings	20mm stainless steel Nails.	SS-20-CN
Breather membrane substrate.		To be positioned behind the batten system against the

If Fixing Insulation Behind Important Points Which Must Always Be Observed:

- Ensure cladding batten system is fully supported cladding system
- Fix at recommended fixing centres
- Always detail a suitable secondary waterproofing material e.g.vapour permeable breather membrane to maintain a watertight structure
- The membrane should be positioned on the external face of the insulation between the insulation and the cladding
- Maintain the correct statutory airspace behind the cladding system

Area Calculations

Cladding:	Product Code:	5m Lengths Required Per Square Metre:	Coverage Per Linear Metre:
Open V Joint Cladding (100mm)	SCV100	2.0	0.1m ²
Shiplap Cladding (150mm)	SCS150	1.4	0.15m ²

Fixing Centres

Cladding:	Product Code:	Batten / Fixing Centre:	Product Code:
White	SCV100 & SCS150	1 per fixing centre, max 600mm centres	SS-30-CP
Foils	SCV100 & SCS150	1 per fixing centre, max 400mm centres	SS-30-CP

All fixings to be A4 marine grade, austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009)

General		
Battens	White plain cladding Foiled cladding	Minimum 19mm x 38mm (25mm x 38mm recommended) Minimum 50mm x 38mm (or 2 x 25mm x 38mm)
Ventilation	White	Allow a minimum of 19mm ventilated air space behind the back of all cladding installations. This satisfies the NHBC requirement for a minimum 10mm wide ventilation cavity to be maintained between claddings and sheathing.
	Foils	Allow a minimum of 50mm ventilated air space behind the back of all cladding installations
Expansion Gap	White	5mm per board end
	Foils	8mm per board end
Joint Fixing		Low modulus neutral cure silicone BS5889 Type A
Installation Temperature		To be installed between 5°C & 25°C temperatures

Fire Rating

	Finish	Thickness (mm)	Class
BS476 Part 7	White	6mm	1Y
EUROCLASS BS EN ISO 11925-2	White	6mm	D-s3, d2
EUROCLASS BS EN ISO 11925-2	Laminated Foil	6mm	E

Celutex™ Textured Cladding Installations

For Celutex™ textured cladding, standard fitting instructions can be followed. However, due to the differing sizes and colours available in the Celutex™ range, slightly modified batten fixings are required. Where required, ensure breather membrane is positioned beneath the batten system against the substrate.

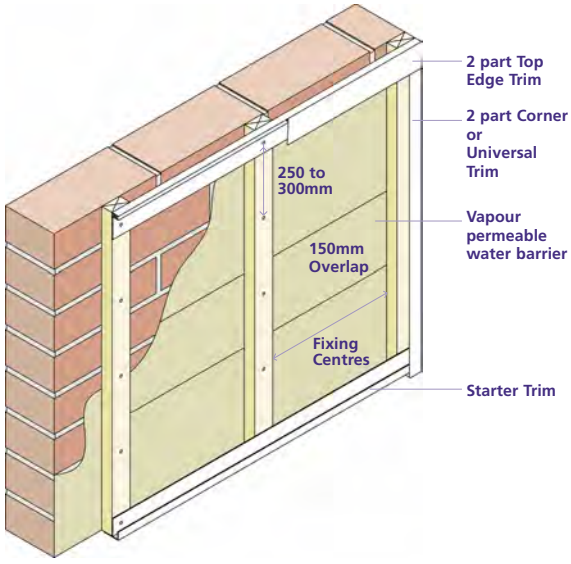
Battens

- Set out and fix 25mm x 38mm tannalised battens vertically.
- Ensure battens are parallel straight and level.
- Fix battens to the substrate at 300mm maximum centres. (600mm for 150mm single planks)
- Fix a tannalised batten along the top of the installation.
- No batten is needed along the base of the cladding system because it relies on this opening to dispel excess moisture and to be used as a point of ventilation.

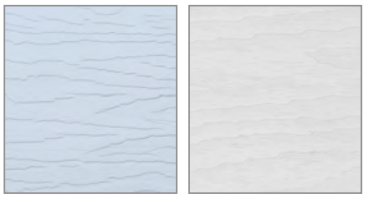
Trim Installation and Order of Work

- Fix the starter trim to the battens at the base of the installation with 20mm A4 stainless steel nails.
- The starter trim is designed to locate the first cladding plank.
- Measure and cut to size the vertical universal trim or corner trim notch out at the rear of the trim.
- Ensure that the trim is straight and plumb and fix onto batten with A4 20mm stainless steel fixings at 250mm-300mm intervals.
- **Trims are designed to take up expansion - ensure a 5mm gap between board edges/ends and trim stops for White cladding and 8mm for RAL9001, RAL1015, RAL7035 and X002.**
- Note there are two part versions of the vertical trims for use with horizontal and vertical cladding applications.
- Measure, cut and fix the top edge trim male extrusion to the top of the installation between the two vertical trims. Ensure you notch out the rear of the vertical trim to accommodate the male top edge extrusion.
- The installation is now ready to accept the first cladding plank.
- Measure first cladding plank ensuring that there is the correct gap left on either end of the plank for expansion.
- Before fixing plank locate groove section of the cladding plank into the location lip of the starter trim.
- Ensure plank is straight and level using a spirit level.
- Fix plank to each batten centre using A4 30mm stainless steel nails or 8 –gauge x 30mm stainless steel countersunk headed screws.
- Ensure fixings pass through nail/screw guideline groove as the boards are a concealed fix.
- Locate second board, ensure groove of second board covers the tongue of the first board fully as not to show nail/screw heads.
- Follow this procedure until you reach the top of the installation, ensuring that each board is located properly.
- Ensure the installation is checked for level every three boards.
- Measure width of last board.
- Cut down last board and use the off cut tongue of the board as packing material. This will be spot glued (Cynoacrylate adhesive) to the back of the last cladding plank and then nailed through into the top batten once located.
- Locate top cladding plank & fix through plank into top batten.
- Cut and snap on female part of trims to the vertical male extrusion ensuring that the trim finishes at the top of the installation.
- Measure cut and snap on the top edge trim ensuring that the trim is fixed between the two vertical trims.

