

CEM-ROCK®

**BUILD
WITH
CONFIDENCE**

CEM-ROCK®



CEM-ROCK®
EXTREME X4

CEM-ROCK®
EXTREME FLOOR



GREENGUARD Certification for Cem-Rock® eXtreme demonstrates both compliance with key chemical emission standards and our commitment to healthier indoor environments.



Our EPD allows you to specify Cem-Rock® eXtreme boards with the confidence that it will increase the sustainability of your project now and far into the future.



Introduction

Discover Cem-Rock®, the groundbreaking family of eco-friendly magnesium cement boards. Light in weight yet unparalleled in strength, Cem-Rock® offers an innovative approach to building that's safer, faster, and more efficient than ever before. Say goodbye to the limitations of traditional building boards – Cem-Rock® is here to transform the way you build.

Combining strength, versatility, and eco-friendliness, Cem-Rock® boards offer A1 fire classification, moisture, and mould resistance for both interior and exterior projects.

Cem-Rock® holds ETA and BBA certifications and conforms to both the Irish and UK building regulations, alongside rigorous testing to ASTM and UL standards. Our commitment to quality and performance is your assurance worldwide.

Build with confidence for a sustainable and resilient future – build with Cem-Rock®.

CEM-ROCK®



Address: Dublin, Ireland
Development: Summerhill Students Accommodation
Application: Rainscreen Cladding Substrate Board



“Cem-Rock® will undoubtedly play a major role in a safer, easier, faster and more environmentally friendly construction future”

TOMMY O'NEILL
STEEL FORMED SECTIONS

Class A1 fire rated

- Unlike Plywood, OSB, Drywall or CP boards
- Releases water vapour during a fire event, helping to cool and contain the fire
- It can achieve 1- and 2- hour fire ratings with both steel and timber frame assemblies
- No smoke development
- Non-combustible

Strong and durable

- Stronger than gypsum boards
- Stronger than fibre cement products
- Lighter than fibre cement products
- Safe to work with
- Extremely user friendly
- Boards will have a service life equal to the building in which they are installed
- Easy to cut and score
- Pliable (3 meter bending radius)
- Tremendous pull out strengths

Resistant properties

- Impervious to water
- Moisture resistant
- Dimensionally stable when wet
- Structurally stable when wet
- Does not rot
- Zero mould growth
- Termite resistant
- Contains zero foodstuff

Environmentally friendly

- Contains no formaldehyde
- Contains no fly ash
- Contains no toxins
- Does not off-gas
- Low energy manufacturing process
- Captures CO₂ during the curing process
- Carbon neutral product
- Recyclable
- No carcinogenic dust
- Ideal for chemically sensitive people in the home environment



Cherrywood, Co. Dublin
Development: Apartment buildings
Application: Sheathing board

CEM-ROCK®

Cem-Rock® cement board is a truly innovative building board, extremely lightweight, suitable for both exterior and interior purposes including but not limited to the following:

- Timber frame structures
- Steel frame structures
- Rainscreen cladding substrate board
- Soffits and ceilings
- Refurbishments
- Tile backer board
- Pods & modular builds
- Internal drylining
- Floor underlayment
- Fire rated partitions

CEM-ROCK® EXTREME X4

Cem-Rock® **EXTREME X4** was developed from the widespread need for a board with racking, pull through and pull out strength. It shares very similar characteristics to Cem-Rock®, but has been formulated to improve on the aforementioned properties.

- Load bearing & non-load bearing walls
- New-build & retrofit walls and ceilings
- Timber frame & SIP panels
- Hospitals, prisons & high traffic locations prone to abuse
- Carrier board for external brick and block
- Carrier board for external insulation and rainscreen cladding systems
- Stove surrounds

CEM-ROCK® EXTREME FLOOR

Cem-Rock® **EXTREME FLOOR**, a structural floor board, now represents a quantum shift in flooring technology. It has been designed to replace plywood and OSB floor sheathing. Cem-Rock® **EXTREME FLOOR** provides a superior flooring solution that is unaffected by environmental exposure during construction.

- Outperforms plywood & OSB
- Minimizes floor bounce & squeaks
- Dimensionally stable when wet
- Superior sound performance
- Denser than plywood & OSB
- Superior nail & screw holding power
- Ideal for mid-rise to high rise commercial or residential builds
- Eliminates fire spread from one level of the building to the next with 0 flame spread and smoke development



Characteristics

Cem-Rock® is a fibre reinforced magnesium cement board, extremely lightweight, offering exceptional workability.

