Sheathing Boards

Design and **construction** guide



benx

the future of façades

JLT GROUP
LTE HOISTS

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Sheathing Boards for all applications

Introduction

This guide is intended for architects, specifiers, contractors, and installers working with Benx sheathing board in timber and steel frame systems. It covers design guidance, installation, fire performance, and product selection.

Our range of high-performance sheathing boards are designed to provide strength, durability, and protection in modern wall systems. Suitable for both commercial and residential construction, these boards enhance structural performance while helping protect buildings from moisture, fire, and environmental exposure.

Engineered for reliability and ease of installation, our sheathing boards integrate seamlessly with steel and timber frame systems, making them an ideal solution for a wide range of building applications.

Design Benefits

Fire Resistance
Our boards provide fire-rated solutions that support safe and compliant wall assemblies.

Structural Strength
Provides rigidity and stability to wall systems, helping buildings withstand wind loads and structural movement.

Moisture & Weather Resistance
Protects the building envelope from water penetration and environmental exposure.

Versatile Applications
Compatible with steel frame and timber frame systems across residential and commercial construction.

Fast & Easy Installation
Large board formats and easy fixing reduce installation time and improve on-site productivity.

Usability
Wide range of thickness and standard sizes.



Example of Our Y-Wall Sheathing Board

Durability and Weathering

Our boards provide durable protection against weather, moisture, and mould while maintaining fire performance and controlled air permeability.

Fire Protection

To achieve an EI fire rating, Nullifire 703 OR FR Pro must be used to seal any gaps or open joints, including 2mm to 5mm joints in open jointed sheathing boards such as Y-Wall.

Weathering

Exposure for up to 12 Months:

Benx guarantees the performance of the board if edges and joints are sealed with a suitable sealant, and DAFA or RCM315 sealing tape is applied over the joints.

This guarantee applies only where boards are exposed for no longer than 12 months.

Exposure for up to 6 Months:

Benx guarantees the performance of the board if edges and joints are sealed with a suitable sealant.

This guarantee applies only where boards are exposed for no longer than 6 months (3 months for DensGlass specifically).

Air Permeability

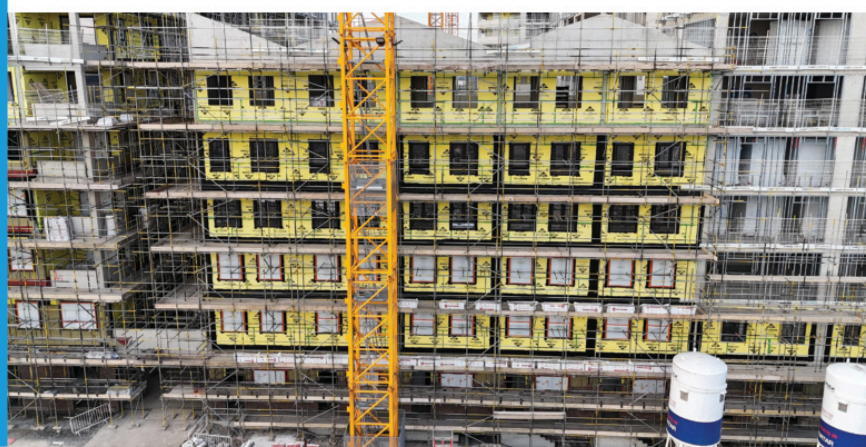
Benx recommends the use of the Joint Seal Kit If there is an Air Tightness requirement. This system combines Joint Seal Liquid with DAFA sor RCM315 ealing tape to provide enhanced sealing performance at board joints. The application of the Joint Seal Kit does not affect the specified exposure limits for weathering. For further information please see Table 9 on Pg 17.

Fixings

For projects requiring a 60-year design life in marine or coastal environments, the specification of fixings for sheathing boards is critical to long-term performance. All external fixings, brackets and ancillary components should be manufactured from stainless steel as a minimum, offering enhanced resistance to chloride-induced corrosion from salt-laden air. In more exposed locations, such as areas subject to direct sea spray, higher-performance materials such as SS 316 may be required.

Breather Membranes

With any facade design there are multiple factors that may impact the requirement to use a breather membrane with our boards. Third parties or insurers may stipulate the requirement for an independent secondary line of defence. Therefore, it is the responsibility of the design team to establish if membranes and their locations are required by third party/insurers on the respective project.



Example of
our DensGlass
Sheathing Board

Associated Products

		Y-Wall	Multipurpose	DensGlass
Tapes	RCM315	✓	✓	✓
	RCM FR PRO	✓	✓	✓
	RCM JOINT SEAL LIQUID	✓	✓	✓
	DAFA UV	✓	✓	✓
	ME010	✓	✓	✓
Fixing	Ø4.8x38mm FIX006 - Steel Frame	✓	✓	✓
	Ø4.2x42mm FIX005- Timber Frame	✓	✓	×
	Ø 4.2mm x 32mm FIX018 - Steel Frame	×	×	✓
Sealants	Nullifire 703	✓	✓	✓
	FR Pro	✓	✓	✓
Breather Membranes	ME050 FR	✓	✓	✓ *
	Wraptite	✓	✓	✓ *
	Photon Wrap	✓	✓	✓ *
	ME013	✓	✓	✓ *
	ME024	✓	✓	✓
Blades	Dart Blade PCD	✓	✓	×

*Subject to condensation risk analysis, build as per final project design

Design Considerations

Structural Guidance

Benx sheathing boards are generally not designed to be primary loadbearing elements. They are structural sheathing components, not structural frames. The performance of the boards is dependent on the system as a whole including, fixings, stud type and spacing, support system and presence of insulation and cavity. They are installed on timber or steel frames as an external layer; their role is to:

- **Provide racking (shear) strength to the wall**
- **Act as a substrate for cladding systems**
- **Improve weather, fire, and impact resistance**

Racking Strength

Racking strength of our sheathing boards is determined in accordance with BS EN 594. Backed by strong test data our boards enhance the structural performance of framed wall systems by providing adequate racking resistance

In practical terms the racking strength of the boards should be considered negligible and the substrate without the board must be capable of withstanding the required wind and racking loads. (for typical racking figures see table 10)

Mechanical Fixings

Ø4.8 × 38 mm (FIX006)

Steel Frame: Heavy-duty self-drilling screw for fixing sheathing boards to steel studs, offering higher pull-out resistance for thicker gauge steel.

Ø4.2 × 42 mm (FIX005)

Timber Frame: Coarse-thread screw designed for timber substrates, providing strong grip and secure fixing of boards into timber studs.