Batten Installation - Celutex Only



White - W | Cream - RAL9001 | Sand - RAL1015



Light Blue - X002 | Light Grey - RAL7035

CELUFORM
LEAVES TREES STANDING

Celutex™ Textured Cladding Installations

Vertical cladding

The same preliminary work as a horizontal cladding application will need to be completed before cladding can commence.

Preliminary work

- Secondary waterproofing membrane.
- Batten orientation and spacing.
- Battens to be installed horizontally for a vertical cladding application.
- A top batten and bottom batten are required.

Method

- Fix battens at the correct 300mm centres. (600mm for single planks)
- Pack out battens where necessary to ensure they sit straight & level.
- Measure, cut and fix drip trim to base of installation to act as a first location for the cladding plank.
- It is important to use two part trims on a vertical cladding application.
- Measure, cut and fix universal trim male extrusion to vertical edges of installation (flat section panel application).
- Measure, cut and fix universal trim to top of cladding installation.
- Measure and cut first cladding plank ensuring that there is 5 / 8mm removed from each end of the plank for expansion.
- Fix first plank with A4 30mm stainless steel nails or A4 – 8 gauge x 30mm A4 stainless steel screws ensuring that the plank sits neatly inside the vertical end trim to start the cladding line. The female part of the trim when snapped on will locate the groove intersection of the cladding board. It is advisable to nail through the base of the board to hold it in position, then snap on the trim female part to hide the fixings.
- Ensure the cladding board is plumb using a spirit level.
- Nail/screw the first board through the nail/screw groove guide lines on the board at every batten centre.
- The boards are a concealed fix so ensure the nail/screw heads are flush with board and through the nail/screw groove guide.
- Work from left to right of the installation and measure cut and fix each board in turn.
- The boards should be checked for plumb every three boards.
- Also check that each board is located properly.
- Measure and cut the last board allowing for the correct expansion gap & engage it into the trim. The tongue of the board will be used as a packing piece to ensure the board is fixed securely into the trim.
- Cut and spot glue the tongue of the board (Cynoacrylate adhesive) to the rear of this last board.
- Fix the board with A4 grade 30mm stainless steel nails or A4 - 8 gauge x 30mm stainless steel screws through the face beneath where the finishing trim is being located.
- Measure, cut and snap-on vertical trims.
- Measure, cut and snap-on the horizontal top edge trim to finish installation.

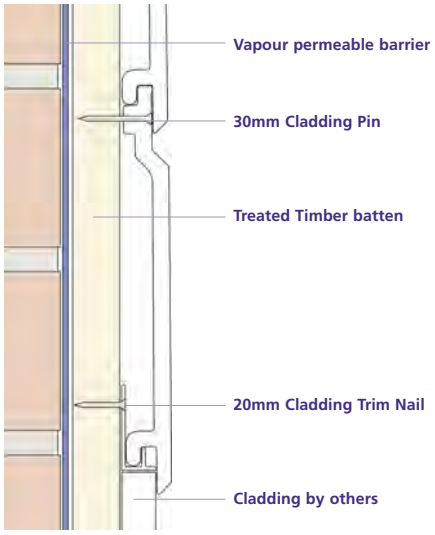
Diagonal cladding

The same preliminary work & installation techniques as a horizontal cladding installation will need to be observed with a few differences.

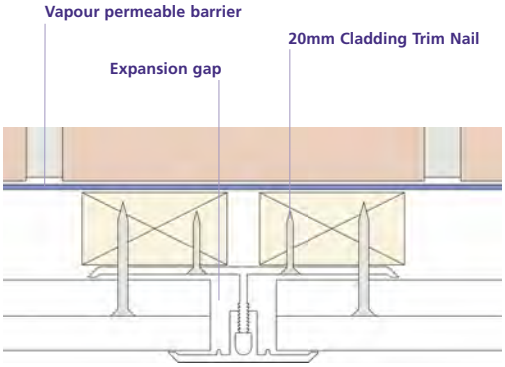
Method

- Reduce batten centres to 210mm.(450mm for 150mm single planks).
- Measure, cut and fix drip trim or universal trim to base of installation to act as a first location for the cladding plank.
- Use 2-part Centre Joint Trim fixed on twin battens if cladding is to be mirrored.
- Use first plank as a template to mark out second plank and so on.