Suitable for external applications:

- Substrate to exterior cladding systems
- External soffits
- Exterior sheathing

Suitable for internal applications:

- Drylining partition walls
- Tile backer board
- Wet rooms - tub and shower surrounds
- Floor underlayment
- Fire rated partitions
- SIP panels

Properties:

- A1 Fire resistant
- Moisture resistant
- Weather resistant
- Impact resistant
- Easy to cut with utility knife
- Easy to handle (light weight)
- Zero mould

Fire rated build-ups

Build-ups of up to 90min for external walls are available.
Build-ups of up to 120min for internal partitions are available.



Cem-Rock® Product Datasheet

Provides a flexible, fire resistant, easy to cut and work with building board suitable for a variety of applications including, but not limited to following:

- sheathing board in timber frame and steel frame structures
- the ideal board for internal applications such as tiling, dry lining and wet areas applications

Physical properties	
Nominal dimensions	2400x1200x12* mm
Dimensions tolerance (EN 12467:2012)	Level 1 (+/- 3mm)
Thickness tolerance (EN 12467:2012)	Level 1 (+/- 0.6mm)
Average weight	11.6 kg/m ²
Average density (EN 12647)	950 kg/m ³
Bending strength (EN 12647)	≥ 6.2 MPa
Bending radius	2.0 m
Modulus of rupture flexural resistance	⊥ 10.3 N/mm ² (Class 2)
	∥ 8.5 N/mm ² (Class 2)
Reaction to fire classification (EN 13501-1:2013)	A1 (non-combustible)
Water vapour transmission	1,975 g/hm ²
Water vapour diffusion coefficient μ (EN ISO 12572)	54
Thermal conductivity (EN ISO 10456)	0.2 W/(mK)
Product classification to EN 12467	Category A
BBA Crying Test (no chloride ions content)	Pass
Mould growth (MOAT 33)	No growth

* 6mm and 10mm thickness also available

CEM-ROCK®

STRONGER FASTER SAFER

Cem-Rock® is a multipurpose board that can line everything from your exterior wall to your interior partition walls.

Address: Red Cow, Dublin, Ireland
Development: Moran Hotel extension
Application: Rainscreen Cladding Substrate Board



Characteristics

Cem-Rock® EXTREME X4 provides very similar characteristics to Cem-Rock® board, but has been formulated to improve on Cem-Rock®'s structural performance and strength.

Suitable for external applications:

- Substrate for EWI Systems
- Cladding system receiver
- External soffits
- Sheathing
- Spandrel panels

Suitable for internal applications:

- Drylining partition walls
- Tile backer board
- Wet rooms - tub and shower surrounds
- Floor underlayment
- Fire rated partitions
- High traffic locations (e.g. corridors)

Properties:

- A1 Fire resistant
- Moisture resistant
- Racking strength
- Impact resistant
- Easy to cut and handle
- Zero mould
- Exceptional pull-out strength

Fire rated build-ups

Build-ups of up to 120min are available for:

- external and internal walls
- non-loadbearing partitions
- load-bearing walls
- floors and ceilings



Cem-Rock® EXTREME X4 Product Datasheet

Provides a strong and lightweight pliable building board with excellent pull-out, pull-through and racking strength properties, dramatically increasing structural performance and cutting construction times.

The ideal substrate board for variety of exterior applications including exterior insulation render systems in timber frame and steel frame structures.

Physical properties	
Nominal dimensions	2400x1200x12 mm
Average weight	11.25 kg/m ²
Average density (EN 12467)	935 kg/m ³
Reaction to fire (EN 13501-1)	A1
Combustibility (EN ISO 1182, ASTM E136)	non-combustible
Flame spread (ASTM E84)	0 flame; 0 smoke
Bending strength (EN 12467)	16.8 N/mm ²
Tensile strength (EN 319)	0.61 N/mm ²
Water vapour diffusion coefficient (EN ISO 12572)	51 μ
Basic racking resistance (9mm sheet, EN 594)	1.71 kN/m
Screw head pull-through (SN40 fixing to EAD 090062-00-0404)	1.5 kN
Screw pull-out (IS fixing to EN 14566)	1.58 kN
Airborne Sound Transmission Loss (ASTM E90-23)	40 dB
Thermal conductivity	0.163 W/(mK)
Maximum weight of tiling	100 kg/m ²
BBA Crying Test (no chloride ions content)	Pass
Mould growth (MOAT 33)	No growth
ICC-ES AC 308	Pass

* 6mm and 9mm thickness also available



**STRONGER
FASTER
SAFER**

Cem-Rock® EXTREME X4 with added strength. Suitable for applications where racking strength and pull-out strength is required.

