

ULTIMATE GUIDE

BE PREPARED FOR YOUR UPCOMING PROJECT

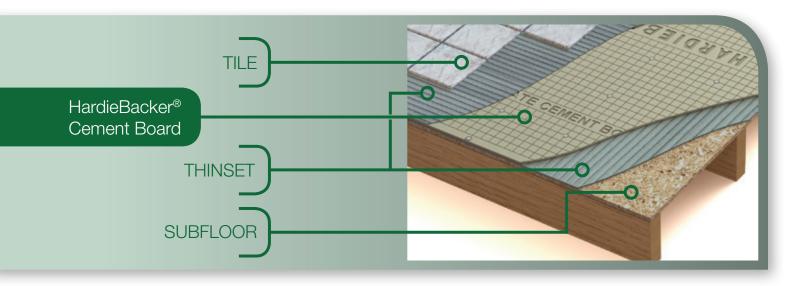


What are Backer Boards and Underlayments?

Backer boards and underlayments are used on interior walls, floors and countertops to provide a uniform surface for adhering tile, stone, paint, wallpaper or resilient surface materials. Even though backer board and underlayment are not visible once tiled or finished, they are a critical component of your interior system.

When you're building or remodeling and have an interior space that would come in contact with water, you should be installing backer board.

* Most local building codes REQUIRE the use of a backerboard or underlayment under tile in wet areas such as bathtub or shower surrounds.







Projects Where Backer Board or Underlayment Should Be Used

- Renovating bathroom
- Updating kitchen
- Replacing basement walls
- Installing fireplaces, furnaces, and steam rooms

Why Backer Board is Imperative

Even if the wall or floor surface is tiled, it's not waterproof. If you don't install backer board, the interior of your home may be susceptible to...

MOISTURE

Moisture can come from many sources, including plumbing leaks, an overflowing bathtub or sink, stream from a shower, pooling water or other sources.

If moisture penetrates the surface of a wall, ceiling or floor and reaches the interior, the substrate can buckle, swell or deteriorate. This could leave you with an unsightly space and the need for an expensive remodel.

MOLD

Moisture damage can turn any room into a breeding ground for mold. Once mold spores are inside your home, they grow and thrive on the combination of:

- Direct exposure to moisture (from showers, steam, structural or plumbing leaks, etc.)
- A food source (paper, wallboard, cloth)
- Warm temperatures

If mold is left untreated, it can colonize and release millions of airborne, breathable spores.

Did You Know?

- Water damaged areas may not be easily repairable, and may require replacement.
- Untreated moisture damage can ultimately cause expensive structural damage to wood studs and support beams.
- Standard homeowner's insurance policies rarely cover the cost of mold testing or removal.
- The average size mold removal costs a couple thousand dollars, but larger removal can cost well over \$20.000.

While no system is completely mold proof, you can help to protect your family and home by using—or requesting from your builder/contractor—mold growth and moisture-resistant substrate materials.





Know Your Backer Board Substrate Options

Not all substrates are equal! To make sure your new or existing home has the greatest mold and moisture protection built in, you should be familiar with all the various substrates.







Gypsum

Gypsum is a lightweight, soft mineral compound used in some backer boards.

The Risk:

- Many building codes no longer allow some types of water resistant gypsum boards in wet areas
- Greenboard gypsum core—susceptible to water damage
- Paper facing serves as food source for mold
- Tile size and weight limitations
- Lower compressive and flexural strength than cement backer boards
- Can't be used in steam rooms or where temperature is greater than 125° F

Glass Mesh Cement Boards

Glass mesh is a hard and durable substrate common in interior construction that has some moisture prevention characteristics.

The Risk:

- Heavy with abrasive filler
- Typically contains fillers like fiberglass, which can reduce strength and quality
- Within the mesh can be messy and require significant cleanup
- Heavier than cement backer boards
- Typically require multiple cuts due to the toughness of the mesh
- Aggregate can scratch and damage porcelain and enamel surfaces

Fiber Cement Backer Boards

Experts agree that fiber cement backer boards are the best choice for wet area walls and floors because they provide the best combination of durability and installation benefits.

The Reward:

- Flexibility of surface finish, can be tiled, painted or wallpapered.
- Greater flexural strength compared to gypsum, reinforced gypsum and glass mesh cement boards
- Greatest resistance to moisture and mold.
- Resistance to flame spread.
- Contains no added formaldehyde, gypsum, or paper facing abrasive aggregate.
- Approved by International Residential Code and International Building Code.