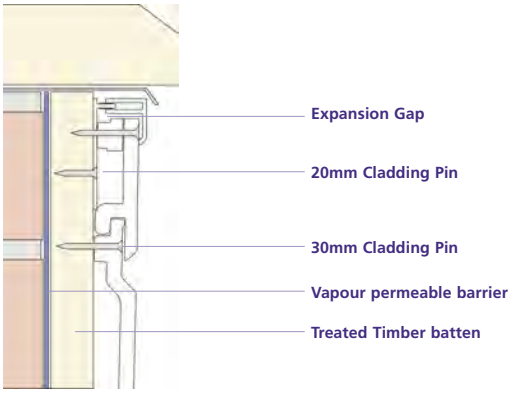
Wall Starter Trim Installation



2pt Centre Joint Trim Installation

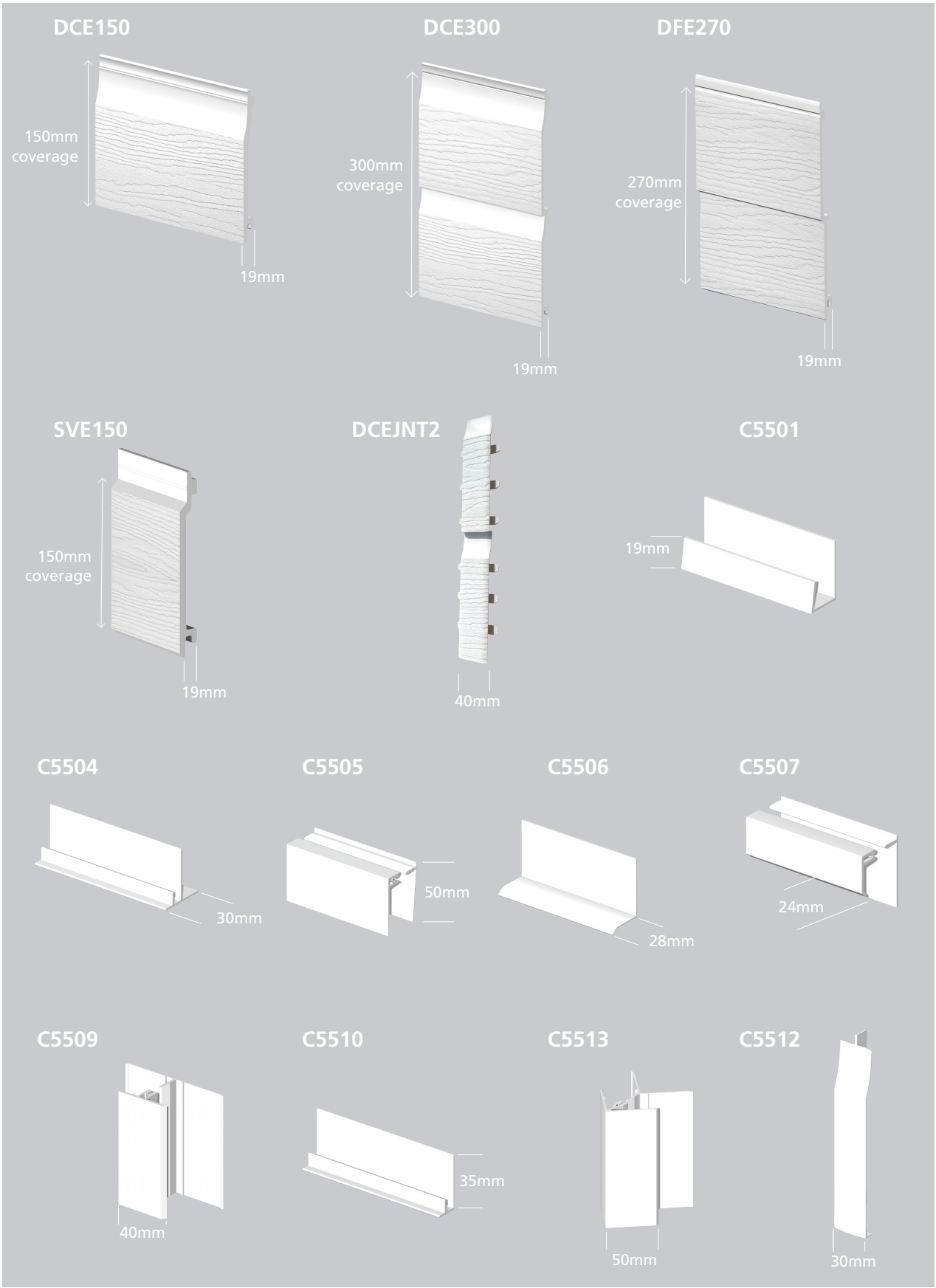


2pt Universal Trim Installation



NB. Breather membrane is only required on non-moisture resistant substrates

Celutex™ Textured Cladding Installations



Fixing Summary - Celutex™ Textured Cladding

Fixing Details		
Batten fixings	into masonry: into steel: into timber:	Hammer screws Self-tapping screws Plated woodscrews.
Cladding fixings	30mm stainless steel Cladding Pins.	SS-30-CP
Trim fixings	20mm stainless steel Nails.	SS-20-CN
Breather membrane		To be positioned behind the batten system against the substrate.

If Fixing Insulation Behind Important Points Which Must Always Be Observed:

- Ensure cladding batten system is fully supported cladding system
- Fix at recommended fixing centres
- Always detail a suitable secondary waterproofing material e.g.vapour permeable breather membrane to maintain a watertight structure
- The membrane should be positioned on the external face of the insulation between the insulation and the cladding
- Maintain the correct statutory airspace behind the cladding system

Area Calculations

Cladding:	Product Code:	5m Lengths Required Per Square Metre:	Coverage Per Linear Metre:
Textured Open V Joint Cladding	SVE/150	1.4	0.15m ²
Textured Shiplap Cladding - 150mm	DCE/150	1.4	0.15m ²
Textured Shiplap Cladding - 300mm	DCE/300	0.7	0.3m ²
Textured Feather Edge Cladding	DFE/270	0.75	0.27m ²

Fixing Centres

Cladding:	Product Code:	Batten / Fixing Centre:	Product Code:
Celutex™ Textured Single Plank	SVE/150 & DCE/150	1 per fixing centre, max 600mm centres	SS-30-CP
Celutex™ Textured Double Plank	DFE/270 & DCE/300	1 per fixing centre, max 300mm centres	SS-30-CP

All fixings to be A4 marine grade, austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009)

General

Battens	Celutex™	Minimum 25mm x 38mm
Ventilation	Celutex™	Allow a minimum of 25mm ventilated air space behind the back of all cladding installations
Expansion Gap	White Colours	5mm per board end 8mm per board end
Joint Fixing		Low modulus neutral cure silicone BS5889 Type A
Installation Temperature		To be installed between 5°C & 25°C temperatures

Fire Rating

	Finish	Thickness (mm)	Class
BS476 Part 7	White / Coloured	7mm	2Y
EUROCLASS BS EN 13823 & BS EN ISO 11925-2	White / Coloured	7mm	D-s3, d2

Internal Applications for Celuform Products

Celuform makes a wide range of products for interior applications and to support the window fitting industry. This range includes window boards, reveal liners, trims, architraves and skirtings.