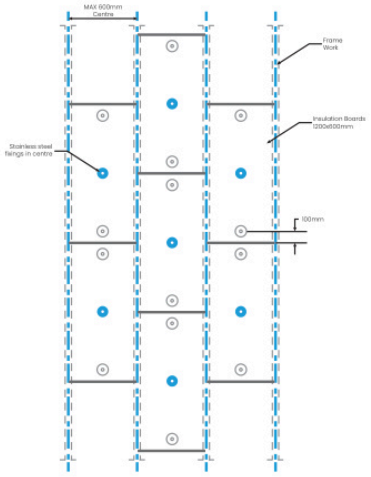
Ø4.2 × 32 mm (FIX018)

Steel Frame: Shorter self-drilling screw for steel framing, typically used for thinner boards or lighter-duty applications where reduced penetration is required e.g.- DensGlass.

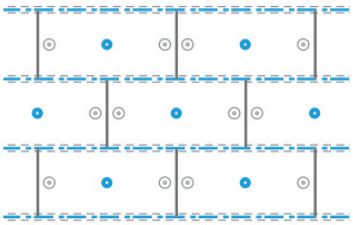
Guidance note Benx do not recommend using impact drivers with our fixings, this is because it can cause cracking and damage to the boards. Ø4.8 × 38 mm (FIX030) - Steel Frame - Countersunk wingtip screw designed for securely fixing boards to steel substrates between 1–4 mm thick.



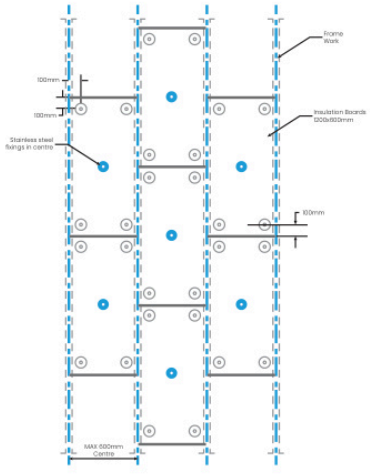
Installing Insulation Boards



3 Fixings per Board



4 Fixings per Board



5 Fixings per Board

1. Measuring and Cutting

Measure the dimensions of the wall and cut the Cladwool RS MV boards to fit the required space. Boards should be cut with a sharp knife to ensure precise fitting around openings and brackets.

2. Fixing Method

The Cladwool RS MV boards can be mechanically fixed using specialised insulation fasteners. Fastener type and length should be chosen based on the substrate and insulation thickness.

Fastener Spacing: Place the fasteners and space them evenly across the board surface with the oversized washers covering both the board above and below (3, 4 or 5No. fasteners per board, depending on wind load requirements – refer to diagrams below).

The Fixing used for Cladwool to Y-Wall or Multipurpose is WX58T screws with a 60KC insulation + KLW 90 insulation retaining plate. We also recommend 1 metal fixing (WX58T) in conjunction with POK 070 washer through the centre of each slab.

When fixing into masonry structures for insulation thickness up to and including 180mm, we recommend using our KI 10 in conjunction with our KWL 90 insulation retaining plate. For insulation above 180mm, we recommend our TFIX 8S screw fixing with a KWL 90 plate. The 1 additional fire fixing we recommend is the Benx MBA-SS-08 hammer fixing with a MKC-SS-85 washer.

3. Board Placement

Begin installing the boards at the base of the wall, ensuring they are level. Place the boards tightly against one another to avoid thermal bridging. Boards should be installed in a staggered pattern to reduce the risk of gaps. (diagrams to the left).

4. Corners and Edges

Special attention should be given to corners and edges to ensure continuous insulation. Use pre-cut corner pieces or ensure that the boards are properly aligned at the corners to avoid gaps.

*Please note: Fixing patterns can change depending on specific height and anticipated wind loading requirements, so it is recommended that this is assessed as part of the project review prior to any installation.

The recommended fixing patterns apply to Multipurpose and Y-wall boards only.
DensGlass is subject to alternative fixing patterns into SFS stud centres only.

Cladwool
Insulation Boards

Technical Information	Value
Thermal conductivity coefficient	≤ 0.035 W/mK
Class for thickness tolerance T5	T5 (-1mm/+3mm) or (-1%/ +3mm)
Dimensional Stability under 70°C and 90% Humidity	≤1.0%
Compressive Stress at 10% deformation CS(10)	0.5 kPa
Water vapour transmission MU	MUI
Reaction to fire BS EN 13501-1:2018	AI Non Combustible
Standard thicknesses	50mm - 220mm in 10mm increments
Standard slab size	1200mm x 600mm
Non standard slab sizes	1000mm × 600mm / 1200mm x 2000mm

Figure 1 - Cladwool RS Technical Data



Y-Wall
Sheathing Boards

Y-Wall is a cement-based external sheathing board used in construction systems such as timber frame and light steel frame buildings. It is an A1 Rated calcium silicate sheathing board, which gives it a combination of strength, durability, and resistance to moisture and fire. The board is designed to provide a robust external layer to wall assemblies, helping to stabilise the structure while also protecting the internal layers from weather exposure during construction.

Y-Wall is tested and certified for use as external sheathing in ventilated rainscreen façade systems. Some of the main properties are:

Technical Information	Value/Unit	Applicable Standard
Sheet Length	2400, 2850, 3000mm ±3	
Sheet Width	1200mm ±2mm	
Sheet Thickness	6mm, 9mm, 12mm & 15mm ±10%	
Weight Per Sheet (Approx) kg/m²	7.2, 10.8, 14.4 & 18	
Nominal Dry Density	1200kg/m³	BS EN 12467
Fire Resistance	60 / 90 / 120 min	BS EN 1363/64/65
Rection To fire	A1 Non Combustable	BS EN 13501-1
Modulus Of Rupture (MOR)	9-12MPa	BS EN 12467
Vapour resistance factor (μ-value)	57	BS EN 12467
Thermal Conductivity	0.23 W/mK	BS EN 12467
Declared Moisture Resistance	≤9%	BS EN 12467

Table 2- Y-Wall Physical Properties

Applications

- Fire rated sheathing board
- OEM applications for improved strength and density

Other Applications*

- Ceilings
- Partition walling

*Must be certified by project specific engineer

Testing

Fire

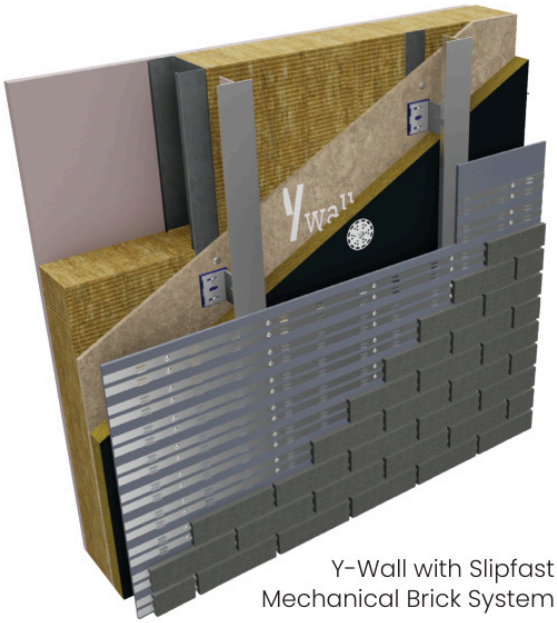
BS EN 476 – Non-loadbearing
BS EN 1364 – Non-loadbearing
BS EN 1365 – Loadbearing
BS EN 13501-1
BS EN 13501-2
BS EN ISO 1182
BS EN ISO 1716

