Glasroc® X

The new high-performance lining
for internal and external applications

INSIDE OR OUT – YOUR CHOICE

Gyproc
SAINT-GOBAIN

Glasroc® X

Introduction

Glasroc® X is a high performance building board with a gypsum core containing special additives for moisture and mold resistance. Glasroc® X is reinforced with a glass-mat on both surfaces and finished with a UV resistant coating, providing outstanding performance in harsh and humid environments.

This non-paper faced board is free from cellulose content, therefore has a strong inherent resistance to mold growth which is perfect for wet areas and high-humidity environments including exterior applications.

Glass-mat liners are embedded within the gypsum core ensuring a strong bond with gypsum that creates a monolithic board of high strength and exceptional integrity.

Glasroc® X is an ideal substrate for ETICS (External Thermal Insulation Systems) or Direct Render application (also known as Direct Apply Systems). This high performance board can be used for areas requiring high protection against water penetration and it has been designed for external and internal applications. This board is a perfect solution for exterior ceilings, external walls systems, façade cladding systems and internal wet area partitions.

Glasroc® X is available 1200mm wide in either 2400 or 3000mm length (other lengths can be available to order depending on quantities required) with longitudinal tapered or squared edges depending on the finishing system.
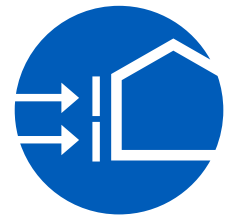
Length	Width
2400mm	1200mm

Inorganic glass mat surface with strong visual branding for instant product identification which provides UV protection to a surface that has high resistance to mold and water penetration.

Glass fiber reinforced gypsum core, moisture and mold resistance and very low water absorption.

BOARD PROPERTIES

SPECIFICATIONS		Value	Unit
Board classification (EN 15283-1) ASTM C1177, ASTM C2658, EN520		GM-H1	
Thickness		12.5	mm
Width		1200	mm
Standard length		2400	mm
Weight		11.5	kg/m^2
Total water absorption (EN 520)		≤ 5 (H1)	%
Surface water absorption (EN 520)		< 90	g/m^2
Mold resistant (ASTM D3273)		10 (No mold)	-
Resistance to UV exposure		12	months
Dimensional stability	Thermal expansion (EN 14581)	0.8×10^{-5}	$^0C^{-1}$
	Moisture expansion (EN 12467)	0.005	mm/m·1%RH (30-90 %RH)
Flexural strength	Longitudinal	≥ 540	N
	Transversal	≥ 210	N
Minimum bending radius		1.6	m
Thermal conductivity λ		0.19	W/mK
Vapour diffusion μ		18.2	-
Fire reaction (EN 13501-1)		A1	-

PRODUCT FEATURES

Exterior Application

Internal Application

Fire Resistance

Dimensional Stability

Energy Efficiency

Low Environmental Impact

Mold & Moisture Resistance

Wet Area Application

Impact Resistance

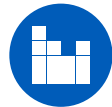Flexibility

Easy to Score and Snap

Easy to screw fix

Easy to Handle

High Labour Productivity

Tiling

Easy to Cut

Tapered Edge

Square Edge

GLASROC® X AS AN EXTERIOR BOARD

Introduction

Glasroc® X is especially designed to withstand humid and harsh environments and can be used in the following external applications.

EXTERNAL CEILINGS

Semi-exposed ceiling areas above balconies

BALCONIES

Wall linings for balconies and terraces

FACADE

Wall linings for ventilated or non-ventilated facades

APPLICATIONS

Glasroc® X has been tested with ETAG verification procedures drawn up by EOTA (European Organisation for Technical Assessment) and harmonised EN standards for façade and exterior cladding and sheathing applications, while covering the requirements of the EN 15283-1 standard for CE marking, as summarised in the relevant declaration of performance.

| WATER	WEATHER BEHAVIOR	HYGROTHERMAL	FIRE	EXTERNAL IMPACTS
Surface absorption <90g/m² Total absorption <5%	Watertightness: 1400 Pa Airtightnesss: Class A4	Hygrothermal behavior -20⁰C to +70⁰C	Reaction to fire A1	ETAG 034 Façades Category I

EAVES
Linings for eaves and soffits

FASCIAS
Façade fronts

ARCHES
Linings to curved surfaces such as arches and columns with minimum bending radius 1.5m

