

DUROCK[®] Brand Cement Board



installation guide

Substrate and ceramic tile
installation for walls,
floors, countertops and
wall shields.

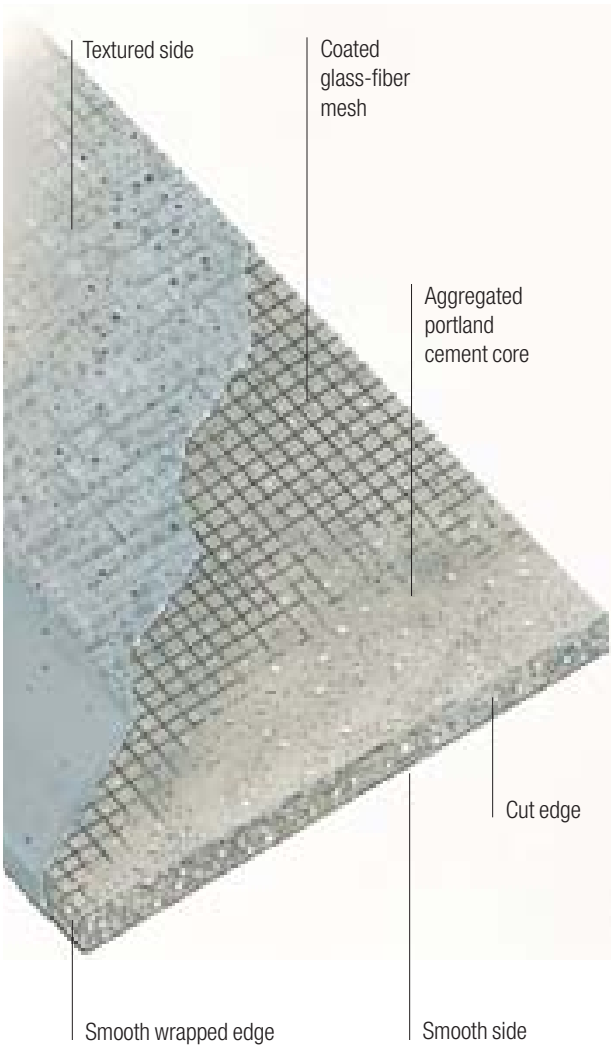
A photograph of a shower stall. The walls and floor are covered in dark brown, textured ceramic tiles. A chrome showerhead and handheld shower wand are mounted on the wall. A wire basket with soap and a sponge sits on a shelf. A piece of Durock cement board is visible on the right side of the image, with the word 'DUROCK' printed vertically on it.

DUROCK[®]

**DUROCK® Brand Cement Board...
Strength beneath the surface™**

A ceramic tile installation is only as good as the surface beneath the tile. Strong, lightweight and resistant to water damage, DUROCK Brand Cement Board is an ideal base for ceramic tile installations throughout the home.

Installing tile takes planning, time and care. But with the help of this step-by-step installation guide, the careful do-it-yourselfer can get the same results as a professional.



Start with Quality Products

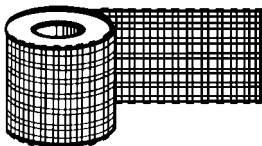
DUROCK Brand Cement Board

Standard board is 1/2" or 5/8" thick and 32", 3' or 4' wide. Standard lengths are 4', 5', 6' or 8'. Custom lengths are available upon request and minimum order requirements do apply. DUROCK® Brand Underlayment is 4'x4'x5/16", 3'x5'x5/16" or 4'x8'x5/16"—ideal for floor and countertop jobs.

Board is smooth on one side for adhesive applications, textured on the other for thin-set mortar applications.

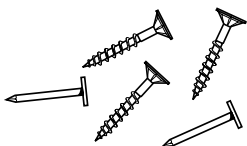
DUROCK™ Brand Interior Tape

Alkali-resistant glass fiber tape reinforces interior cement board joints to provide a strong, continuous surface.



Fasteners

Cement board is readily applied over framing with 1-1/2" hot-dipped galvanized roofing nails or 1-1/4" DUROCK™ Brand Wood Screws. With steel framing use 1-1/4" DUROCK™ Brand Steel Screws.