Physical Properties

BS EN 594
BS EN 12467
ISO 12572
BS EN 1015-11
BS EN 12667

**Please see page 29 for breakdown of standards

Typical
Cladding Options



Y-Wall with Slipfast
Mechanical Brick System



Y-Wall with
Rainscreen System



Y-Wall with
EWI System



Y-Wall with
Rendaclad

*More build ups available

Multipurpose Sheathing Boards

Multipurpose is a cement-based fibre cement board used in construction systems such as timber frame and light steel frame buildings. It is an A1 rated non-combustible board, providing a combination of strength, durability, and resistance to moisture and impact. The board is designed to act as a robust sheathing or lining layer within wall assemblies, contributing to structural stability and long-term performance.

The board is suitable for use as external sheathing in ventilated rainscreen façade systems and is also certified for internal lining applications, offering versatility across different construction requirements. Some of the main physical properties of multipurpose are:

Technical Information	Value/Unit	Applicable Standard
Sheet Length	2400mm & 2440mm +1/-2mm	
Sheet Width	1200mm & 1220mm +1/-2mm	
Sheet Thickness	3.2mm, 4.5mm, 6mm, 9mm, 12mm & 18mm ±10%	
Weight Per Sheet (Approx) kg/m²	4.4, 6.2, 8.25, 12.4, 16.5, 24.75	
Nominal Dry Density	1375kg/m³	BS EN 12467
Fire Resistance	60 / 90 min	BS EN 1363/64/65
Rection To fire	A1 Non Combustable	BS EN 13501-1
Modulus Of Rupture (MOR)	10.5-15MPa	BS EN 12467
Vapour resistance factor (μ-value)	46	BS EN 12467
Thermal Conductivity	0.12 W/mK	BS EN 12467
Declared Moisture Resistance	8%	BS EN 12467

Table 3 - Multipurpose Physical Properties

Applications

- OEM applications for improved strength and density
- Sheathing applications

Other Applications*

- Tile backer boards
- Can be used in flooring and roofing applications
- Internally as wall liner

*Must be certified by project specific engineer

- External walling
- Flooring and ceilings
- Fascias and soffit liner (We do not have any fire tests for this)
- External cladding

Testing

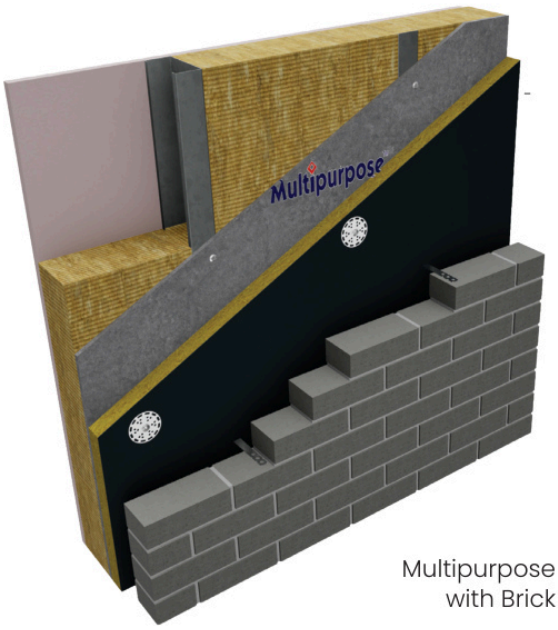
Fire

BS EN 476-Non-loadbearing
BS EN 1364-Non-loadbearing
BS EN 1365-Loadbearing
BS EN 13501-1
BS EN ISO 1182
BS EN ISO 1716

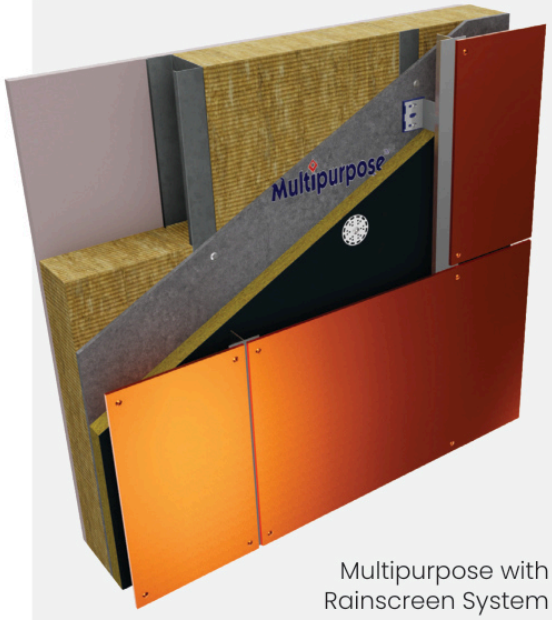
Physical Properties

BS EN 594
BS EN 12467

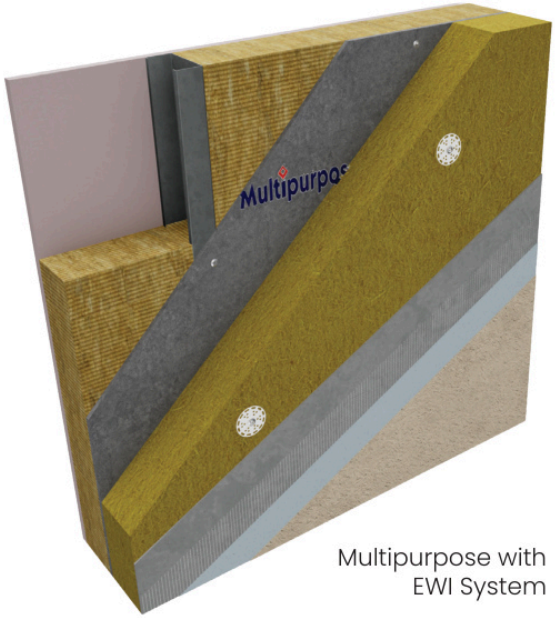
Typical
Cladding Options



Multipurpose
with Brick



Multipurpose with
Rainscreen System



Multipurpose with
EWI System



Multipurpose with
Rendaclad

DensGlass Sheathing Boards

DensGlass is a gypsum-based external sheathing board with fibreglass mat facings, used in construction systems such as timber frame and light steel frame buildings. It is classified as A1 non-combustible, providing a combination of dimensional stability, durability, and resistance to moisture and fire. The board is designed to form a robust external layer to wall assemblies, helping to stabilise the structure while also protecting internal layers from weather exposure during construction.