INSTALLATION GUIDE

## INSTALLATION OF GLASROC® X BOARDS IN EXTERNAL APPLICATIONS
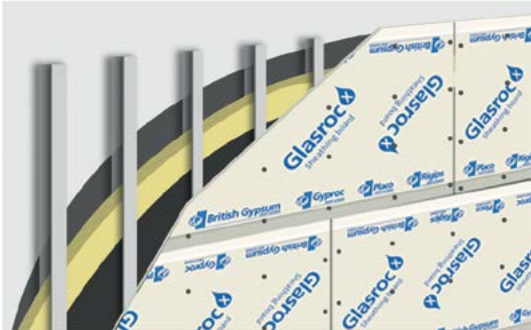
01 Boards

For all exterior applications, boards should be installed horizontally starting at least 20cm from the bottom, or waterproofed first 20cm, to avoid direct contact with the ground (for interior application, 2cm from the floor and 1cm from ceiling) and a maximum joint gap of 3mm between boards. Boards should be fixed to metal profiles with a galvanized coating not less than Z275 or to aluminum profiles. The thickness and spacing of these profiles are calculated in accordance with local regulations to support the self-weight of boards and wind factors, with spacings from 400-600mm centres. The gap between the vertical joints of two rows of adjacent boards should be no less than 800mm.
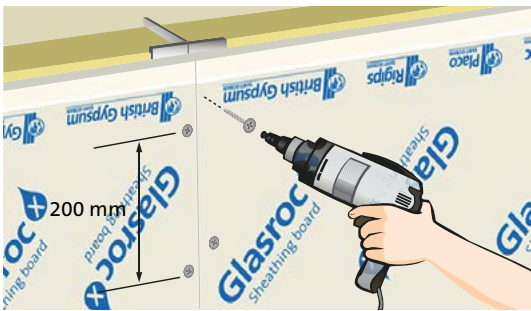

02 Board fixing

Boards should be fixed using Glasroc® X screws at no greater than 200mm centres - no less than 10mm from the board edges. It is recommended to use a stagger pattern of at least 20mm for the fixings. Screw heads should finish flush with the board surface without damage to the core.
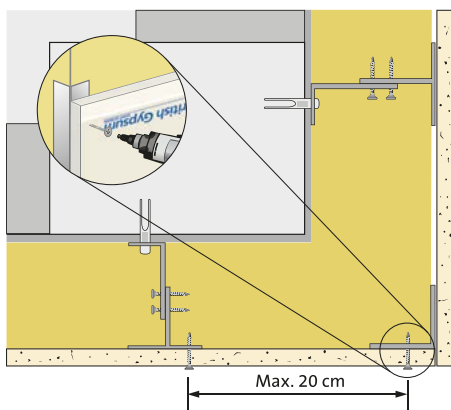
03 Corner reinforcement

For inner and outer corners, the board can overlap the last profile by a maximum of 20cm. In all cases the edge of the board must be reinforced with an angle profile.

Max. 20 cm

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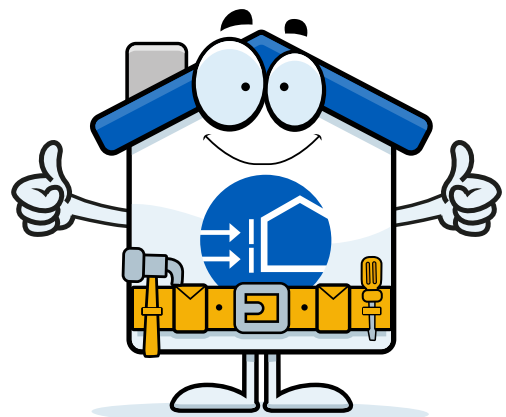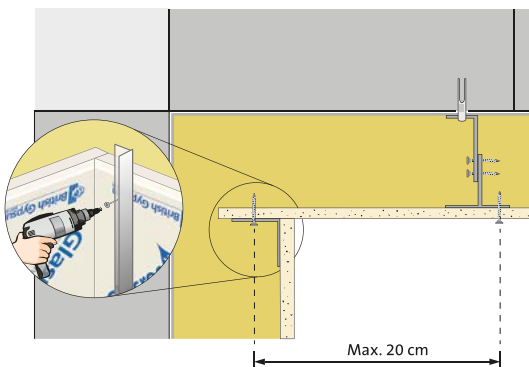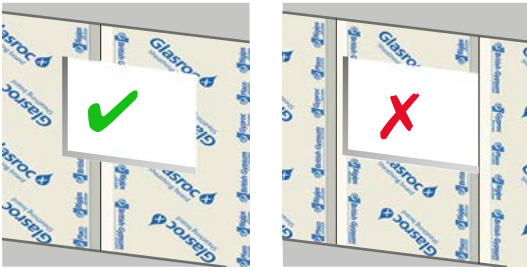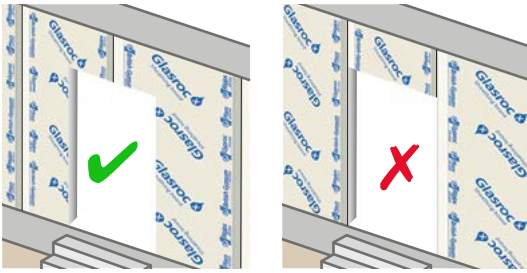
04 Doors and windows areas

