



# USG DUROCK® BRAND CEMENT BOARD WITH EDGE GUARD™

### Backerboard for tile and exterior finish systems

- Enhanced proprietary edge performance prevents spinout and crumbling
- Easy to cut and fasten
- Water durable and mold resistant
- Warranted for interior and exterior applications
- Exceptional tile bond
- Achieved GREENGUARD Gold Certification as an assembly and qualifies as a low VOC emitting material (meets CA 01350)
- USGBC® LEED® v4/4.1—may assist in achieving additional credits

### DESCRIPTION

USG Durock® Brand Cement Board with EdgeGuard™ 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 16 in. (406 mm) o.c. with corrosion-resistant wood screws, steel screws or hot-dipped galvanized roofing nails. After joints are treated, wall or floor tile is applied using latex-fortified mortar or Type I organic adhesive.

USG Durock® Brand Cement Board with EdgeGuard is preferred by many applicators as a base for directly applied finishes, tile, stone and thin brick used in building exteriors.

The 1/2 in. (12.7 mm) and 5/8 in. (15.9 mm) panels are Underwriters Laboratories Inc. (UL) Classified for fire resistance, and may be used in any UL Design where Type DCB panels are listed.

## PRODUCT DATA

## SIZES AND PACKAGING

Size (thickness x width x length) <sup>1</sup>	Units (pcs) <sup>2</sup>
1/4 in. x 3 ft. x 5 ft. (6.4 mm x 915 mm x 1525 mm)	60
1/2 in. x 3 ft. x 5 ft. (12.7 mm x 915 mm x 1525 mm)	50
1/2 in. x 4 ft. x 8 ft. (12.7 mm x 1220 mm x 2440 mm)	40
5/8 in. x 3 ft. x 5 ft. (15.9 mm x 915 mm x 1525 mm)	40
5/8 in. x 4 ft. x 8 ft. (15.9 mm x 1220 mm x 2440 mm)	32

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

## STANDARDS

USG Durock® Brand Cement Board with EdgeGuard 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 nonasbestos fiber-mat reinforced cementitious backer units.

#### AVAILABILITY

USG Durock® Brand Cement Board with EdgeGuard is distributed throughout the United States. Contact a USG sales office or sales person for additional information.

## COMPOSITION AND MATERIALS

USG Durock® Brand Cement Board with EdgeGuard 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 with a patented poly-propylene fabric-wrapped edge. The ends are square cut.

#### 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 USG Durock® Brand Cement Board with EdgeGuard is unaffected by the elements, moisture and temperature variations may have an effect on the bonding effectiveness of basecoats and adhesives. Store all USG Durock® Brand Cement Board with EdgeGuard panels flat.

#### ENVIRONMENTAL CONDITIONS

In cold weather and during USG Durock® Brand Cement Board with EdgeGuard panel and tile installation, temperatures within the building shall be maintained within the range of 40 to 100°F (5 to 38°C). Adequate ventilation shall be provided to carry off excess moisture.

#### INTERIOR APPLICATIONS

The building shall be enclosed and the HVAC system operating so that wood framing shall reach the moisture content it will reach in service. Do not install board when the board is wet.

#### EXTERIOR APPLICATIONS

In exterior applications, USG Durock® Brand Cement Board with EdgeGuard should not be left uncovered for a period of time exceeding 90 days. Discoloration or staining may occur due to exposure to the elements which will not affect performance of the panel. Finishes, leveling/skim coats and basecoats should not be applied to USG Durock® Brand Cement Board with EdgeGuard 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, USG Durock® Brand Cement Board with EdgeGuard panel, skim or basecoat, mortar, finish material and air temperature must be at least 40°F (5°C) 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.

#### PANEL MICROCRACKING

USG Durock® Brand Cement Board with EdgeGuard is formulated to develop fine microcracking (also called multiple cracking) in the panel. The microcracking 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 microcracks in the panel should not be considered a product defect.

#### 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 USG Durock® Brand Cement Board with EdgeGuard to subfloor using Type 1 organic adhesive or latex-modified thin-set mortar suitable for bonding cement board. Fasten to subfloor with 1-1/4 in. (32 mm) USG Durock™ Brand Tile Backer Screws for wood framing (or equivalent) or 1-1/2 in. (38 mm) hot-dipped galvanized roofing nails spaced 8 in. (203 mm) o.c. in both directions with perimeter fasteners at least 3/8 in. (10 mm) and less than 5/8 in. (16 mm) 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 USG Durock™ Brand Tile Backer Tape and level joints.
- C.** For wall application, fasten USG Durock® Brand Cement Board with EdgeGuard 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 8 in. (203 mm) o.c. for walls, 6 in. (152 mm) o.c. for ceilings, with perimeter fasteners at least 3/8 in. (10 mm) and less than 5/8 in. (16 mm) from ends and edges. Drive nails and screws so bottoms of heads are flush with panel surface to ensure firm panel contact with framing. Do not overdrive fasteners. Approved fasteners include: USG Durock™ Brand Tile Backer Screws for steel framing (or equivalent), 1-1/4 in. (32 mm) and 1-5/8 in. (41 mm) for 14- to 20-gauge steel framing; USG Durock™ Brand Tile Backer Screws for wood framing (or equivalent), 1-1/4 in. (32 mm), 1-5/8 in. (41 mm) and 2-1/4 in. (57 mm) for wood framing. Nails (1-1/2 in. [38 mm] hot-dipped galvanized roofing nails). Prefill joints with tile-setting mortar or adhesive and then immediately embed USG Durock™ Brand Tile Backer Tape and level joints.