DensGlass is tested and widely specified for use as external sheathing in ventilated rainscreen façade systems and can also be used in internal applications where enhanced fire performance is required. Some of the main physical properties of DensGlass are:

Technical Information	Value/Unit	Applicable Standard
Sheet Length	2400mm ±6mm	
Sheet Width	1200mm ±3mm	
Sheet Thickness	12.7mm	
Weight Per Sheet (Approx) kg/m²	9.27	
Nominal Dry Density	1200kg/m³	BS EN 12467
Fire Resistance	60 -120 min (In Systems)	BS EN 1363/64/65
Rection To fire	A1 Non Combustable	BS EN 13501-1
Modulus Of Rupture (MOR)	5.5 Mpa	BS EN 12467
Vapour resistance factor (μ-value)	6	BS EN 12467
Thermal Conductivity	0.20 W/mK	BS EN 12467
Declared Moisture Resistance	To EN 15283-1	BS EN 12467

Table 4 - Densglass Physical Properties

Applications

- Rainscreen cladding
- Masonry facades
- Fibre-cement sidings
- Timber Cladding
- External Wall Insulation Systems
- Sheathing Application

*Must be certified by project specific engineer

Testing

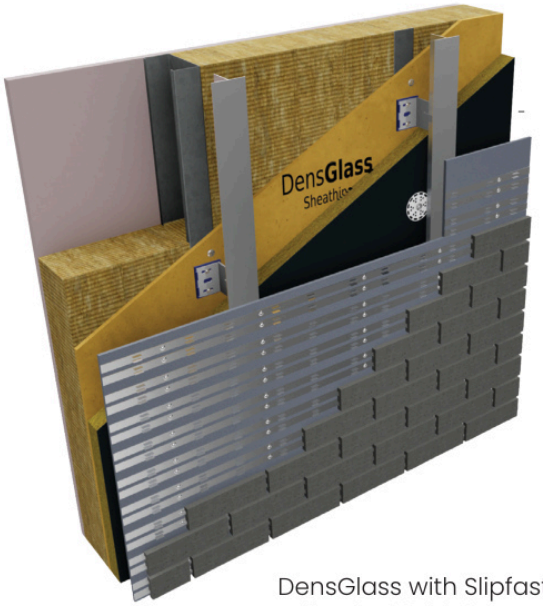
Fire

BS EN 476 – Non-loadbearing
BS EN 1364 – Non-loadbearing
BS EN 13501-1
BS EN 13501-2
BS EN ISO 1182
BS EN ISO 1716

Physical Properties

BS EN 594
BS EN 12467

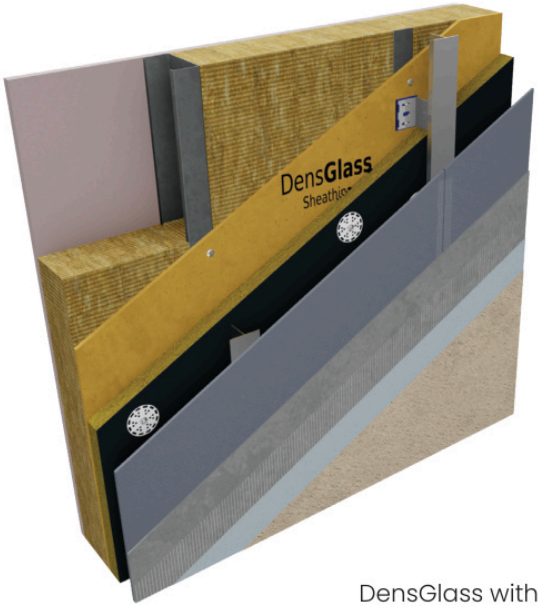
Typical
Cladding Options



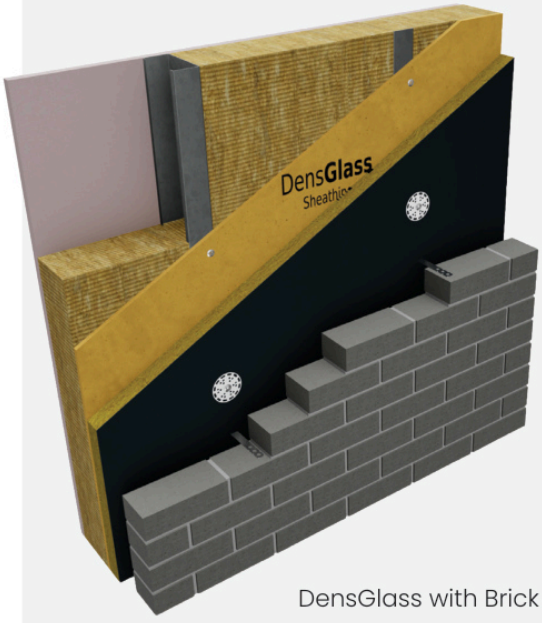
DensGlass with Slipfast
Mechanical Brick System



DensGlass with
Rainscreen System



DensGlass with
Rendaclad



DensGlass with Brick

Fire Performance

Our sheathing board range includes A1 fire rated, BBA approved products. Designed to contribute to the overall fire performance of the wall system when installed as part of a tested and classified build-up. Fire performance is determined in accordance with BS EN 1364-1 (non-loadbearing walls) or BS EN 1365-1 (loadbearing walls), with performance classified to BS EN 13501-2 (e.g. EI / REI ratings).

The achieved fire performance is dependent on the full system, including board type, fixings, joint treatment, and sealing. Project-specific assessments are required for all projects.

Fire Resistance

Classifications such as EI (integrity and insulation) and REI (loadbearing capacity, integrity, and insulation) are used to define the required level of performance depending on whether the wall is non-loadbearing or loadbearing.

It is essential that the complete wall system is designed and installed in line with tested configurations to ensure the intended level of fire performance is achieved in practice.

Fire Performance Summary for Benx Sheathing boards

		Y-Wall	Multi-purpose	DensGlass
	Fire Rating in Accordance With **BS EN 13501-1**	A1 BBA Approved		
Fire Classification	**BS EN 13501-1** Fire classification of construction products and building elements	✓	✓	✓
Fire Classification	**BS EN 13501-2** - Fire resistance classification of building elements	✓	N/A	✓
Fire Resistance	**BS EN 1364-1** - Fire resistance tests for non-loadbearing elements - Part 1: Walls	✓	✓	✓
Fire Resistance	**BS EN 1365-1** - Fire resistance tests for loadbearing elementsPart 1: Walls	✓	✓	✓

Table 5- Sheathing Board Fire Test Summary

Overview
of BS EN 1364 Non-Loadbearing & 1365 Loadbearing

BS EN 1364-1 applies to non-loadbearing walls, assessing integrity (E) and insulation (I) under fire exposure, with classifications such as EI 60 or EI 120.

