

# CGC DUROCK® BRAND CEMENT BOARD



## DESCRIPTION

### Backerboard for ceramic tile and exterior finish systems

- Lightest cement board in the industry
- Environmentally sustainable product—lower weight reduces embodied energy and embodied emissions
- Water-durable, mould-resistant substrate for high-moisture areas
- Suitable for use in interior or exterior applications
- Will not rot, warp, delaminate or disintegrate
- Easy to cut and fasten
- Noncombustible

CGC Durock® Brand Cement Board offers architects, builders and tile contractors a strong, water-durable tile base for tub and shower areas. Also an ideal underlayment for tile on floors and countertops in new construction and remodeling. Board is readily applied over wood or steel framing spaced 406 mm (16") o.c. with corrosion-resistant wood or steel screws or hot-dipped galvanized roofing nails. After joints are treated, ceramic wall or floor tile is applied using latex fortified mortar or Type 1 organic adhesive.

CGC Durock Cement Board is preferred by many applicators as a base for directly applied finishes, tile, stone and thin-brick used in building exteriors.

## PRODUCT DATA

### Sizes and Packaging

Size (thickness x width x length) <sup>1</sup>	Units (pcs) <sup>2</sup>
12.7 mm x 813 mm x 1525 mm (1/2" x 32" x 5')	50
12.7 mm x 915 mm x 1525 mm (1/2" x 36" x 5')	50
12.7 mm x 1220 mm x 2440 mm (1/2" x 4' x 8')	30
15.9 mm x 1220 mm x 2440 mm (5/8" x 4' x 8')	24
6.4 mm x 915 mm x 1525 mm (1/4" x 36" x 5')	60

1. Other lengths available. Contact your CGC Representative.
2. Shipped in packaging units as shown.

**Standards:** CGC Durock Cement Board exceeds ANSI standards for cementitious backer units (CBU). See ANSI A118.9 for test methods and specifications for CBU and ANSI A108.11 for interior installation of CBU. Exceeds industry standards as an exterior substrate for exterior finishes. Exceeds ASTM C1325 standards for non-asbestos fiber-mat reinforced cementitious backer units.

**Availability:** CGC Durock Cement Board is distributed throughout Canada. Contact a CGC Inc. sales office or sales person for additional information.

**Composition and Materials:** CGC Durock Cement Board is formed in a continuous process of aggregated portland cement slurry with polymer-coated, glass-fiber mesh completely encompassing edges, back and front surfaces. The edges are formed smooth. The ends are square cut.

**PRODUCT DATA  
(CONTINUED)**

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**Delivery and Storage of Materials:** All materials should be delivered and stored in their original unopened package and stored in an enclosed shelter providing protection from damage and exposure to the elements. Even though the stability and durability of CGC Durock® Brand Cement Board is unaffected by the elements, moisture and temperature variations may have an effect on the bonding effectiveness of basecoats and adhesives. Store all CGC Durock Cement Board panels flat.

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**Environmental Conditions:** In cold weather and during CGC Durock Cement Board panel and tile installation, temperatures within the building shall be maintained within the range of 5 to 38°C (40 to 100°F). Adequate ventilation shall be provided to carry off excess moisture.

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**Interior Applications:** Wood framing shall approximate the moisture content it will reach in service by allowing the enclosed building to stand as long as possible prior to the application of the cement board. Do not install board when the board is wet.

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**Exterior Applications:** Finishes, leveling/skim coats and basecoats should not be applied to CGC Durock Cement Board Panel that is wet or frozen or that contains frost. After application, and for at least 24 hours, finishes, leveling/skim coats and basecoats should be effectively protected from rain and excessive moisture. In cold weather and during finish applications, CGC Durock Cement Board Panel, skim or basecoat, mortar, finish material and air temperature must be at least 5°C (40°F) and must remain at this temperature or higher for at least 24 hours after application. Hot and dry weather may affect working time of leveling/skim or basecoat and finish materials. Under rapid drying conditions, dampening or light fogging of board, leveling/skim or basecoat surface may be required to improve workability.

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**Panel Micro-Cracking:** CGC Durock Cement Board is formulated to develop fine micro-cracking (also called as multiple-cracking) in the panel. The micro-cracking process helps to evenly relieve the stored strain energy in the product due to handling and installation, external loads, and/or panel restrained movement. The presence of micro-cracks in the panel should not be considered a product defect.