PVC-UE products used in interior and window application offer several key advantages over traditional building materials. PVC-UE products:

- are durable and long lasting
- are lightweight, quick and easy to install
- do not need painting or any other form of treatment
- can be worked with conventional tools by traditional trades

GENERAL

Installation Conditions

Celuform internal trim profiles should only be fixed within the recommended installation temperatures of 5°C and 25°C. Boards should not be sprung between fixed points. A gap of 1mm/m at each board end should be allowed for thermal expansion on white boards and 1.3mm/m on Woodgrain foiled boards. It is recommended that products are only used in circumstances where the maximum internal temperature will not exceed 30°C.

Prior to installation it should be ensured that the substrate is sound, level and free from dust or moisture. The relevant profile should be cut to size and mitred if required.

Cutting The Material

Workability of PVC-UE and PVC-U is similar to that of timber. All Celuform products can be sawn, drilled and planed using traditional joinery tools. Hand saws should have a fine tooth blade. Power tools should be run at speeds similar to, or in excess of, those used for timber. When using power tools, a coarse particle dust mask, eye protection and light industrial gloves should be worn.

Repairs and Remedial Work

In the event of a profile becoming damaged in service, it is recommended that the damaged profile be removed and replaced to ensure full product performance.

In-Service Maintenance

In order to maintain the as-new finish it may be necessary to wash the profiles occasionally to remove surface dirt. This can be done easily with soap and water. When wiping over, use a soft cloth and never use solvent-based or abrasive cleaners.

Storage

Products should be stored on a clean level surface in stacks not exceeding 1m in height and restrained from collapse. If stored externally, the product must be kept under cover.

Woodgrain

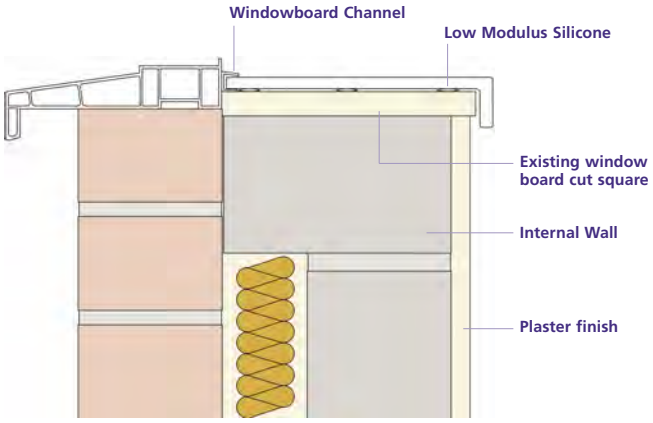
It is not recommended to use Cyanoacrylate adhesive (Super Glue) on foiled products.

Selection of Boards

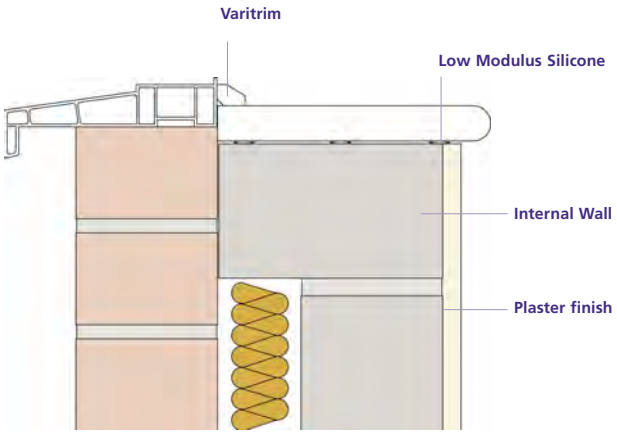
Celuform's 9mm thick boards are suitable for the majority of applications. However in certain applications, it may be necessary to consider the use of thicker boards, e.g. VAN & ELG, with their superior strength and rigidity. Consideration should be given in the following circumstances:

- New Build type applications where a board is required to bridge a cavity.
- Fixing over irregular or uneven substrates.
- Situations where boards may be subject to above average loading.

DLR reveal liner, silicone fix with window board channel



ELU windowboard, silicone fix with varitrim



CELUFORM
LEAVES TREES STANDING

Windowboard and Internal Trims

INSTALLATION

Reveal Liner

Window board channel should be fixed to the inner surface of the window frame using fixing screws suitable for the window frame material, in lengths corresponding to the reveals to be cloaked. Reveal liner may also be installed without the use of window board channel by butting up directly to the inner window frame.

Packing pieces should be introduced under the board to level it out if required. Continuous 6mm wide beads of Low Modulus Silicone should be applied to the front, middle and rear of the underside of the board.

The board should be bedded into the substrate and, where used, located into the window board channel. The product may require to be held in place to allow the silicone to skin.

The installation should be finished by filling all gaps with acrylic Sealant. Internal reveal corners can be trimmed using a slimline internal corner joint, applied after installation of the boards and secured using Low Modulus Silicone. Exposed board ends are trimmed using end caps secured with Low Modulus Silicone or Cyanoacrylate adhesive.

Window Boards

Internal window boards may be fixed over existing window board or directly to the internal building construction, using either of the methods detailed. On New Build or when fixing over uneven substrates, thicker boards such as ELG and VAN are recommended.

Window board channel should, if required, be fixed to the inner surface of the window frame/cill, using fixing screws suitable for the window frame material. Where required, packing pieces should be placed under the window board channel for support. Window board may also be installed without the use of window board channel by butting up directly to the window frame/cill. Packing pieces should be introduced under the board to level it out if required. Window board channel is the recommended option due to its positive location and the lack of a need for further trimming.