BS EN 1365-1 applies to loadbearing walls, assessing loadbearing capacity (R) in addition to integrity and insulation, with classifications such as REI 60 or REI 120.

We have worked with several SFS companies to carry out extensive testing across a wide range of build-ups. This comprehensive testing program underpins the proven performance of our boards and reflects our commitment to quality and reliability.

Testing Company	System/Board	Performance
Frame Clad	DensGlass	60 minutes
	Y-Wall	120 minutes
Hadleys	Y-Wall	90 minutes
KingSpan	DensGlass	120 minutes
	Renderflex	60 minutes
	Y-Wall	90 minutes
Metsec	DensGlass	90 minutes
	Multipurpose	90 minutes
	Y-Wall	120 minutes
SFS	DensGlass	90 minutes
	Multipurpose	120 minutes
	Y-Wall	120 minutes

Table 6- SFS Testing with our product

*Maximum Performance figures quoted, subject to overall build up.

Guidance over 11m

To meet compliance with Approved Document B (fire) for facades over 11m, we provide A1 non-combustible boards. These boards are tested to BS EN 13501-1 as well as BS EN 1364-1 & BS EN 1365-1 as shown in the table overleaf.

Test Data
Wind Loading

		Allowable Wind Load	
Board Type	**Thickness**	**Single Span**	**Double Span**
Multipurpose	6mm	0.60kN/m²	1.44kN/m²
	9mm	2.02kN/m²	4.75kN/m²
	12mm	4.78kN/m²	8.44kN/m²
Y-Wall	9mm	1.12kN/m²	2.14kN/m²
	12mm	2.65kN/m²	3.80kN/m²
DensGlass	12.7mm	1.44kN/m²	0.57kN/m²

Table 7- Benx Sheathing board Wind Load table

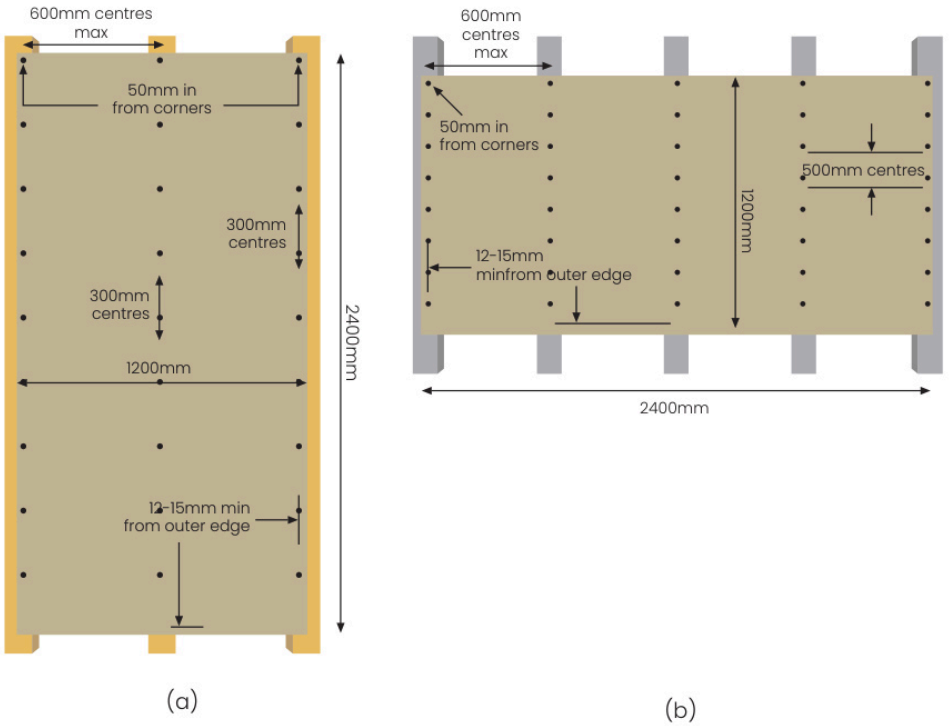


Figure 2- Typical double spanning board (a) vertically fixed and (b) horizontally fixed with 600mm fixing spans and 200mm or 300mm fixing centres.



Air permeability



	Infiltration (Max at 600Pa)	Exfiltration (Max at 600Pa)
Y-Wall (6mm)	0.43	0.47
Y-Wall (9mm)	0.24	0.07
Multipurpose (6mm)	0.23	0.28
DensGlass	-	0.019 (Max at 500Pa)

Table 9- Air Permeability Data

	Panel	Top Load (kN)	Racking Stiffness (R) N/mm	F Max (kN)	Basic Test Racking Resistance to BS 5268-6.1 (kN/m)
Y-Wall	1	0	1260	27.65	2.52
	2		943	27.11	
	3		1056	29.36	
	Mean	-	1086	28.04	-
	1	5	1714	35.22	2.38
	2		1884	30.34	
	3		1842	29.65	
	Mean	-	1813	31.74	-
Multipurpose	1	0	1034	7.44	1.76
	2		701	7.28	
	3		614	7.53	
	Mean	-	783	7.42	-
	1	5	1215	13.14	1.75
	2		1372	12.42	
	3		1412	12.39	
	Mean	-	1333	12.65	-

Table 10- Racking Data on timber frame

Construction Guideline & Best Practices

Edge Sealing

We specify Nullifire 703 fire-rated, providing both the required fire performance at joints and penetrations, as well as acting as a temporary weather seal for up to 6 months of exposure.

Board-to-board joints should be fully sealed with a continuous, unbroken application of fire-rated mastic or an approved sealant. Cut edges must also be sealed where exposed to prevent moisture ingress, particularly around openings such as windows and doors, as well as at perimeters and terminations.

Edge Detailing

Joints and edges should be sealed using a compatible airtight and fire-rated sealant to ensure continuity of the air barrier. Service penetrations must be sealed with appropriate fire-stopping products to maintain the required fire performance.

Only manufacturer-approved and compatible products should be used with the board, ensuring suitability with adjacent materials and systems. While the sealing system can provide up to 6 months of temporary exposure, boards should be fully protected and clad as soon as practicable.

Sustainability

Our experienced and complimentary technical support team can provide advice at all stages of your project to help you achieve your vision. In addition, a fully integrated fabrication service allows customers to order both boards and façades to exact size to reduce construction time, minimise wastage and improve environmental impact. As well as this we hold recognised ISO certificates including ISO 14001 and 5001, showing our commitment to environmental management.