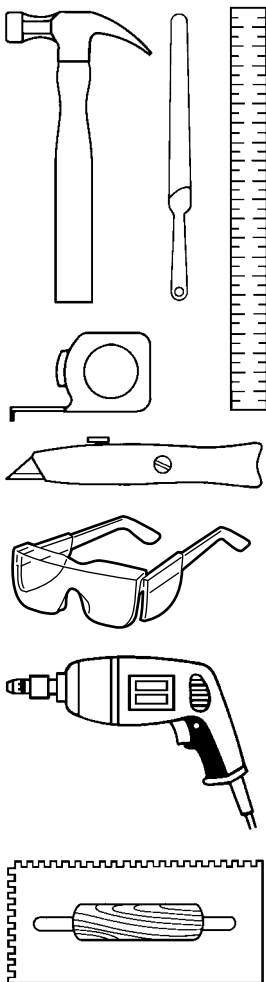


Adhesives, Mortars, Grouts

Check your local tile distributor for the products available and which ones are appropriate for your job.

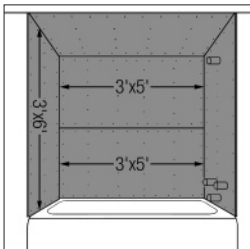
Tools

In general, common tools are used for cement board installation while installing tile requires special tools. Retail stores frequently rent the special tools needed for tile work on a per-day basis, including tile cutter, nippers and notched trowels. Other tools you may need for cement board and tile installations include: straightedge, level, tape measure, caulk and caulking gun, hammer, drill, drill bits (including hole-saw bits), wood rasp, scoring tool or utility knife, sponge and squeegee.



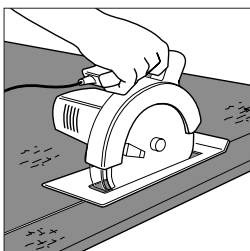
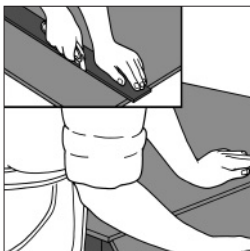
Installing Board— Walls and Ceilings

A typical tub surround uses two 3'x5' cement boards horizontally for tub backwall, one 3'x6' board vertically at each endwall, and one 3'x5' board for the ceiling.



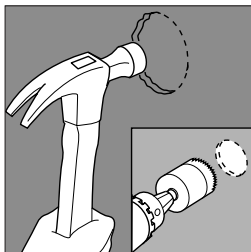
1. Cutting

To cut DUROCK Brand Cement Board, mark desired size on the board with a rule and pencil. Score both sides and edges with a utility knife through the glass-fiber mesh, and snap the board to size. Smooth cut edges with wood rasp. Cutting with a circular saw with a carbide-tipped blade is an alternative.



2. Cutouts

To make cutouts for fixtures, outline area with utility knife, cut through the mesh on both sides, and punch out with a hammer from the back side. Smooth edges with wood rasp. Alternatively, mark location and drill hole using the appropriate size hole-saw bit and drill. Use slow speed if available.



3. Attachment

Place a 1/4" spacer strip or shim around lip of tub or shower pan to hold bottom edge of cement board off lip.

Fasten board to wood studs spaced at 16" o.c.* with 1-1/2" hot-dipped galvanized roofing nails spaced 8" o.c. for walls, 6" o.c. for ceilings, or using 1-1/4" DUROCK Brand Wood Screws with the same spacing. (For steel stud applications, use 1-1/4" DUROCK Brand Steel Screws.) Leave a 1/8" gap between all panel edges.

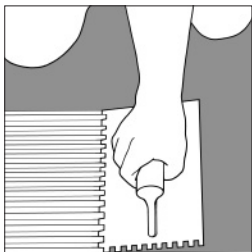


*On center is the spacing between the centerlines of two structural members or fasteners.

Installing Board— Floors

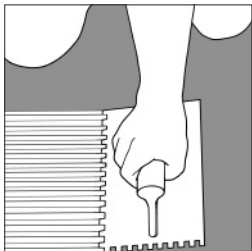
1. Lamination

Laminate 5/16" DuRock Brand Underlayment to minimum 5/8" thick exterior grade plywood or oriented strand board (OSB) using adhesive or mortar suitable for bonding cement backer board to the subfloor. Apply adhesive with 5/8" V-notched trowel, mortar with 1/4" square-notched trowel.



2. Fasteners

Place underlayment with joints staggered from subfloor joints. Fit ends and edges closely but not forced together, leaving a 1/8" gap. Fasten underlayment to subfloor with 1-1/2" hot-dipped galvanized roofing nails or 1-1/4" DuRock Brand Wood Screws spaced 8" o.c. in both directions.