Continuous 6mm wide beads of Low Modulus Silicone should be applied to the front, middle and rear of the underside of the board. The board should be bedded onto the substrate and where used, located into the window board channel. The board may require to be held in position to allow the silicone to skin. The installation should be finished by filling all gaps with Acrylic sealant. Visible window board ends are finished using end caps which may be applied with Low Modulus Silicone or Cyanoacrylate adhesive.Note: It is recommended that the overhang on all window board installations be kept to a minimum.

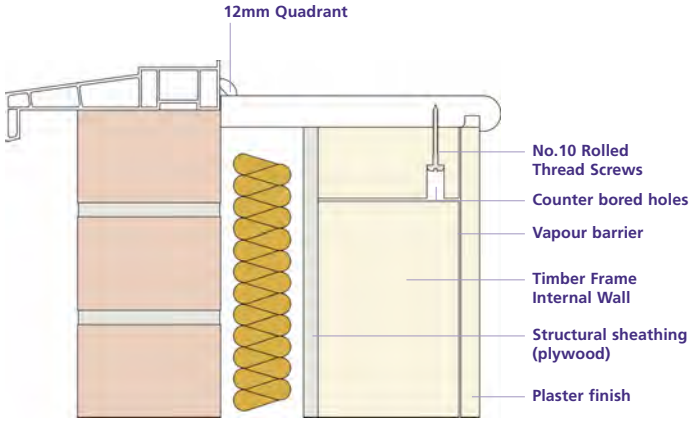
Skirting and Architraves

Low Modulus Silicone should be applied in a continuous 6mm bead to the upper part of the back of the profile, and peaks of the same silicone applied at maximum 250mm centres to the lower part of the profile. The profile is then bedded into position. The profile may require holding in position to allow the silicone to skin. The installation should then be finished by filling gaps with acrylic sealant.

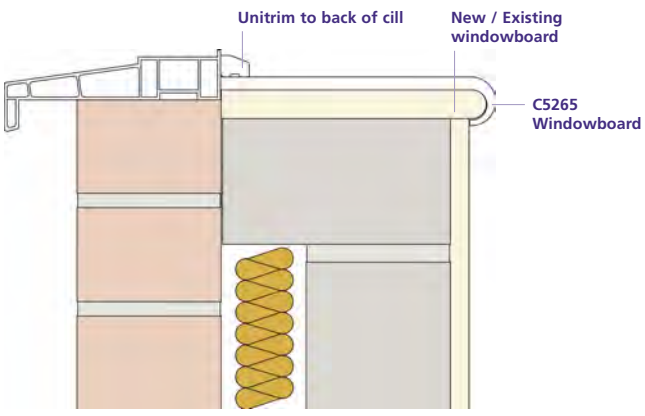
Finishing Trims

To provide a finished appearance to installations, PVC-UE trims should be used. Trims are installed using Low Modulus Silicone. Following application of silicone to the rear of the trims, they are bedded into position and when required held in position to allow the silicone to skin.

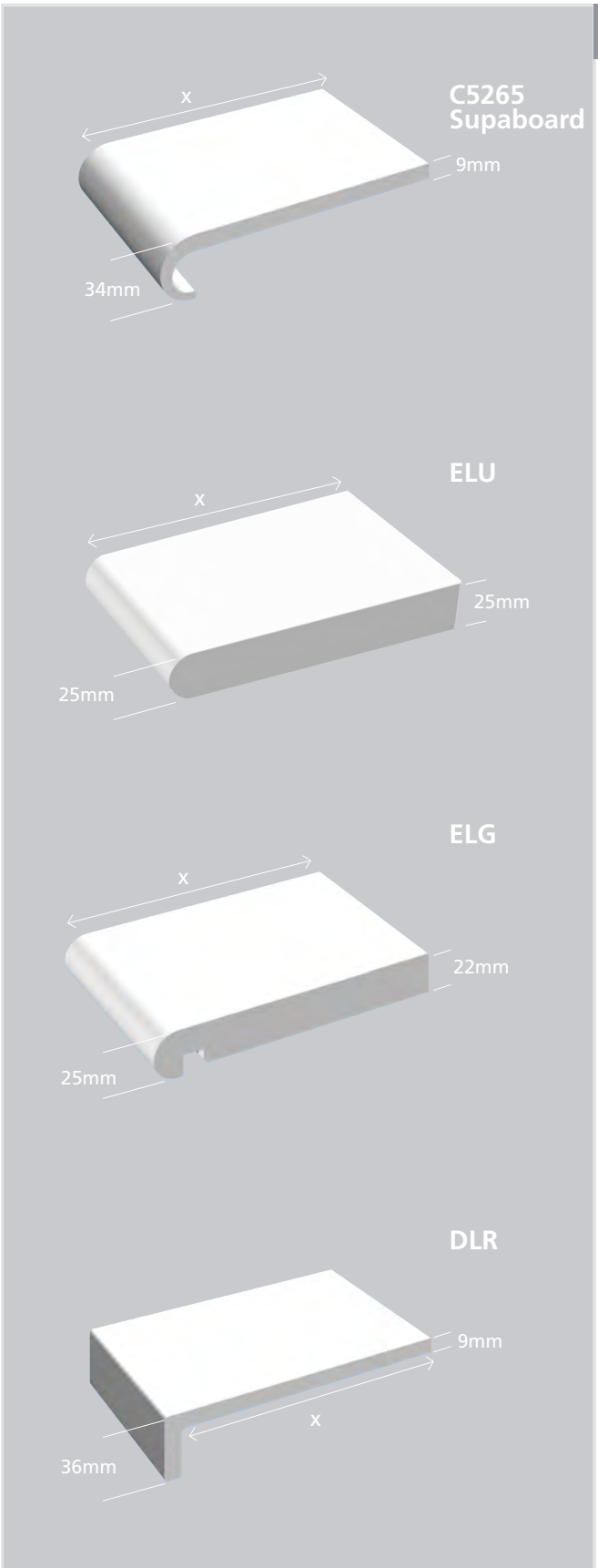
ELG windowboard to timber frame with quadrant