Storage & Handling

Benx building board panels are stacked neatly on timber pallets to prevent sagging or damage. The boards must be stored in a ventilated and dry environment on a flat, level surface protected from contamination. To avoid excessive flexing of the boards, long edges must be supported when lifting and handling. The Certificate holder's instructions on site handling and storage must be followed.







Fixing Guide

Layout Patterns

Benx Sheathing boards to be installed in a brick bond pattern in accordance with Benx recommendation. Line and level the first board and fix in accordance with the fixing drawing. Follow the same process with the next board leaving consistent joints as noted below..

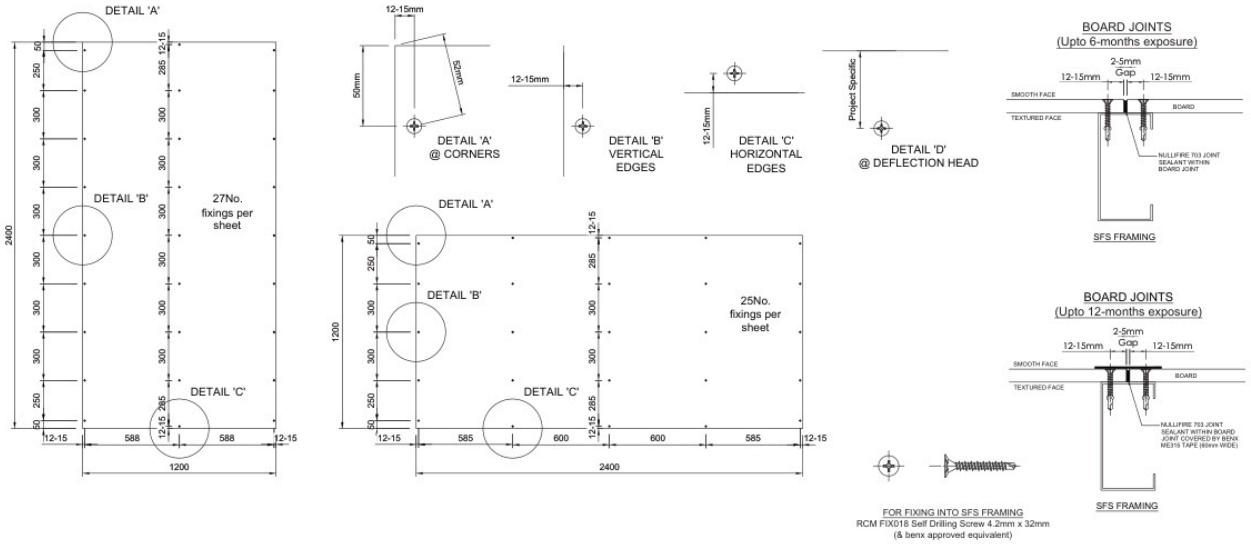


Figure 3- Fixing Guide for Y-Wall

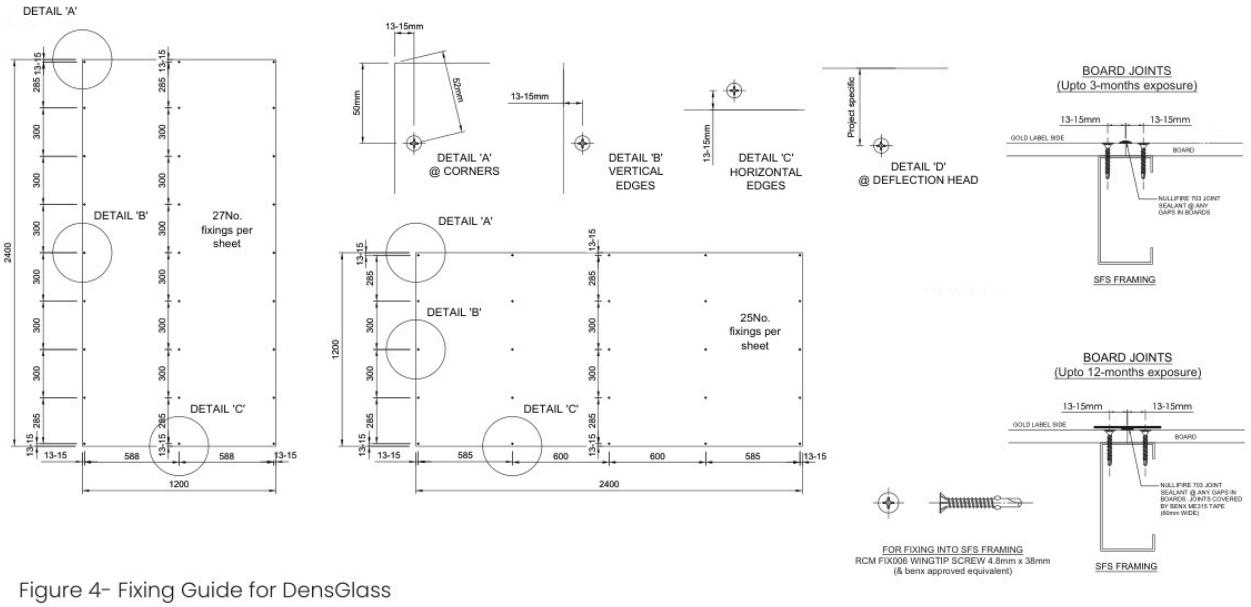


Figure 4- Fixing Guide for DensGlass

Fixing Guide

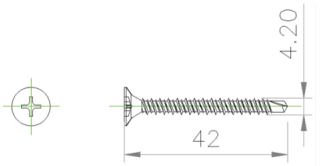
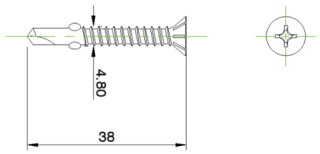
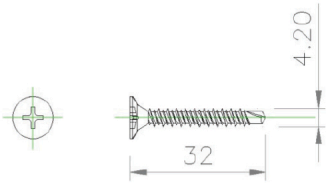
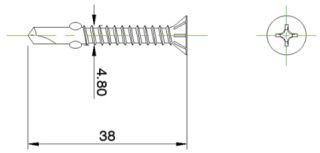
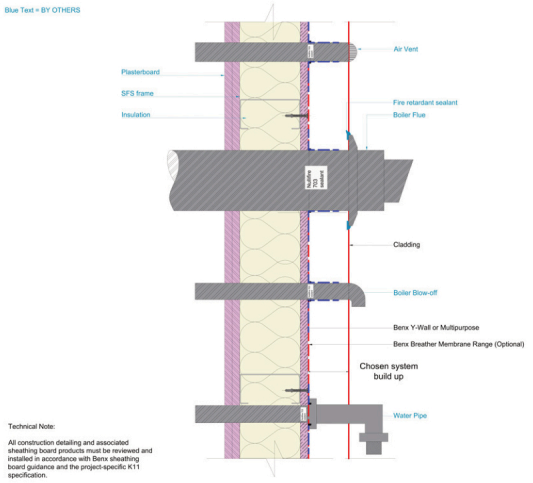
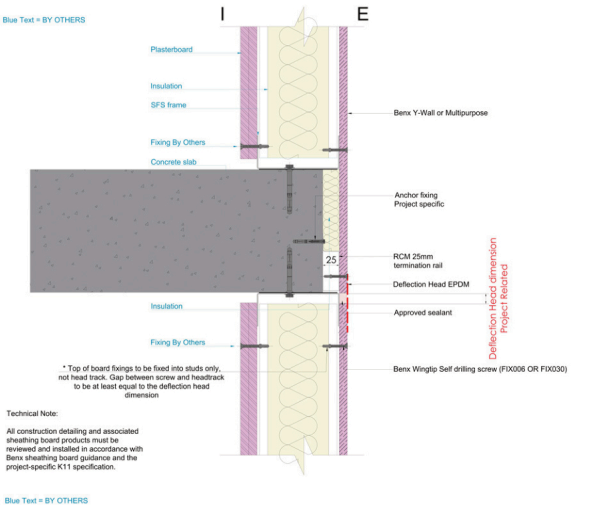
Fixing	Material	Coating	Fixing Head Type	Pull-Out Strength (N) (Based on 1.2mm steel thickness)	Applicable Board	Fixing Image
FIX005	Hardened Carbon Steel	Evoshield 1000hr	Countersunk	1600	Y-Wall Multipurpose	
FIX006		Galvanic Zin plated Zn 10-12 bk		1350 (Based on 1mm steel thickness)	Y-Wall Multipurpose	
FIX018	Hardened Carbon Steel	Evoshield 1000hr		1600	DensGlass	
FIX030	AISI C1022	500hr Evoshield		1100	Y-Wall Multipurpose	

Table 8- Benx Approved Fixing information Table

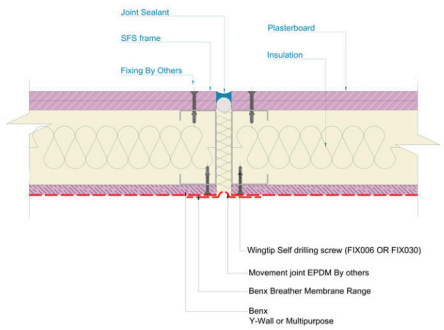
Construction Drawings



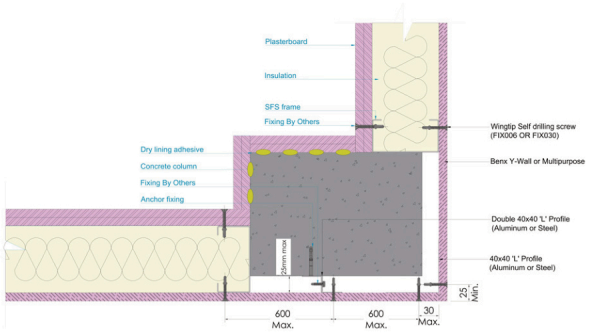
Detail 1- Typical Service Penetration Details



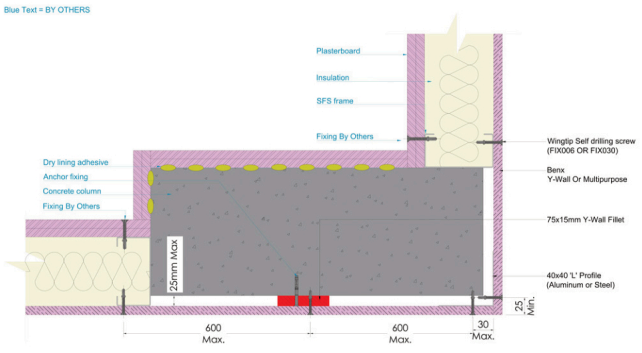
Detail 2- Deflection head detail on top hat



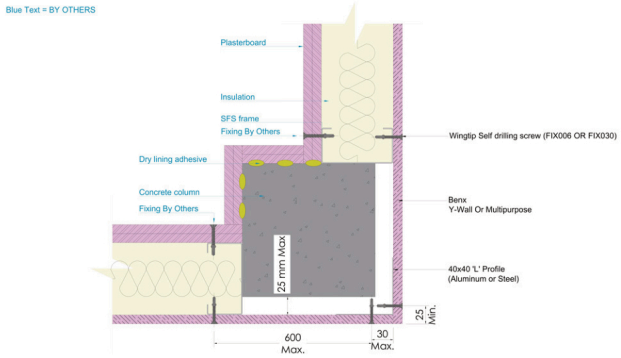
Detail 3- Typical Movement Joint Detail



Detail 4 - Typical corner detail on fillet



Detail 6 - Typical corner detail on "L profiles" - variable slab depth



Detail 5 - Typical corner detail

Additional Support & References

Y-Wall (Calcium Silicate Sheathing Board)

- Can be exposed for up to 12 months provided joints are suitably sealed.