## INSTALLATION CONT.

- 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 USG Durock™ Brand Liquid Waterproofing Membrane. See *USG Durock™ Brand Liquid Waterproofing Membrane* submittal sheet (CB817) for product information.

Refer to *USG Durock® Brand Cement Board System Guide* (SA321624) for complete installation information, including good design practices. For technical assistance, call USG Technical Service at 800 USG.4YOU (874-4968).

## LIMITATIONS

1. Designed for positive or negative uniform loads up to 60 psf. For complete information on the use of USG Durock® Brand 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: 16 in. (406 mm) o.c. (24 in. [610 mm] 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: 8 in. (203 mm) o.c. for wood and steel framing; 6 in. (152 mm) o.c. for ceiling applications.
3. Floor applications: Maximum joist spacing 24 in. (610 mm) 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, USG Durock® Brand Cement Board with EdgeGuard should not be left uncovered for a period of time exceeding 90 days. Discoloration or staining may occur due to exposure to the elements which will not affect performance of the panel.
5. Brittle coatings, such as epoxy coatings, are not recommended for use with USG Durock® Brand Cement Board with EdgeGuard. USG Durock® Brand Cement Board with EdgeGuard 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. Steel framing must be 20-gauge or heavier.
8. Do not use drywall screws or drywall nails. Do not use drywall joint tape.
9. Do not use 1/4 in. (6.4 mm) USG Durock® Brand Cement Board with EdgeGuard for wall or ceiling applications. 1/4 in. (6.4 mm) USG Durock® Cement Board with EdgeGuard is for use in interior applications only.
10. Do not use USG Durock® Brand Cement Board with EdgeGuard with vinyl flooring.
11. USG Durock® Brand Cement Board with EdgeGuard is not designed for use as a structural panel.
12. Maximum installed weight of the finish system should not exceed 15 psf.
13. USG Durock® Brand Cement Board with EdgeGuard panels should not be used in areas where they are exposed to temperatures that exceed 200°F (93°C).
14. In locations close to salt water 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 USG Durock® Brand Cement Board with EdgeGuard.
16. Do not use in submerged applications.
17. In exterior applications, Durock® Brand Cement Board with EdgeGuard cannot be used below grade.

## TECHNICAL DATA

### PRODUCT INFORMATION

See usg.com for the most up-to-date product information.

GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit [ul.com/gg](http://ul.com/gg).

**DANGER:** Can cause serious injury to eyes, skin, & respiratory tract or allergic reaction. Repeated inhalation of respirable crystalline silica may cause cancer. **KEEP OUT OF REACH OF CHILDREN.** When cutting product, wear a NIOSH approved respirator. Contains portland Cement: avoid contact with skin and eyes. Washing contaminated clothing before reuse. Read carefully other cautions and safety precautions. **FIRST AID:** If swallowed, inhaled, or skin irritation occurs, get medical attention. If on skin: wash with plenty of water. If in eyes: rinse cautiously with water for several minutes. Remove contact lenses and continue rinsing. Dispose of in accordance with local, state, and federal regulations. For more information, call Product Safety: 1-800-507-8899 or see the SDS at usg.com

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### SAFETY FIRST!

Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read applicable SDSs and literature before specification and installation.



Property	Unit of Measure	ASTM Test Method	5/8 in. (15.9 mm) USG Durock® Brand Cement Board with EdgeGuard™	1/2 in. (12.7 mm) USG Durock® Brand Cement Board with EdgeGuard™	1/4 in. (6.4 mm) USG Durock® Brand Cement Board with EdgeGuard™ Underlayment
Flexural strength	psi (MPa)	C947	> 480	> 750	> 1000 (6.9)
Indentation strength	psi (MPa)	D2394	> 1250	> 1250	> 1250 (8.6)
Shear bond strength	psi	ANSI A118.4	> 50	> 50	> 50
Nail-pull resistance	lb. (0.375 in. [10 mm] head diameter, wet or dry)	C473	> 90	> 90	—
Weight	psf (kg/m²)	C473	3	2.4	< 1.9 (1.9)
Freeze/thaw resistance	procedure B, number of cycles with no deterioration	C666	100	100	100
Mold resistance	—	G21	Rating 0, No growth	Rating 0, No growth	Rating 0, No growth
		D3273	10/10	10/10	10/10
Surface-burning characteristics	flame/smoke	E84	0/0	0/0	0/0
Thermal	"R"(°F-ft²-h/Btu)/k (Btu-in/°F-ft²-h)	C518	.49/1.27	0.39/1.27	—
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	—

## UNIFORM LOAD—1/2 IN. (12.7 MM) AND 5/8 IN. (15.9 MM) USG DUROCK® BRAND CEMENT BOARD WITH EDGE GUARD™

Stud Spacing	Fastener Spacing	Design Wind Load (1/240)	Design Wind Load (1/360)
12 in. (305 mm) o.c.	8 in. (203 mm) o.c.	35 psf	35 psf
	6 in. (152 mm) o.c.	44 psf	44 psf
16 in. (406 mm) o.c.	8 in. (203 mm) o.c.	27 psf	21 psf
	6 in. (152 mm) o.c.	31 psf	21 psf
24 in. (610 mm) o.c. (for shaft wall assemblies only)	8 in. (203 mm) o.c.	12 psf	8 psf
	6 in. (152 mm) o.c.	12 psf	8 psf

## SUBMITTAL APPROVALS

Job Name	
Contractor	Date

800 USG.4YOU  
800 (874-4968)  
[usg.com](http://usg.com)

Manufactured by  
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