Supaboard, silicone fix to new / existing window board



Windowboard Range



C5265 Supaboard

ELU

ELG

DLR

	Code	Dimension X
C5265	C5265150	150mm
	C5265175	175mm
	C5265200	200mm
	C5265225	225mm
	C5265250	250mm
	C5265405	405mm Double Leg
ELU	ELU150	150mm
	ELU175	175mm
	ELU200	200mm
	ELU225	225mm
	ELU250	250mm
	ELU300	300mm
	ELU405	405mm Double Nose
ELG	ELG150	150mm
	ELG175	175mm
	ELG200	200mm
	ELG225	225mm
	ELG250	250mm
	ELG300	300mm
	ELG405	405mm Double Nose
DLR	DLR100	100mm
	DLR125	125mm
	DLR150	150mm
	DLR175	175mm
	DLR200	200mm
	DLR225	225mm
	DLR250	250mm
	DLR300	300mm
	DLR400	405mm
	DLR450	450mm
	DLR600	605mm

*For full list of trims please see current price list.

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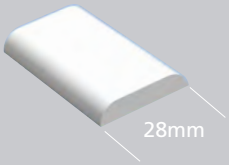
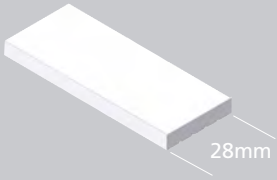
Trim Range

DSN028



CRECT028

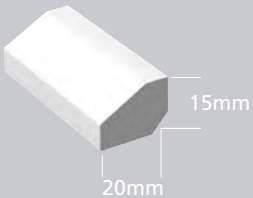


QUA012

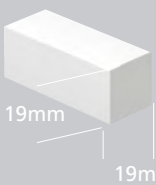
QUA018

CAS

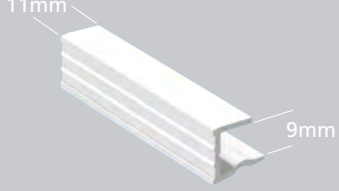
VAT020



SQU019



C5550105



Code	Dimension X
DSN028	
DSN028	28mm x 6mm D-section
CRECT028	
CRECT028	28mm x 6mm Rectangle
QUA*	
QUA012	12mm quadrant
QUA018	18mm quadrant
CAS*	
CAS040	40mm Castellated Architrave
CAS060	60mm Castellated Architrave
CAS080	80mm Castellated Architrave
CAS090	90mm Castellated Architrave
CAS100	100mm Castellated Architrave
VAT020	
VAT020	20mm x 15mm Unitrim
SQU019	
SQU019	19mm Square Trim
C5550105	
C5550105	9mm Window Board Channel

*For full list of trims please see current price list.

Frequently Asked Questions

Celuform's technical team is always willing to offer advice and practical assistance with planned installations. Our team can guide you as to the most appropriate products, expected product life, ease of installation and more. We are also able to provide estimates in terms of bills of quantities and to supply full health and safety information about each product in the range. Where you have a particularly large or complex installation, please call on us at the planning stage. One of our area sales managers can then visit you to advise on the best options for your application.

In the meantime, here are the answers to the ten most frequently asked questions about Celuforms products and PVC-UE applications in general

1. With what do you recommend fixing cover and corner joints to fascia board?

A: Low Modulus Neutral Cure Silicone.

2. Has hollow soffit got a Class 1 Fire Rating?

A: No, whilst PVC-UE products in the Celuform range have, hollow soffit has not.

3. Are Woodgrain products guaranteed for external use?

A: Yes for 10 years and white products are guaranteed for 20 years.

4. Does Celuform supply vented soffit with an insect mesh?

A: Celuform does not recommend the use of mesh. The soffit vent slots comply with BS5250 with regard to minimum slot size. Further reduction in slot size via the use of mesh may result in the vent area becoming blocked by airbourne dust and debris.

5. What expansion gaps are required when installing Celuform products?

A: For white products there should be an expansion gap of 5mm per board end (eg. 2 boards butting up to each other in the same plane = 10mm gap). When installing Woodgrain product this gap is increased from 5mm to 8mm per board end.

6. Are PVC cladding products suitable for use in swimming pool buildings?

A: Yes, contact with swimming pool water is not detrimental to PVC.

7. Is it better to install the thickest board available?

A: For a replacement installation, a 16mm fascia board will perform equally as well as thicker products, requiring no additional support and taking both gutter and tile loading. If the 16mm board chosen is VAN, it can be teamed with 9mm DLR bargeboard to give a cost effective performance installation.

8. What is the coverage of Celuform Shiplap and Open-V Cladding boards?

A: C5224 150 Shiplap = 150mm, C5224 150 Open V = 150mm, SCV100, Open-V = 100mm

9. What is the length of the leg on Celuform 'L Boards'?

A: Both VAN and DLR have the same length of leg, which is 36mm.

CELUFORM
LEAVES TREES STANDING

Product Characteristics

A) TECHNICAL DATA

Many of the applications for PVC foam profile are for wood-replacement products due to its ease of installation and the advantages of a low maintenance product. The principal products in the Celuform range are manufactured by co-extruding a highly weather-able PVC-U compound (skin) onto a PVC-UE compound (core), cooling and forming into the desired section.

In order to obtain a high quality product with the required stiffness, strength and impact performance, it is important to control foam density, skin thickness, surface finish and cell size distribution. Formulations contain a mixture of processing aid, thermal stabilisers, lubricants, pigment and filler in addition to the blowing agents required for foaming. The cellular structure is generated by the decomposition of chemical blowing agents, e.g. sodium bicarbonate (baking powder). The latest calcium organic stabiliser technology is utilised to provide optimal performance. Other products in the Celuform range (rigid profile and joints) are manufactured using conventional extrusion or injection moulding techniques.