- Maintain joint sealing systems (e.g. tapes or fire-rated sealants such as Nullifire where required).
- Ensure breather membranes, flashings, and damp-proofing details remain intact at openings, eaves, and base.
- Inspect areas subject to high moisture, frost, or thermal movement, as the board is designed for these environments but still relies on correct detailing.
- Routine maintenance should focus on:
  - Joint integrity
  - Edge sealing
  - Protection from water ingress

Multipurpose

- Requires similar maintenance approach to Y-Wall:
  - Ensure joints and edges remain sealed
  - Maintain integrity of façade system and weather barriers
- Inspect periodically for:
  - Mechanical damage
  - Sealant failure
  - Moisture ingress at junctions
- Board durability is high, but performance depends on correct installation and ongoing protection.

DensGlass

- Must not be exposed to standing water or prolonged saturation.
- Boards are resistant to weather but are not intended for immersion and must be protected from water ponding.
- All openings and penetrations must remain properly flashed and sealed.
- Exposed edges (e.g. parapets) must be protected to prevent water ingress.
- Boards must not be left permanently exposed and should be covered by the façade system.

Key Maintenance Risks to Monitor

- Failed or degraded joint sealants / tapes
- Water ingress at edges, openings, or parapets
- Damage to boards from impact or construction activity
- Unapproved modifications affecting fire or structural performance



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BSR Compliance Checklist

Is your sheathing board specification Gateway 2 ready? ☐

For higher-risk buildings, Gateway 2 requires Building Safety Regulator approval before construction work can begin. This places greater emphasis on selecting the right sheathing boards as part of a fully coordinated and evidenced external wall system. Benx boards and tested system build-ups are designed to support compliance with Gateway 2 requirements, with documented fire classification, system fire performance, fixing details, structural suitability, weathering performance and installation guidance available to assist project submissions. This helps design teams demonstrate Building Regulations compliance from specification through to installation.

