

I N T R O D U C I N G

CEM-ROCK®

B U I L D W I T H C O N F I D E N C E



Introduction

Cem-Rock® is an eco-friendly, light weight, high strength magnesium cement board with safer, easier and faster application suitable for both interior and exterior use. It can replace traditional building boards and can be used as an alternative to chipboard, plywood, OSB, fibre cement board, calcium silicate board, and gypsum board. Offering a fresh innovative building board the construction industry has been longing for. Best of all Cem-Rock® has the environment in mind and carries an A1 fire rating, tested to EN 13501 standard as well as a CE certification to EN 12467 standard and also BBA tested.

CEM-ROCK®



Address: Dublin, Ireland
Development: Summerhill Students Accommodation
Application: Reinscreen 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 up to 4 hour fire ratings
- No smoke development
- The building board of dreams for fire officers

Strong and durable

- Stronger than gypsum boards
- Stronger than fibre cement products
- Lighter than fibre cement products
- Safe to work with
- Extremely user friendly
- Due to the aforementioned characteristics Cem-Rock® increases a buildings life span
- 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 feed mildew
- Does not rot or mould
- Termite resistant
- Contains zero foodstuff

Environmentally friendly

- Contains no formaldehyde
- Contains no fly ash
- Contains no toxins
- Does not off-gas
- Carbon neutral product
- Completely recyclable
- Captures CO₂ during the curing process
- Low energy manufacturing process
- 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 render 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
- Provides a superior stiffer floor
- 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 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)

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)	0.39 W/Km
BBA Crying Test (no chloride ions content)	Pass

* 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: Reinscreen 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
- Render system receiver
- 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
- Weather resistant
- Impact resistant
- Easy to cut with utility knife
- Easy to handle (light weight)

Fire rated build-ups

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

- exterior walls
- interior partitions
- 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 render systems and 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)	non-combustible
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 BS EN 14566)	1.58 kN
Thermal conductivity	0.317 W/(mK)
Maximum weight of tiling	100 kg/m ²
BBA Crying Test (no chloride ions content)	Pass
Mould growth (MOAT 33)	No growth

* 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: Reinscreen 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 proof
- 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 buildings of Category A, B, C1, C2, C4, C5, D1 and D2.

Fire rated build-ups

REI45 (45 minutes) fire rating achieved to BS EN 13501-2 (tested with wooden floor build-ups on SpaceJoist to BS EN 1365-2).



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	2400x1200x20 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)	non-combustible
Mould growth (MOAT 33)	No growth
Thermal conductivity	0.317 W/(mK)
BBA Crying Test (no chloride ions content)	Pass

Structural test results (BS EN 1195)

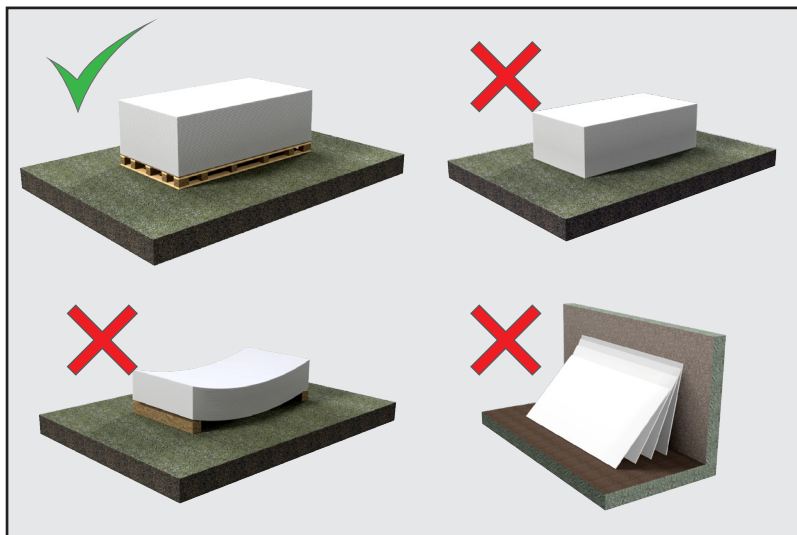
Test with joists @ 600mm c/c max.	Result
Point Load (F _{max} Mean)	4.45 kN
Point Load (F _{max} Characteristic Q _k)	3.68 kN
Uniformly Distributed Load q _k	> 10.14 kN/m ²
Soft Body Impact	no visible damage @ 135 J



**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.

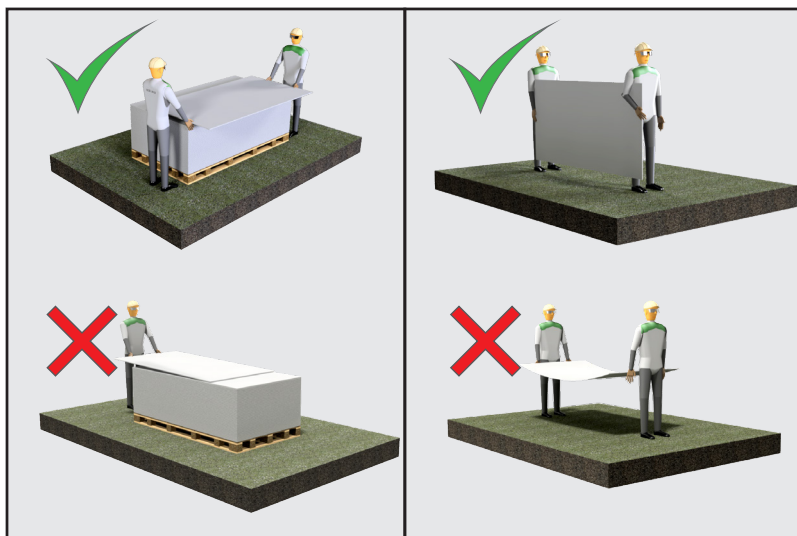
Do not store the boards directly on the ground. Do not store the boards vertically.