Address: Dublin, Ireland
Development: Luxury Apartments Building
Application: Rainscreen Cladding Substrate Board



Characteristics

Cem-Rock® EXTREME FLOOR is a structural floor board which has been developed to rapidly improve flooring technology. Suitable for both timber and steel joists systems. Its fire, water, mold and mildew resistance properties far outweigh any competing products like plywood or OSB floor sheathing.

Features:

- Fire protection
- Sound absorption
- Water resistant
- No floor deflection

Properties:

- Nonhazardous
- No formaldehyde content
- No crystalline silica content

Advantages:

- Outperforms plywood or OSB
- Denser than plywood or OSB
- Easy to cut and screw
- Z-edge or T&G technology allows for easy installation

Applications

Using the BS EN 1195 test results and criteria provided in BS EN 1991-1-1:202 this system is suitable for use in applications on Category A buildings. Can also be used on Category B, C1, C2, C4, C5, D1 and D2 if no fire rating is required.

Fire rated build-ups

- REI45 (45 minutes) rating to BS EN 13501-2 on timber SpaceJoist
- REI60 (60 minutes) rating to BS EN 13501-2 on metal joist
- 120min rating to ASTM E119 on both metal and timber joists



Address: Dublin, Ireland
Development: Sports hall
Application: Roof substructure

Cem-Rock® EXTREME FLOOR Product Datasheet

The perfect floor board from low- to high-rise commercial and residential properties, providing excellent acoustic and structural characteristics.

Cem-Rock® EXTREME FLOOR can also be used on flat roof systems.

Physical properties	
Nominal dimensions	2400x1100x20* mm
Average density	1,200 kg/m ³
Average weight	22.2 kg/m ²
Bending strength (EN 12467)	23.40 N/mm ²
Fire classification (EN 13501-1)	A1, A1 _{fl}
Combustibility (EN ISO 1182, ASTM E136)	non-combustible
Flame spread (ASTM E84)	0 flame; 0 smoke
Mould growth (MOAT 33)	No growth
Thermal conductivity	0.23 W/(mK)
BBA Crying Test (no chloride ions content)	Pass
Airborne Sound Transmission Loss (ASTM E90-09)	56 dB
ICC-ES AC 386	Pass

* - custom sizes available: 2400x600mm, 1200x600mm

Structural test results (BS EN 1195)

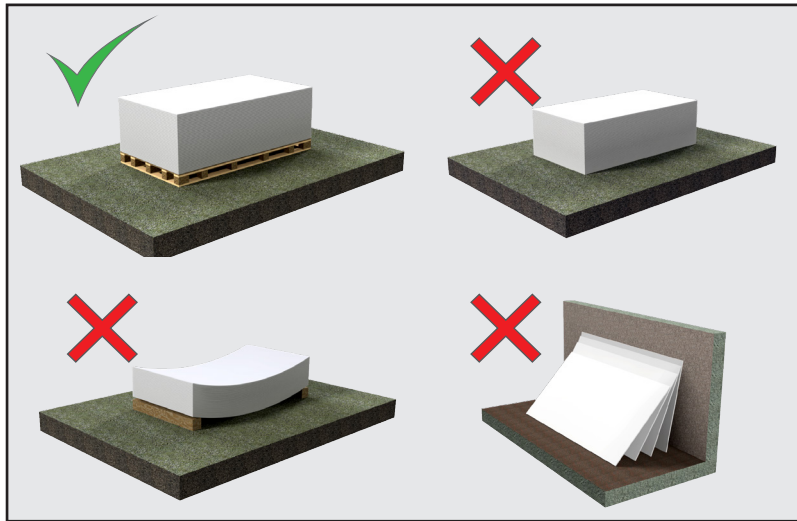
Test with joists @ 600mm c/c max.	Result
Point Load (F _{max} Mean)	4.45 kN
Point Load (F _{max} Characteristic Q _k)	3.68 kN
Uniformly Distributed Load q _k	> 10.14 kN/m ²
Soft Body Impact	no visible damage @ 135 J



**STRONGER
FASTER
SAFER**

Cem-Rock® EXTREME FLOOR is reducing the risk of fire, is not affected by adverse weather conditions, and drastically improves your building's structural performance

Storage



The base to store the boards has to be strong enough to support them.