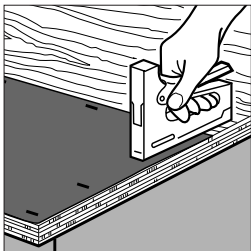


When 1/2" or 5/8" DuRock Brand Cement Board is used in underlayment applications, follow the same procedure as for 5/16" DuRock Brand Underlayment.

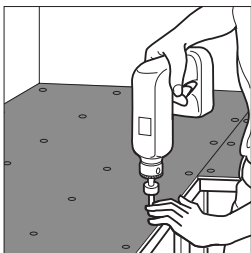
Installing Board— Countertops

1. Attachment

Install minimum 3/4" exterior-grade plywood or OSB base across the wood cabinet supports. Position ends and edges over supports. Staple-attach 15-lb. felt or 4-mil polyethylene film using 1/4" galvanized staples over the plywood base.



Fasten to the plywood with 1-1/4" DuRock Brand Wood Screws or 1-1/2" hot-dipped galvanized roofing nails, spaced 8" o.c. in both directions and around edges. Leave a 1/8" gap between panels.

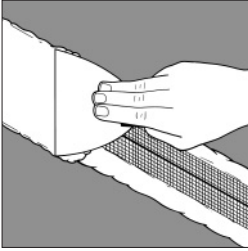


When using 1/2" or 5/8" DuRock Brand Cement Board in underlayment applications, follow the same procedure as for 5/16" DuRock Brand Underlayment.

Joint Treatment—Walls, Floors and Countertops

Prefill joints, as well as inside and outside corners, with latex-fortified mortar or Type 1 organic adhesive and then immediately embed tape and level joints.

NOTE: Use latex-fortified portland cement mortar for wall shield and floor protector applications.

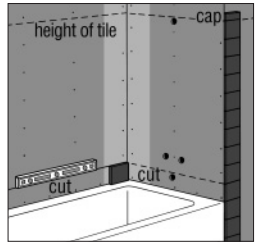


Installing Tile—Measuring and Planning

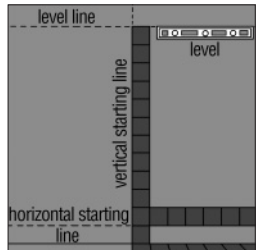
1. Walls

Establish tile height for walls by finding the low point of the floor next to the wall. Measure from this point to wainscot height including base and cap. On new work where floor must be installed, allow for tile thickness.

From low point, stack one row of tile to required height with dabs of mastic on the back of each tile. Use cap to establish height but draw line on top of the last tile as caps can be installed later.

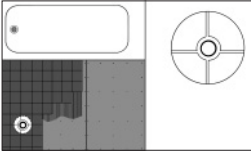


Find vertical starting line by beginning from the center of the wall. Lay out a row of tile to the corner. If cut comes to less than half the tile, adjust vertical starting line so its center hits middle of tile instead of tile joint.



2. Floors

Find starting point for floors by placing tile on floor in front of the tub and along the adjoining wall. Some tile may have to be cut to fill in open spaces. Fit tiles to pipes, then draw starting line for adhesive.

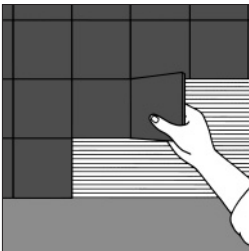


3. Setting tile

To set tile, apply the adhesive or mortar you've selected to wall, floor or counter top using notched trowel, holding at 50° or 60° angle for walls.

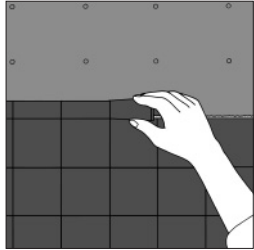
Working a small area at a time, set tile with a slight sliding motion and press into place. This avoids adhesive pile-up on tile edge and in grout space. Keep tiles aligned so joints are straight and uniform.

Use tile spacers, if desired. If adhesive is squeezed from under tile, you're using too much. Clean out excess adhesive before it dries.



Maintain 1/4" shims beneath the bottom row of tiles and cement board to make a caulk joint along tub rim.

When beginning at the top, place tile to horizontal line, then butter each cap and place in position. This eliminates possibility of troweling adhesive above required height.

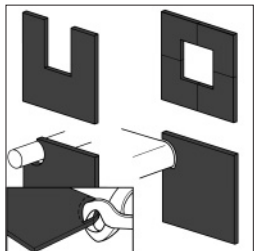


4. Cutting Tile

To trim tile use a professional tile cutting tool. Score tile only once for each cut. This prevents uneven breaking of tile and dulling of cutting wheel.