OPTICAL PERFORMANCE

Colour

The surface colour of the profile shall be uniform and be within the optical limits as specified by Celuform's test procedure and specification for each particular colour.

Appearance and Finish

The profile shall be free from foreign bodies, cracks or sink marks when viewed by normal corrected vision at 90˚ to the surface and at a distance of 1 metre in normal diffused north light.

Subject to normal wear and tear, Celuform's PVC-UE and PVC-U profiles will retain their optical and mechanical properties for a period of at least 20 years for white and 10 years for Woodgrain foiled, with only minor changes in surface appearance. Additional care should be taken with foiled and colour finishes to ensure that correct installation procedures are followed.

CLEANING & MAINTENANCE

Celuform products are low maintenance and with the required care and attention will stay looking good for years to come. However, there are some external factors which may adversely affect the appearance of any PVC, especially after extended weathering:

- Solvent based cleaners
- Abrasive cleaners
- Environmental contamination e.g. dirt / pollen

In order to maintain the appearance, it will be necessary to wash the installation with warm soap and water to remove surface dirt. The frequency of this will depend upon the local environmental conditions. This cleaning should be carried out with copious amounts of soapy water to avoid any chance of scratching of the surface.
When wiping over **ALWAYS** use a soft cloth or sponge.
NEVER use solvent-based cleaners.
NEVER use abrasive cleaners.

Repairs and Remedial Work

In the event of a profile becoming damaged in service it is recommended that the damaged profile is removed and replaced to ensure full product performance.

DURABILITY

Colour Fastness

Accelerated weathering tests and natural exposure trials indicate that Celuform products are at least as durable as conventional window grade PVC-U profiles. White Celuform PVC-UE profiles are Kitemarked and satisfy UV stability and UV aged impact resistance requirements to BS7619:2010.

PHYSICAL PERFORMANCE

Flatness

When measured in accordance with BS7619:2010 the surface flatness over any 100mm distance does not exceed +/- 0.6mm.

Bowing

When measured in accordance with BS7619:2010 test procedure the maximum permitted bowing is 25mm over a 5 metre length. This is not applicable to products which, under their own weight, lie flat.

PHYSICAL PERFORMANCE

Dimensions (in mm)

Width (as cut)	Tolerance
0 - 50	±0.5
51-150	±1.1
151- 250	±1.7
251- 350	±2.2
Over 350	±3.3

Thickness	Tolerance
5 -12	+/- 0.5
Over 12	+/- 0.75

Length	Tolerance
5.0	- 0

Water Absorption

The PVC-U surface skin of Celuform Roofline profiles is unaffected by moisture. Due to the closed cell structure of the material cut ends are non-absorbent.

Thermal Movement

Linear thermal expansion when measured to BS4370 Part 3 Method 13 is less than 7 x 10^{-5}/°C similar to that of rigid PVC-U.thermal movement.

Product Characteristics

Thermal Conductivity
Cellular foam profiles have a very low co-efficient of thermal conductivity, resulting in insulation properties better than timber boarding or gypsum plasterboard (K=0.06W/mC).

Chemical Resistance
Staining will result from contact with creosote or bitumen. Organic solvents and solvent based cleaning solutions will damage the surface finish.

Celuform PVC-UE profiles are liable to damage if attacked by aromatic solvents, ketones and esters. PVC-UE profiles are resistant to insect attack but may need protection during storage from vermin.

Fire Resistance
Celuform white cellular foam profiles do not support combustion andconform to the following specifications: Surface spread of flame BS476Part 7 1997. Fire Propagation BS476 Part 6 1989 (see Fixing Summarytable on opposite page).CE Marking requires that cladding be testedfor its reaction to fire. Celuform PVC-UE cladding with PVC-U skin achieves a Classification of Reaction to Fire Performance: D-s3, d2/AVM.

Impact Resistance
All white Celuform PVC-UE profiles are Kitemarked and comply with the BS specification for falling weight impact resistance as specified by BS7619:2010.

Softening Point
The foamed PVC-UE material has a softening point of approximately 75°C.

STORAGE
Profiles are protected on the co-extruded surface by polythene lo-tac film, which should be removed immediately prior to installation. Celuform PVC-UE profiles are delivered in packs sealed in polythene sleeves, using coloured cellotape for ease of identification of the product shades. Pack quantities vary according to the profile and all packs carry a Celuform product code indicating product, quantity and date of manufacture.

All packs not in stillages should be unloaded by hand, stored flat in their protective packaging on a clean, level surface in stacks not exceeding 1 metre high and restrained from collapse.

Where the packs are stored externally, additional protection should be provided against the weather and accidental damage. Where possible all products should be stored in doors to prevent any water ingress to thepackaging and during excessively hot weather the removal of the possibility of heat build up and subsequent distortion of the product within the packaging.

B) PVC AND THE ENVIRONMENT
PVC RESIN SYNTHESIS: PVC is one of the world's oldest plastics. It has evolved since the 1940s to become a much used, cost-effective, safe, adaptable and environmentally efficient material. In essence, salt and oil derivatives are combined to produce a plastic material specified for a broad range of applications across various market sectors. Production processes are being continually improved. For this reason, the European industry, under the auspices of the European Council for Vinyl Manufacturers (ECVM), has signed a European Industry Charter, committing us all to tighter limits on emissions from PVC production plants.

PVC RESIN WASTE MANAGEMENT:
Plastics represent only 6% of municipal solid waste, of which the PVC component is about one tenth and is mainly composed of used packaging. It is known that the presence or absence of PVC in the municipal solid waste stream makes no difference to the levels of dioxins produced during incineration.