BSR compliance starts with a fully evidenced wall system. Complete this checklist to assess whether your sheathing board specification is ready to support a Gateway 2 submission.

Is your system non-combustible A1/A2-s1,d0? ☐

Have you specified suitable non-combustible sheathing boards, with clear fire classification evidence?

Benx Support We provide multiple A1 Boards and with supporting test documents (Refer to Table 5).

Evidence for Gateway 2 ☐

Do you have product data, fire reports, fixing details, installation guidance and supporting test evidence ready?

Benx Support We provide test data and installation guidance to help you breeze through this process.

System performance ☐

Has the sheathing board been assessed as part of the full wall build-up, including insulation, membranes, cavity barriers, cladding and fixings.

Benx Support The sheathing must work with insulation, membranes, cavity barriers, cladding and fixings. We provide all these ancillaries, just ask!

Structural suitability ☐

Can the board meet project requirements for wind loads, racking, deflection, pull-out and pull-through performance?

Benx Support Our sheathing boards have been extensively tested to give a clear understanding of wind loads, racking capabilities, deflection and pull-out/pull-through values.

Product traceability ☐

Can you clearly identify the board type, thickness, certification, manufacturer data and relevant batch information?

Benx Support We provide clear data sheets to help you understand the intricate details of the boards, this includes certification, board type, thickness and more.

BSR Compliance Checklist

Competent Installers ☐

Are installers trained and supported with clear fixing patterns, joint treatment, tolerances and inspection checks?

Benx Support Installation is a vital part of the performance of our systems, we provide set fixing patterns, joint treatment, tolerances and guidance on inspection checks as well as training on installing all our systems.

Interface details ☐

Are key junctions fully detailed, including windows, balconies, slab edges, roofs, corners and penetrations?

Benx Support To accommodate a high installation quality, we can provide details such as junctions around windows, balconies, slab edges, roofs, corners and much more.

Cavity barrier coordination ☐

Are cavity barriers and fire-stopping supported, continuous and coordinated with the sheathing board build-up?

Benx Support It is important to make sure cavity barriers and fire-stopping are supported, continuous and clash-free. Whilst we do not provide guidance on how to install these, we do supply them.

Weather and durability ☐

Is there clear guidance on weather protection, exposure limits and long-term board durability?

Benx Support We provide clear guidance of how to protect our boards from weathering as well as test data to show the durability of our boards.

Change control / golden thread ☐

Are any changes approved, recorded and signed off, with evidence kept for the golden thread?

Benx Support With both technical and commercial guidance Benx can offer start to finish assistance and a clear path with no need for deviation, however, if changes are made these should be approved and signed off.



FAQ's

Can Benx boards be used in below DPC applications?

The sheathing boards have not been tested below ground level. Where installed below traditional DPC level, an appropriate EPDM should be taken from the sheathing board to the base of the concrete slab and integrated with the local waterproofing layer to limit moisture exposure.

How should service penetrations be sealed?

We would recommend considering a mastic such as Nullifire 703, along with a fire-retardant expanding sealing tape. We do not have specific testing for this application, and therefore, the suitability of any products used should be assessed and approved by a suitably qualified structural and/or fire engineer.

What ancillaries are exempt from testing?

According to Part B Building Regulation, Reg 7, Paragraph 3, identifies certain items which are excluded from the non-combustibility requirement. These exempt items include cavity trays when used between two leaves of masonry; door frames and doors; membranes; seals, gaskets, fixings, sealants and backer rods, and other items specifically listed in Paragraph 3 (but not beads and trims).

Can Y-Wall be curved?

Our Y-Wall is not meant to be bent in general. What we usually recommend in this situation is for Y-Wall to be facetted.

Can Benx sheathing boards be used for steel encasement?

We do not have any testing for our board to be used as a steel encasement board; however, we have a series of tests where our boards are fixed to SFS.

What orientation can the board be installed in?

Horizontal and Vertical.

How much can Y-Wall overhang unsupported?

Our Y-Wall board has a maximum overhang of 150mm, this is only applicable when the board is already suitably fixed to 2 other studs.

When should stainless steel fixings be used?

For 60-year design life projects in marine or coastal environments, fixing specification is critical. External fixings, brackets and ancillary components should be stainless steel as a minimum, with SS 316 considered in highly exposed areas or locations subject to direct sea spray. Their reaction to fire performance, including classes such as A1, A2, B, C, D, E, and F.

British Standards & Eurocodes

BS EN 476

Non-combustibility test.

BS EN 476

Fire resistance of building elements/systems, depending on the tested wall or partition assembly.

BS EN 594

Test method for determining the racking strength and stiffness of timber frame wall panels. Used to assess lateral load resistance (e.g. wind loads) in loadbearing timber walls.

BS EN 634 (Parts 1 & 2)

Cement-Bonded Particleboards. Specification for cement-bonded particleboards, including general requirements and properties.

BS EN 1015-11

Methods of test for mortar for masonry. Determines the flexural and compressive strength of hardened mortar specimens.

BS EN 1716

Reaction to fire tests for building products. Determines the gross heat of combustion (calorific value) of materials using a bomb calorimeter.

BS EN 1182

Reaction to fire tests for building products. Specifies a method for determining the non-combustibility of materials when subjected to heating in a furnace.

BS EN 1364-1

Fire resistance test for non-loadbearing walls. Assesses integrity (E) and insulation (I) performance under fire exposure.

BS EN 1365-1

Fire resistance test for loadbearing walls. Assesses loadbearing capacity (R), integrity (E), and insulation (I) under fire conditions.

BS EN 12467

Specification and test methods for fiber cement flat sheets. Used for external cladding and rainscreen systems in non-loadbearing wall applications.

ISO 12572

Determination of water vapour transmission properties of building materials. Used for assessing vapour permeability and condensation risk in wall build-ups.

BS EN 12667

Thermal performance of building materials. Specifies methods for determining thermal resistance and thermal conductivity using guarded hot plate and heat flow meter apparatus.

BS EN 13501-1

Fire classification of construction products and building elements. Classifies materials based on their reaction to fire performance, including classes such as A1, A2, B, C, D, E, and F.

BS EN 13501-2

Fire classification system for construction elements based on test results. Defines classifications such as EI (non-loadbearing) and REI (loadbearing) with time ratings (e.g. 30, 60, 120 minutes).

BS EN 15283-1

(Glass-Mat Gypsum). Specification for glass-mat reinforced gypsum boards.

Important Notes



Get in touch

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