For gap formation for windows and doors, joints between boards may not coincide with the plumb line of lintels, window cases or door jambs, as there should be at least 40cm between vertical joints and 15cm between horizontal joints.

All joinery work must be fixed to independent frames so as not to transfer loads onto the boards.

In sections used for forming window sills, boards should ensure a slope of at least 10° for water drainage.

05 Expansion joints

Glasroc® X's high dimensional stability makes it ideal for large continuous façade areas, which are only interrupted every 15m maximum for vertical joints, in addition to those required by the building's structural joints or for changes in the size of the façade leaves. Equally possible in these cases are the creation of horizontal joints.
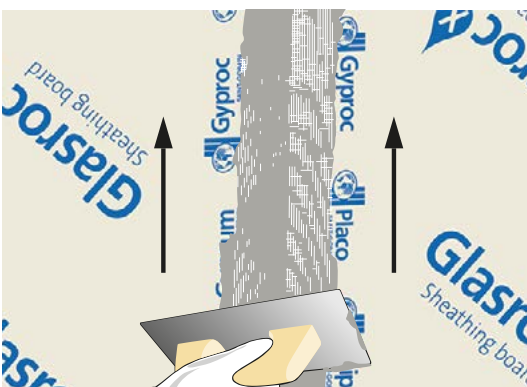

06 Joint treatment

Joint treatment is determined in each case by the type of application of Glasroc® X and surface covering.

When boards are not exposed to the outside (cavity or sidings systems and external walls with cladding systems over), it is advised to seal with an outdoor mastic or adhesive tape provided it overlaps joints and connections by at least 10cm on all sides to ensure continuity of the seal.

Where boards require a direct finish, a band of not less than 15cm in width should be applied using the render plus 160 reinforcing mesh overlapped at least 15cm at joints and connections to ensure continuity.
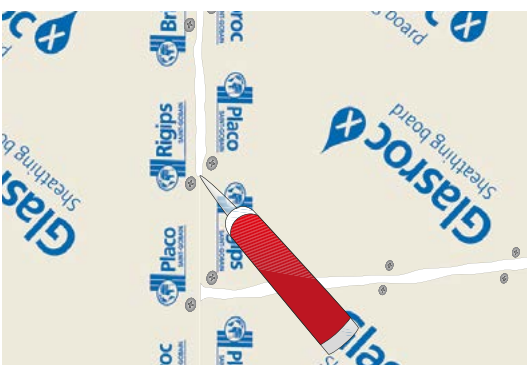
07 Window angles and lintels

To prevent the appearance of cracks at angles forming gaps when the boards will be given a direct render coat, diagonal bands measuring 20 x 40 cm minimum of 160 reinforcing mesh should be placed at 45º before applying the render.

Similarly, the edges of these gaps should be reinforced with ancillary PVC profiles for corners and drip-proofing.
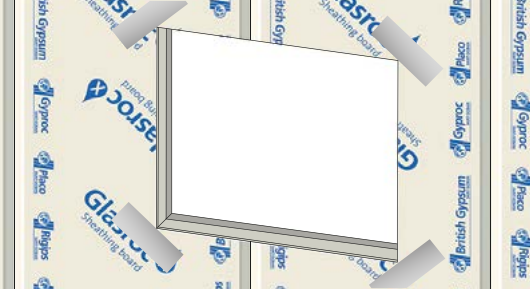
SURFACE FINISHES

Direct Render system

Direct Render finishing is used for the construction of external walls in which the board is exposed to the external environment. The render should be a compatible basecoat mortar using a reinforcement mesh. Finish the system using an acrylic or siloxane-based topcoat.

ETICS / EIFS System

ETICS or EIFS Systems are used for construction of external walls in which the board is exposed to the outside. A continuous external insulating system is then adhesively / mechanically fixed to the Glasroc® X board. The complete system is then finished using an acrylic or siloxane-based topcoat.