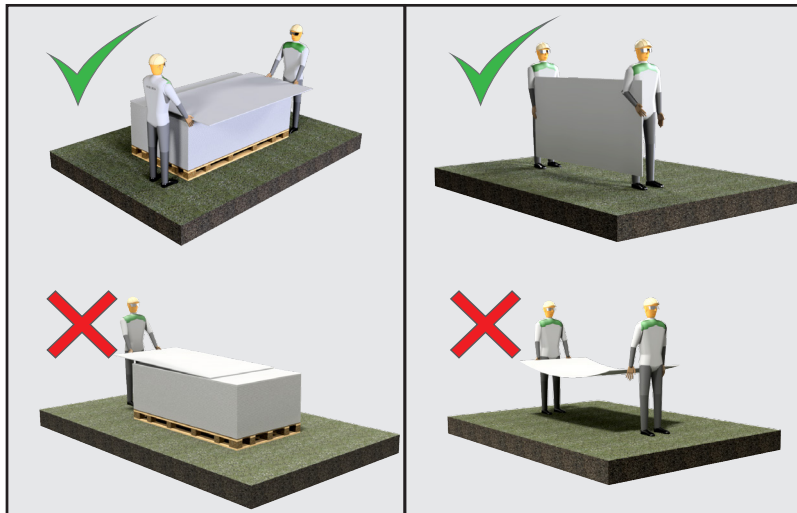
Do not store the boards directly on the ground. Do not store the boards vertically.

Boards have to be stored under cover.

Do not leave boards exposed to weather on the flat.

If the boards get wet, they have to be dried before they are installed.

Handling



Boards must be carried upright.

Take care not to damage corners and edges when setting the board down.

Two person handling only.

Cutting

Cem-Rock® to be cut using:

- Utility knife (score & snap)
- Hand saw
- Diamond disk grinder
- Concrete disc grinder
- Carbide blade saw

Safety measures:

Appropriate PPE equipment to be worn when working with Cem-Rock® boards.

Fixings

Only rust proof, alkali resistant or stainless steel fixings to be used to install Cem-Rock® boards. Wood and gypsum screws are not recommended. Check installation guide for list of suitable fixings.

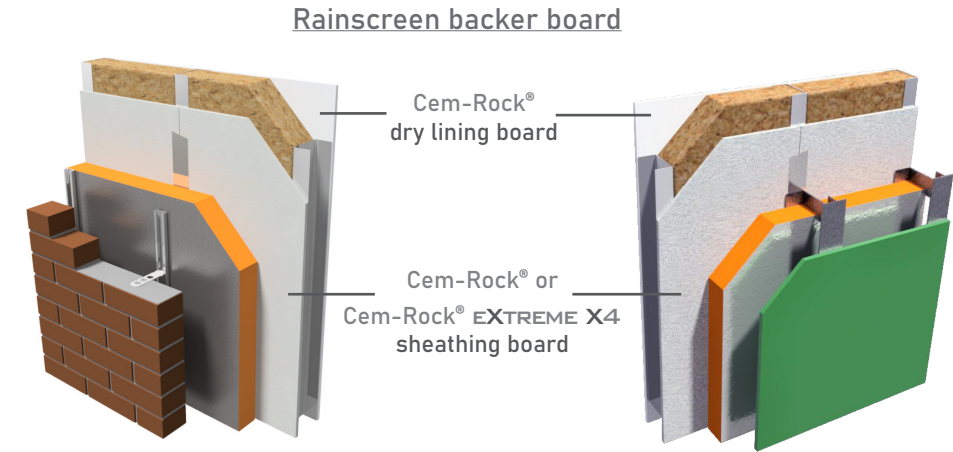
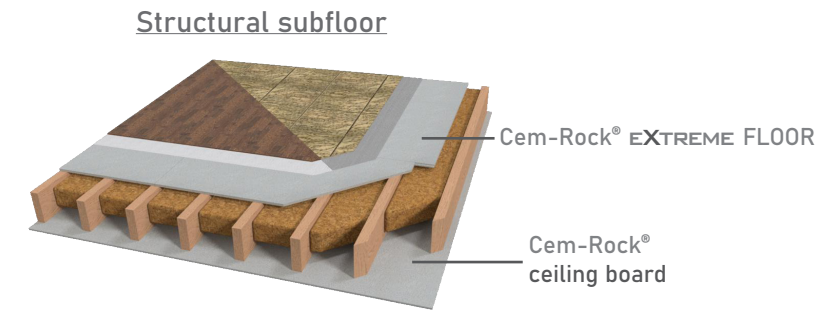
Technical details