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
- Diamond blade saw

Safety measures:

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

Fixings

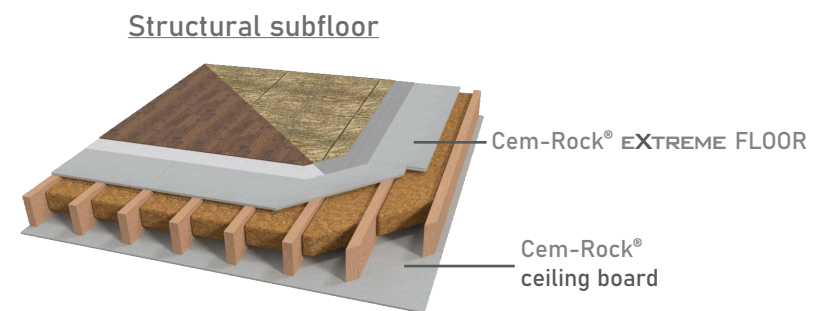
Only rust proof, alkali resistant fixings to be used to install Cem-Rock® boards. Wood and gypsum screws are not recommended.

Technical details

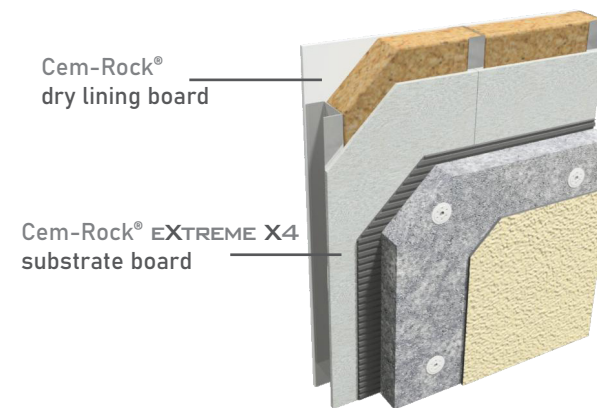
Cem-Rock® building boards come equipped with all the appropriate certifications and application procedures.

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

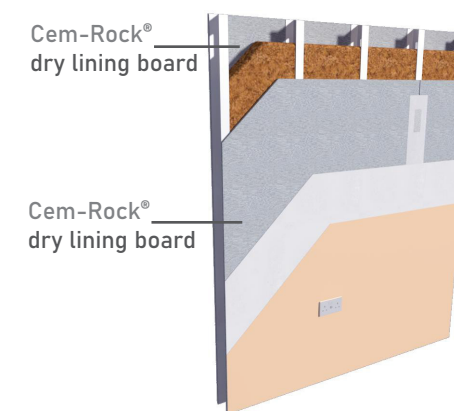
CEM-ROCK® Typical installations



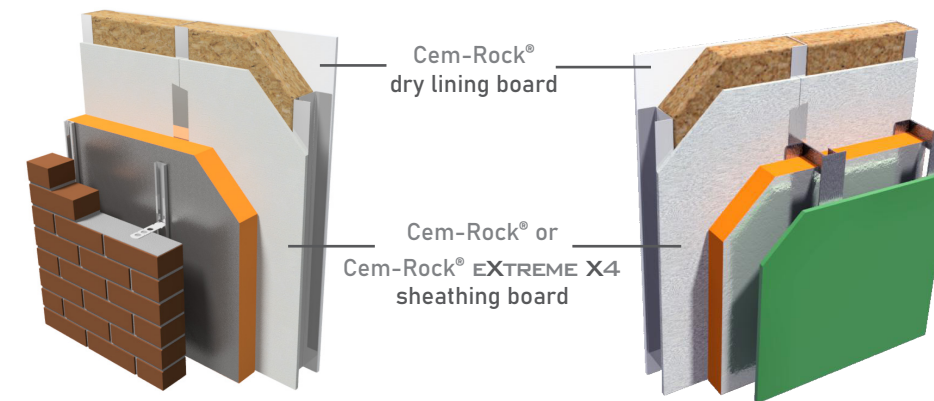
External insulation substrate board



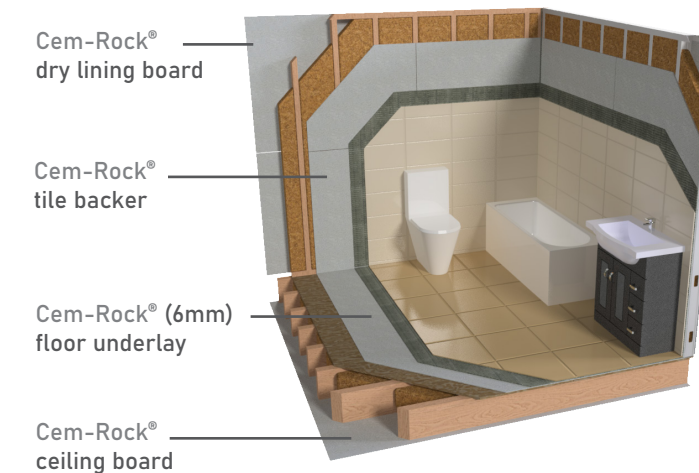
Drylining and fire rated partition



Rainscreen backer board



Tile backer board and drylining



B U I L D W I T H C O N F I D E N C E

C H O O S E

CEM-ROCK[®]

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