



# MAGNUM BOARD BRAND

## FIBER REINFORCED MGO CEMENT BOARD PRODUCTS

Construction Specifications Institute Format Specification – 062417, Issue. 050319

### Product Description

MEGCRETE™ using MBP-IP Technology “MEGCRETE™” is a mineral based green building product superior to all other sheathing products supplied by ConstructShield Products Corp. “CS”. MEGCRETE™ is made of Magnesium Oxide Cement with Fiberglass Cores. MEGCRETE Sheathing is resistant to delamination and deterioration due to weather exposure — even during construction delays that last as long as twelve months after installation.

MEGCRETE Sheathing is the ONLY MGO board available in Canada that has been CCMC certified by the Canadian National Resource Council (NRC) for use as Interior and Exterior Sheathing. MEGCRETE Sheathing is also ICC-ES certified for use in the United States.

MEGCRETE Sheathing is FIRE, MOLD, MILDEW, WATER, RODENT/INSECT & IMPACT RESISTANT

### Physical Properties

#### Widths

- 4' (1219mm)

#### Lengths

- 8' (2438mm)
- 9' (2743mm)
- 10' (3048mm)

#### Thickness (mm)

- 6, 8, 10, 12, 16, 18, 19

#### Edge

- Square Edge
- Bevelled Edge
- Tapered Edge

### Property

### Unit

### Requirement

### Result

Fluxural Strength	F-Statistic	10 boards from each of 4 production batches	CCMC Certified
Density	F-Statistic	10 boards from each of 4 production batches	CCMC Certified
Chemistry	N/A	X-Ray Diffraction	CCMC Certified
Chemistry	Atomic %	X-Ray Fluorescence	CCMC Certified
Leachate pH	pH	Ph > Gypsum board or 6; whichever is greater	8-9 pH
Free Chloride Ion Leachate (Weight of Board Mass)	%	If > 0.1%, corrosion resistant fasteners required	7
Vicker's Hardness	Mpa	ASTM E 384 value report	Varies 40-150
Fastening - Staples (16-Gauge SS316 Staples, 11mm x 38 mm)	N/A	Install panels on a 12 ft. x 8 ft. wood frame and observe if breakage after 95% are installed	CCMC Certified

Flexural Strength of Immersed Samples	MPa	Average residual strength after immersion from each lot greater than or equal to 90% of average strength of as-received material. The residual strength after immersion of each specimen must be greater than or equal to 80% of average strength of as-received material. ASTM 293	CCMC Certified
Flexural Strength of Samples Exposed to Construction Moisture (i.e. rain)	MPa	Average loss in strength of all MgOCl samples less than or equal to average loss in strength of NBC benchmark (i.e. exterior gypsum)	CCMC Certified
Water Vapour Permeance	ng/Pa*s*m2	ASTM E 96, desiccant method >170 ng/Pa*s*m2	300
Air Permeance	L/s*m2*Pa @ 75 Ps (train-gle P)	Report Value (ULC S741-08)	0.042
Fastener Corrosion (Mass Loss Compared to SS316)	%	Mass loss of SS316 did not exceed 0.07%, Mass loss of SS304 did not exceed 0.11%, ASTM G 198-11	Pass, with only 0.04% difference following 4-month test program.

## Features

	MgO Board	OS Board	Plywood	Cement Board
Flame Spread	None	High	High	None
Smoke Developed	None	High	High	None
Water Resistant	Yes	No	No	Yes
Mold Mildew Resistant	Yes	No	No	Yes
Insect Resistant	Yes	No	No	Yes
Thermal/R Value per inch	1.2	1	1.2	0.8
Impact Strength	High	Medium	Medium	Low
Weight LBS/Sq. Ft	2.5	2	1.6	3.1
Combustibility	Zero	High	High	Zero
Structural	Yes	Yes	Yes	No
Environmentally Friendly	High	Poor	Medium	Medium
Freeze/Thaw	Excellent	Good	Good	Good

## Application Requirements

**Cutting:** Cut MEGCRETe with a carbide tipped scoring knife or a power saw equipped with a regular blade. Blades designed specifically for cement board works best. We recommend using a T-square to help ensure cuts are straight and even. Make circular cuts and irregular angle cuts with a Roto Zip, Dremel or equivalent tool, equipped with a cement board bit or carbide tipped bit.

**Fastening:** The fasteners for attachment of the product as an interior or exterior sheathing must be Type SS304, SS305 or SS316 (i.e. self-tapping screws) and was shown to accept 16-gauge Type SS304, SS305 or SS316 staples, 11 mm wide × 38 mm in length.

Any fasteners that may penetrate the exterior sheathing product for attachment to the studs (i.e., cladding fasteners) must be Type SS304, SS305 or SS316 stainless steel grade (i.e., self-tapping screws).

ConstructShield has implemented a membrane solution to avoid the direct contact of MgO with Steel Studs in high moisture areas. This solution is modeled after exterior gyproc where a paper layer separates the gypsum core and steel studs. Please consult with your ConstructShield sales rep for fastening details on steel stud assemblies.

- Install fasteners no closer than 4" from corners.
- Perimeter fasteners should be placed 6" apart.
- Center fasteners should be placed 12" apart.
- Install fasteners approximately 9/16" from board edge.

**Board Surface Finishing:** MEGCRETe can be finished with most any type of product including, but not limited to paint, lime based products, clay based products, wall paper, stone, brick, stucco and more. If paint is selected as the finish for your project, please consult with your ConstructShield Sales rep to determine the best brand and application for your application or purpose. When finishing MEGCRETe always follow the finish manufacturer's instructions and follow good industry practices such as cleaning board surface completely before beginning the application process and ensuring the relative humidity (RH) is appropriate for the application.

## Storage and Handling

MEGCRETe MgO Board is fire, water, insect, chemical, mold and mildew repellent. In order to best preserve the integrity of this product, ConstructShield recommends following the outlined construction practices (below) when storing MEGCRETe MgO Board

- Stack flat on dun-age – do not allow material to bow or sit directly on the ground.
- Keep material dry prior to and during installation.
- Do not stack other materials on top of MEGCRETe MgO Board
- Keep MEGCRETe MgO Board clean, avoid contact with jobsite dirt.
- Protect edges, ends, and faces of MEGCRETe MgO Board from damage.
- Store MEGCRETe MgO Board inside and protected from damage by weather and direct sunlight whenever possible.

## Warranty

CS warrants all goods to be free from defects in material and workmanship, and to be of the quality, size and dimensions ordered. CS reserves the right to refund or credit any products mutually agreed to be out of specification. Freight and documentation costs are not credited or refunded. Disposition of any out of specification product will be determined by CS.

CS is not responsible for improper installation or joint cracking. Consult with your joint material supplier for any questions you may have prior to beginning the joint preparation process. CS provides joint preparation guidelines only. Use of these guidelines is not a representation or warranty against potential cracking since the stability of locations and use by Buyer of third party joint compounds or other materials used will vary.

CS will not be held liable in any way for warranty or defects of MEGCRETe™ products installed with un-approved, or non-certified fasteners, membranes, or connection details. Please contact us to ensure you are using certified fasteners, adhesives and connection details.

CS makes no other warranties or guarantees either expressed or implied.