GLASROC® X AS AN INTERIOR APPLICATION BOARD

Introduction

A breakthrough in lining technology, Glasroc® X is a high performance, non-combustible board with outstanding moisture and mold resistance for internal wet and humid enviroments that's light and easy to handle and reduces build time.

APPLICATIONS

Whether your challenge is to find a board that will withstand the constant wet and humid conditions of internal spaces like bathrooms, kitchens and pool rooms, find a quick and easy external lining for exposed and semi-exposed areas or temporarily protect your building from the harsh Middle East environment whilst fit-out work progresses inside – Glasroc® X is the solution for you.

Interior Applications

Enhanced levels of sound performance, up to 120 minutes fire resistance and outstanding resistance to moisture and mold, thanks to its advanced technology and unique paper-free glass mat liners, make Glasroc® X the perfect high-performance lining for internal tiled areas or walls subject to frequent exposure to moisture.

Tiled Areas

With a reinforced moisture-resistant core and special hydrophobic glass mat liners specially treated to resist mold and mildew, Glasroc® X is a perfect backing for tiled areas in damp and humid environments. Its high strength and dimensional stability mean it can support tiled coverings up to $60kg/m^2$ – and with a little extra support it can even accommodate marble or other very heavy facings.

Decorated Surfaces

In partial or non-tiled areas of bathrooms, kitchens an d other high moisture environments, the ready-primed and moisture-repellent surface of Glasroc® X boards can be taped and jointed to create a continuous moisture resistant barrier that protects the structure below and is ready to accept decoration.

Wet Rooms And Showers

Glasroc® X's outstanding resistance to moisture and humidity makes it perfect for tile backing and wet area lining for shower enclosures, bathrooms and other areas in heavily moisture-ladened environments.

Swimming Pools

Glasroc® X's enhanced water-repellent properties and resistance to mold and mildew growth makes it the perfect lining choice for controlled environments with frequent exposure to moisture, such as swimming pools, health spas and other leisure buildings.

INSTALLATION GUIDE

Installation of Glasroc® X Boards In Internal Applications

STEP 1   CUTTING BOARD

Cut Glasroc® X as necessary by scoring the surface with a board knife and snapping over a straight edge, before turning board over and cutting through the back glass mat lining – special cutting tools are not required.

STEP 2   FIXING BOARD

Starting from the abutting wall, external corner or other opening, fix Glasroc® X board to framework in the usual way, using Gyproc Drywall Screws every 300mm. Position screws no closer than 10mm from board edge, or 15mm from cut edge and lightly butt adjacent boards together as work progresses.

STEP 2   PREPARING BOARD SURFACE

Wipe down the ready-primed surface to remove dust and seal around perimeters and base with waterproof sealant. Reinforce board joints with Glasroc X Tape, prior to filling with Gyproc jointing compound or tile adhesive and applying final primer and paint finish.

STEP 3   TILING

Fix tiles of up to 60kg/m^2 using a thin bed of adhesive in accordance with manufacturer's advice. For heavier tiles and marble cladding framing centres should be reduced and the board fixed back to the framing using supplementary support.

TILED PARTITIONS

For speed and ease, partitions may be constructed using Gyproc Drywall metal systems in the normal way. Unless very heavy tiling systems (in excess of 60kg/m2) are to be applied, normal stud centres of 600mm or 400mm should be used, depending on board width used.
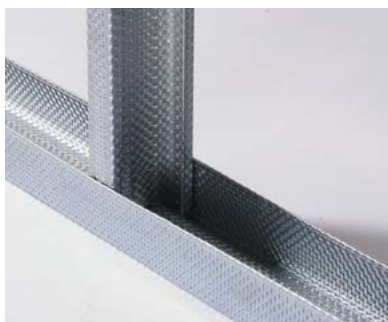
STEP 4   FINISHING

Once adhesive has set, finish tile joints with waterproof grout and carefully seal around all perimeters with waterproof sealant, taking care that wall and floor joints and junctions with the bath or shower base are well sealed.

Glasroc® X

SUPPLEMENTARY PRODUCTS

GYPFRAME STUDS AND CHANNELS

To provide a strong backbone for Glasroc® X systems.

GLASROC® X SCREWS

For fixing Glasroc® X boards to Gyproc X framing.

GYPROC DRYWALL ADHESIVE

For fixing Glasroc® X boards in Gyproc DriLyner BASIC system.

GYPROC SEALANT

For sealing perimeters

GLASROC® X TAPE

For reinforcing board joints in internal applications

GYPROC DRYWALL SCREWS

For fixing Glasroc® X boards to metal frameworks

GYPROC JOINTING COMPOUND

For filling joints between Glasroc® X boards.

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