To make contoured and irregular cuts, use nippers to take small bites to prevent cracking or breaking of tile. With rod saw use long, even strokes to avoid binding. Smooth cut edges with an abrasive stone.



Grouting

1. Application of Grout on Walls

Wait at least 24 hours after tile has been installed before grouting. Apply with a rubber float or squeegee at a slight angle to the walls. Go over each joint three times, spreading grout across tile diagonally.

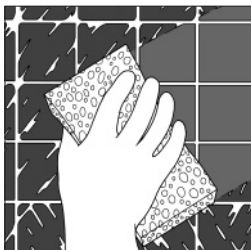


Fill joints completely. Remove excess grout with a float or squeegee as you go along.



Let grout set for 20 minutes, then wipe tile diagonally with a damp square-edge sponge.

Continue until grout lines are even and joints are smooth. Rinse sponge often but keep it as dry as possible. Let joints dry about 15 to 20 minutes, or until a haze forms on the tile. Then polish with clean paper towel or a clean white cloth.



Caulking

2. Application of Grout on Floors and Countertops

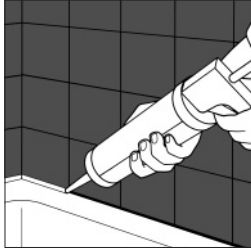
Wait at least 48 hours after the tile has been installed before grouting. Apply grout and force into joints with rubber float. Remove excess grout by drawing float across tile at 45° angle. Then wipe tile diagonally with damp sponge until joints are smooth and even. Rinse sponge often, and wring it as dry as possible. Polish with clean paper towels or a clean, white cloth.

NOTE: After you've completed grouting, it's important to put moisture back into the grout for a few days for stronger grout joints. Dampen grout now and then with a fine water spray during the first 24 hours while grout is curing. After the final cure—in about 2 or 3 weeks—protect grout surface on walls from dirt by coating with silicone tile and grout sealer. Do not use sealer on floors.



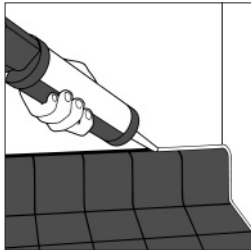
Walls

Fill 1/4" space between tub lip and bottom edge of tile around tub with flexible sealant. Also caulk around tub soap dish and other wall fixtures. Fill vertical grout lines adjacent to door jambs with flexible caulk rather than stiff cement grout.



Floors

Caulk space where floor edges meet walls with sealant. Protect unglazed mosaic or quarry tile with a sealer.



Countertops

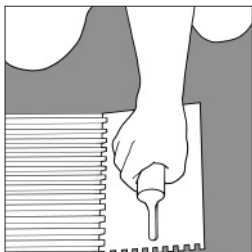
Follow the same steps used for grouting floors. Caulk abutments of countertop and walls and, if needed, underneath sink edge.

Other Applications of Cement Board

Floor Protectors

Apply 1/8" to 1/4" thick latex-fortified portland cement to solid surface—never on top of carpeting or padding.

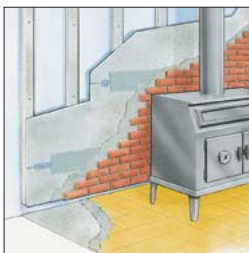
Fasten DUROCK Brand Cement Board with 1-1/4" hot-dipped galvanized roofing nails or 1-1/4" DUROCK Brand Screws, spaced 8" o.c. in both directions, penetrating floor a minimum of 3/4".



Wall Shields

Cut 1/2" DUROCK Brand Cement Board to panel and furring strip sizes with carbide-tip scoring tool. Smooth rough edges with wood rasp.

Fasten furring strips to framing with 1-1/2" hot-dipped galvanized roofing nails spaced 8" o.c. Fasten wall shield through furring to framing with 2-3/4" nails 8" o.c. Maintain 3/4" minimum framing penetration for both furring and shield.



For additional information on wall shields and floor protectors, see the DUROCK Brand Cement Board Submittal Sheet, CB198.

Trademarks

The following trademark used herein is owned by United States Gypsum Company: DUROCK, STRENGTH BENEATH THE SURFACE.

Notice

We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use.

Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

Safety First!

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

For warranty or product information and literature:

(800) USG-4YOU (874-4968)

<http://www.usg.com>



Manufactured by
United States Gypsum Company
125 South Franklin Street
Chicago, IL 60606

CB237/rev. 3-02
©2002, United States Gypsum Company
Printed in U.S.A.