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**INSTALLATION**

- A.** Install cement board with ends and edges closely abutted, but not forced together. Stagger end joints in successive courses.
- B.** For flooring applications over a wood-based substrate, laminate CGC Durock Cement Board to subfloor using Type 1 organic adhesive or latex-modified thin-set mortar suitable for bonding cement board. Fasten to subfloor with 32 mm (1-1/4") CGC Durock™ Brand Tile Backer Screws for wood framing (or equivalent) or 38 mm (1-1/2") hot-dipped galvanized roofing nails spaced 203 mm (8") o.c. in both directions with perimeter fasteners at least 10 mm (3/8") and less than 16 mm (5/8") from ends and edges. Drive nails and screws so that bottoms of heads are flush with panel surface to ensure firm panel contact with subfloor. Do not overdrive fasteners. Prefill joints with tile-setting mortar or adhesive and then immediately embed CGC Durock™ Brand Tile Backer Tape and level joints.
- C.** For wall application, fasten CGC Durock Cement Board Panels to framing with specified fasteners. Drive fasteners into field of panels first, working toward ends and edges. Hold panels in firm contact with framing while driving fasteners. Space fasteners maximum 203 mm (8") o.c. for walls, 152 mm (6") o.c. for ceilings, with perimeter fasteners at least 10 mm (3/8") and less than 16 mm (5/8") from ends and edges. Drive nails and screws so that bottoms of heads are flush with panel surface to ensure firm panel contact with framing. Do not overdrive fasteners. Approved fasteners include: CGC Durock Tile Backer Screws for steel framing (or equivalent), 32 mm (1-1/4") and 41 mm (1-5/8") for 14- to 20-gauge steel framing; CGC Durock Tile Backer Screws for wood framing (or equivalent), 32 mm (1-1/4"), 41 mm (1-5/8"), and 57 mm (2-1/4") for wood framing. 38 mm (1-1/2") hot-dipped galvanized roofing nails may be used for CGC Durock Cement Board for wood framing. Prefill joints with tile-setting mortar or adhesive and then immediately embed CGC Durock Tile Backer Tape and level joints.

**Note:** For dry untiled areas -for small areas where the CGC Durock Cement Board will not be tiled, such as a board extending beyond the tiled area and abutting another surface, treat joints as follows. Seal CGC Durock Cement Board with High-Performance Tile Mastic or Type I Ceramic Tile Adhesive. (Mix four parts adhesive with one part water.) Embed CGC Joint Tape over joints and treat fasteners with CGC Durabond® Brand Setting-Type Joint Compound (CGC Durabond 45 or 90) applied in conventional manner. Flat trowel CGC Durabond Setting-Type Joint Compound or CGC Lightweight Compound over board to cover fasteners and fill voids to a smooth surface. Finish joints with at least two coats CGC Ready-Mixed Joint Compound. Do not apply ready-mixed or setting-type joint compound over unsealed board and do not skim coat large surface areas.

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**INSTALLATION  
(CONTINUED)**

- D. Cement board should be cut to size with a knife and straight edge. A power saw should be used only if it is equipped with a dust-collection device. Installer should wear NIOSH/MSHA approved dust mask.
- E. If waterproofing is desired, use CGC Durock™ Brand Tile Membrane. See CGC literature piece DTM\_DATA\_CB492 for CGC Durock Tile Membrane product information.
- F. Wall surfaces should be isolated with surface control joints (sometimes referred to by the industry as expansion joints) or other means where: (a) a wall abuts a structural element or dissimilar wall or ceiling; (b) construction changes within the plane of the wall; (c) tile and thin brick surfaces exceed 4.8 m (16'), 6 m (20') for other surfaces. Surface control joint width should comply with architectural practices. Location of building control joints is the responsibility of the design professional/architect.

Refer to current CGC literature piece *Moisture-Resistant Assemblies* (SA934) and USG literature *Durock Cement Board Systems* (SA932) and *Exterior Substrate Systems* (SA700) for complete installation information, including good design practices. For technical assistance, call CGC Customer Service at 800-387-2690.

**LIMITATIONS**

1. Designed for positive or negative uniform loads up to 60 psf. For complete information on the use of CGC Durock® Brand Cement Board Panels in exterior systems, consult uniform load table on page 4 for applicable positive or negative uniform loads on wall systems.
2. Wall applications: Maximum stud spacing is 406 mm (16") o.c. (610 mm [24"] o.c. for cavity shaft wall assembly). Framing shall be designed (based on stud properties alone) not to exceed L/360 deflection for tile and thin brick, L/240 for direct-applied exterior finish systems. Maximum fastener spacing is 203 mm (8") o.c. for wood and steel framing; 152 mm (6") o.c. for ceiling applications.
3. Floor applications: Maximum joist spacing 610 mm (24") o.c. The subfloor system should be designed with a minimum deflection limit of L/360 for the span. Some finish materials may require a more rigid subassembly (such as large format tile and natural stone products). In these cases, follow the manufacturer's minimum requirements. The subfloor should be APA Span-Rated Plywood or OSB with an Exposure 1 classification or better with tongue and groove or back blocked at the unsupported edges.
4. In exterior applications, CGC Durock Cement Board should not be left uncovered for a period of time exceeding 90 days. Discoloration or staining may occur due to exposure to the elements and will not affect performance of the panel.
5. Brittle coatings, such as epoxy coatings, are not recommended for use with CGC Durock Cement Board. CGC Durock Cement Board is intended for use with tile, thin brick and exterior stucco coatings only.
6. Maximum dead load for ceiling system is 7.5 psf.
7. Avoid exposure to sustained temperatures exceeding 93°C (200°F).
8. Steel framing must be 20-gauge equivalent or heavier.
9. Do not use drywall screws or drywall nails. Do not use drywall joint tape.
10. Do not use 6.4 mm (1/4") CGC Durock Cement Board for wall or ceiling applications.
11. Do not use CGC Durock Cement Board with vinyl flooring.
12. Maximum installed weight of the finish system should not exceed 15 psf.
13. CGC Durock Cement Board is not designed for use as a structural panel.
14. In locations close to saltwater or other challenging environments, design professionals should consider the use of stainless steel fasteners.
15. Do not use lightweight setting-type joint compounds or ready-mix joint compounds directly over CGC Durock Cement Board.