Developed countries generate some 500 kg of waste per person per annum. In the EU this represents 100 million tonnes. of household waste annually. Plastic materials account for 6%, of which PVC itself accounts for 0.6% in total, i.e. 600,000 tonnes. In Western Europe only 30% is incinerated, most going to landfill.

A study of PVC undertaken by the TNO Institute of Environmental and Energy Technology in Holland on behalf of the European Commission's Director General emphasises that PVC can be incinerated safely and cleanly.

REPROCESSING PVC-U AND PVC-UE:
During any manufacturing process, a small percentage of scrap is generated. Celuform reprocesses this back into the manufacturing cycle without losing any of the excellent characteristics of our finished products. Long term durability, aesthetics, colour fastness and weather resistance are not affected. Celuform reprocesses 99.8% of all its incoming materials. The small amount of unusable scrap is disposed of, off site, at locally authorised and registered incinerators or land fill sites.

C) STANDARDS AND CERTIFICATION
Celuform's principal product ranges have all the necessary approvals for wide use in the majority of common domestic and commercial building applications.

British Board of Agreement
PVC-UE Roofline System :Certificate No.11/4835
PVC-UE Cladding System :Certificate No.11/4839.

BS Kitemark:
Celuform products are manufactured in accordance with British Standard 7619: 2010. License no. KM51726.

Company Standards:
Celuforms' business and manufacturing resources have been assessed to and are operated under ISO 9001:2008, ISO 14001:2004 and BES 6001.

D) PRODUCT GUARANTEES
Celuform's white products are guaranteed for 20 years and woodgrains for 10 years provided that approved installation and maintenance instructions are followed. Copies of the guarantees which relate to Celuform products are available from the marketing team.

General Fixing Summary

Roofline		
Expansion Gap	White	5mm per board end
	Foils & Colours	8mm per board end
Fixing	Replacement Fascia - 16mm+	2 per fixing centre, max 600mm centres, 65mm polytop nails (or 50mm x 4mm shank screws), austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009)
	Overcap fascia - 9mm+	2 per fixing centre, max 600mm centres, 50mm polytop nails (or 40mm x 4mm shank screws), austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009)
	Soffit	Per fixing centre, max 600mm centres, 40mm polytop pins (or 40mm x 4mm shank screws), austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009)
Soffit Boards	Soffit wider than 300mm	Soffits up to 300mm wide require no additional fixing. Soffit boards over 300mm wide should be fixed at maximum 600mm centres along their length and 300mm centres across their width. Fix to adequate timber bearers.
Load Bearing load	Fascia 16mm+	16mm - 22mm boards will support all eaves tiles in common usage in the UK (up to 10kg per 1m length of fascia) provided that the boards are installed within the requirements of the BBA certificate.
	Fascia <16mm	All fascia less than 16mm requires a minimum 12mm exterior grade plywood backing board.
Joint Fixing		Low modulus neutral cure silicone BS5889 Type A
Gutter Fixing 25mm	For 16 - 22 mm boards	Fix gutter brackets directly into the board using, for each bracket, at least 2 x 10 gauge x long (parallel thread form)austenitic s/steel screws, ensuring that the screws penetrate the rear face of the board and that the bracket spacings do not exceed one metre.
Gutter Fixing	For 9mm boards	For the 9 mm board, gutter brackets are screwed through the fascia board onto rafter feet or other timber support.

Cladding		
Expansion Gap	White Foils & Colours	5mm per board end 8mm per board end
Joint Fixing		Low modulus neutral cure silicone BS5889 Type A.
Fixing Centres	White	1 per fixing centre, max 600mm centres, 25 or 30mm x 2mm shank nails, austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009)
	Foils	1 per fixing centre, max 400mm centres, 30mm x 2mm shank nails, austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009).
	Celutex™ Embossed	1 per fixing centre, max 300mm centres for twin plank, (600mm for single plank) 30mm x 2mm shank nails, austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009).
Battens / Ventilation	White	19 x 38mm battens. Allow a minimum of 19mm ventilated air space behind the back of all cladding installations. This satisfies the NHBC requirement for a minimum 10mm wide ventilation cavity to be maintained between claddings and sheathing.
	Foils	50 x 38mm battens. Allow a minimum of 50mm ventilated space behind the back of all cladding installations.
	Celutex™	25 x 38mm battens. Allow a minimum of 25mm ventilated air space behind the back of all cladding installations.

General		
Installation Temperature		To be installed between 5°C & 25°C temperatures

Fire Rating				
	Range	**Finish**	**Thickness (mm)**	**Class**
BS476 Part 7	Roofline	White	16 - 25	1
BS476 Part 7	Roofline	White	8 - 10	1Y
BS476 Part 7	Cladding	White	6	1Y
BS476 Part 7	Cladding	White / Coloured	7	2Y
EUROCLASS BS EN 13823 & BS EN ISO 11925-2	Cladding	White / Coloured	6, 7	D-s3,d2
EUROCLASS BS EN ISO 11925-2	Cladding	Laminated Foil	6	E

CELUFORM
LEAVES TREES STANDING

Dedicated Estimating Team

Celuform has a dedicated estimating team with over 20 year's experience. With the ability to accept electronic and hard copy tenders and drawings. Average turnaround time is under seven days offering 99.5% accuracy and they are able to schedule from drawings or pricing bill of quantities. This service is free of charge.

All electronic drawings should be e-mailed to: spec@celuform.co.uk

All paper drawings should be posted directly sent to:

Celuform Estimating Department
Billet Lane,
Normanby Enterprise Park,
Normanby Road,
Scunthorpe,
North Lincolnshire,
DN15 9YH.

Specification Tel : 01724 400 454
Specification email : spec@celuform.co.uk

Celuform Customer Services

TEL: 08705 920 930
Email: info@celuform.co.uk

www.celuform.co.uk

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