Cem-Rock® building boards come equipped with all the appropriate certifications and application procedures.

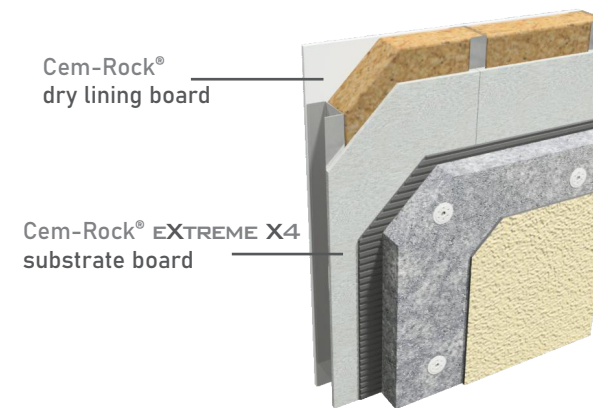
For any technical queries or to receive the appropriate method statements please contact our technical team at Greenspan.

The architecture, engineering, and design using the Cem-Rock® product are the responsibility of the project' design professional. All products and systems must comply with National Building Regulations and Standards.

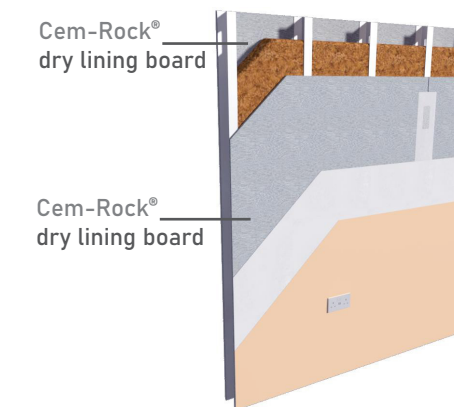
CEM-ROCK® Typical installations



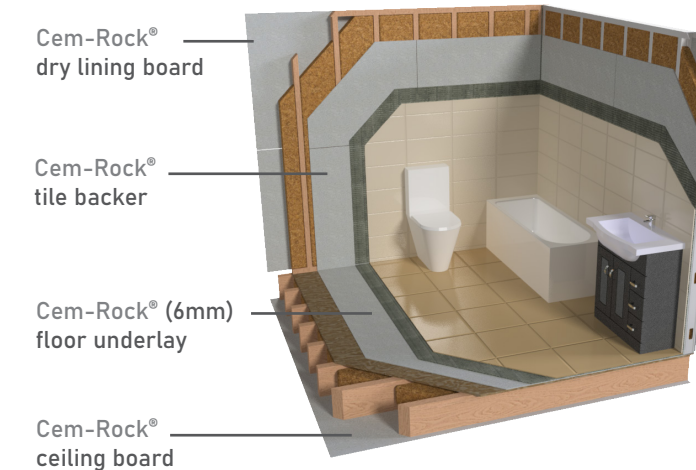
External insulation substrate board



Drylining and fire rated partition



Tile backer board and drylining



CEM-ROCK®

 **Greenspan®**
System Sales Ireland Ltd.

Ballyhahill, Co. Limerick, Ireland

Tel:+353 69 82222

E-mail: sales@greenspan.ie

Web: www.greenspan.ie

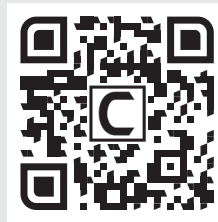
 **Greenspan®**
UK Limited

Office 2, 91 Main Road, Meriden
Coventry, West Midlands, CV7 7NL

Tel:+44 (0) 121 517 0957

E-mail: sales@greenspan.co.uk

Web: www.greenspan.co.uk



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