**UNIFORM LOAD**

<b>12.7 mm (1/2") CGC Durock Cement Board</b>			
<b>Stud Spacing</b>	<b>Fastener Spacing</b>	<b>Design Wind Load (L/240)</b>	<b>Design Wind Load (L/360)</b>
<b>305 mm (12") o.c.</b>	203 mm (8")	45 psf	45 psf
	152 mm (6")	60 psf	60 psf
<b>406 mm (16") o.c.</b>	203 mm (8")	33 psf	30 psf
	152 mm (6")	45 psf	30 psf
<b>610 mm (24") o.c. (for shaft wall assemblies only)</b>	203 mm (8")	13 psf	9 psf
	152 mm (6")	13 psf	9 psf

## TECHNICAL DATA

CGC Durock® Brand Cement Board					
Property	Unit of Measure	ASTM Test Method	15.9 mm (5/8")	12.7 mm (1/2")	6.4 mm (1/4") Underlayment
Flexural Strength	MPa (psi)	C947	> 3.3 (480)	> 5.2 (750)	> 6.9 (1000)
Compressive Strength	MPa (psi)	D2394	> 8.6 (1250)	> 8.6 (1250)	> 8.6 (1250)
Shear Bond Strength	psi	ANSI A118.4	> 50	> 50	> 50
Water Absorption	% by wt. 24 hrs.	C473	15	15	15
Nail Pull Resistance	lb. (10 mm [3/8"] head diameter, wet or dry)	C473	> 90	> 90	—
Weight	kg/m <sup>2</sup> (psf)	C473	14.6 (3)	11.7 (2.4)	< 9.3 (1.9)
Freeze/Thaw Resistance	procedure B, number of cycles with no deterioration	C666	100	100	100
Mould Resistance	—	G21 D3273	No growth 10/10	No growth 10/10	No growth 10/10
Noncombustibility	Pass/Fail	CAN/ULC S114 (ASTM E84)	Pass	Pass	Pass
Surface Burning Characteristics	Flame/Smoke	CAN/ULC S102 (ASTM E136)	0/0	0/0	0/0
Thermal	"R"/k value	C518	0.49/1.27	0.39/1.27	—
Linear Variation (due to change in moisture content)	%	D1037	<0.07%	<0.07%	<0.07%
Standard Method for Evaluating Ceramic Floor Tile Installation Systems	Passes cycles 1 – 6	C627	Light Commercial	Light Commercial	Light Commercial
Minimum Bending Radius	ft. (requires special framing details available upon request)	—	6	6	—

### PRODUCT INFORMATION

See [cgcinc.com](http://cgcinc.com) for the most up-to-date product information.

### WARNING

Portland cement is strongly alkaline. Direct contact can be corrosive and cause severe damage or chemical burns to the eyes and wet or moist skin. Avoid contact with eyes and skin. Wear eye protection, alkali-resistant protective gloves, long-sleeved shirts and pants to prevent direct contact. If eye contact occurs, immediately flush thoroughly with water for 30 minutes and seek medical advice. Inhalation of dust may be corrosive or cause chemical burns or irritation to nose, throat and respiratory tract. Avoid breathing dust. Use in a well-ventilated area or provide sufficient local ventilation. If dusty, wear a NIOSH/MSHA approved dust respirator. Wash thoroughly with soap and water after use. Do not ingest. If ingested, call physician. If cutting board with a power tool, use a wet or vacuum saw to reduce the amount of dust generated. Panels are heavy and can fall over, causing serious injury or death. Avoid creating a tripping hazard and do not exceed floor limit loads. Longterm breathing of respirable crystalline silica dust can cause permanent lung damage and/or cancer. Product safety information: 800 387-2690 or [cgcinc.com](http://cgcinc.com).

**KEEP OUT OF REACH OF CHILDREN.**

### TRADEMARKS

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### NOTE

Products described here may not be available in all geographic markets. The information in this document is subject to change without notice. CGC Inc. assumes no responsibility for any errors that may inadvertently appear in this document. Consult your CGC Inc. sales office or representative for information.

### NOTICE

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### SAFETY FIRST!

Follow good safety and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read Safety Data Sheets and related literature on products before specification and/or installation.

EDR0D18/rev. 4-16  
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