Backer Board Comparison

| | HARDIEBACKER® CEMENT BOARD | USG DUROCK® Board and Durock® Next gen | CUSTOM BUILDING PRODS WONDERBOARD® | CUSTOM BUILDING PRODS WONDERBOARD® LITE | NATIONAL GYPSUM PERMABASE® | GEORGIA PACIFIC DENSSHIELD® BOARD | CERTAINTEED DIAMONDBACK® GLASROC® | USG FIBEROCK [®] AQUA-TOUGH™ UNDERLAYMENT | GREENBOARD |
|---|--|---|---|--|---|--|---|--|--|
| Product Composition | Portland cement, ground sand | Portland cement, aggregate, glass- fiber mesh | Portland cement, aggregate, glass- fiber mesh | Portland cement, EPS beads, aggregates and reinforcement. | Portland cement, aggregate, glass- fiber mesh | Gypsum, fiberglass mat w/acrylic coating | Gypsum, fiberglass mat w/ coating | Engineered gypsum fiber core | Gypsum with paper facing |
| WORKABILITY | | | | | | | | | |
| Cuts clean | √ | × | × | × | × | √ | Not indicated | ✓ | ✓ |
| Cuts easily | √ | × | × | × | × | √ | √ | √ | √ |
| EZ-Grid® Technology | √ | × | × | × | × | × | × | × | × |
| Non-abrasive | √ | × | × | × | × | √ | Not indicated | √ | √ |
| UL Greenguard Gold Certified (low VOC/ no formaldehyde emmissions) | √ | × | × | × | √ | × | √ | × | √ |
| DURABILITY | | | | | | | | | |
| Gypsum-free | √ | √ | √ | ✓ | √ | × | × | × | × |
| Glass fibers - free | √ | × | × | × | × | × | × | √ | √ |
| Passes ASTM G21 and ASTM D3273 standards for mold resistance | √ | × | √ | √ | × | ✓ | √ | × | √ |
| MoldBlock® Technology | ✓ | × | × | × | × | × | × | × | × |
| ASTM E136 Non-combustible | √ | √ | √ | × | × | × | √ | × | ✓ |
| STRENGTH | | | | | | | | | |
| Flexural Strength (psi) | 1700 (0.42") 2100 (1/4") | 750 | 900 | 900 | 750 | Not indicated | Not indicated | 40-155 | Not indicated |
| Compressive Strength (psi) | 6500 (0.42") 7000 (1/4") | 1250 | 2500 | 1200 | 2250 | 450-600 | Not indicated | 500-1250 | Not indicated |
| TRUSTED | | | | | | | | | |
| Warranty | Lifetime limited; transferable (material and labor) | 30-year limited; transferable | Lifetime limited; non-transferable | 30-year limited; transferable | 30-year limited; non-transferable | Lifetime limited; non-transferable | Lifetime limited for residential; 20-year for light commercial | 20-year limited; transferable | May vary by manufacturer; non-transferable |
| Lifetime limited; transferable (material and labor) | √ | × | × | × | × | × | Not indicated | × | × |
| NAHB Green | ✓ | × | × | × | × | × | × | × | ✓ |

The Best Backer Board Choice: HardieBacker® Cement Board

HardieBacker® cement board is the strongest, easiest to use, and is the most durable lightweight cement backer board on the market today.

HardieBacker cement board is a portable fiber cement backer board that is composed of 90% Portland cement and sand, 10% cellulose fibers and proprietary additives to enhance performance.







HARDIEBACKER CEMENT BOARD IS USED
AS A MOISTURE AND MOLD RESISTANT
SUBSTRATE THAT PROTECTS THE INTEGRITY
OF TILE INSTALLATION IN FLOORS, WALLS,
COUNTERS AND WET AREAS

BENEFITS OF HARDIEBACKER CEMENT BOARD



DURABLE:

- Protects walls, floors, counters and wet areas from water damage.
- Non-combustible and approved for fire rated construction.



WORKABLE:

- No special tools required for cutting, just score and snap upwards.
- Fasten with screws or nails.



STRONG:

- Highest compressive strength.
- Strong enough to adhere to all sizes and types of tile.



TRUSTED:

- The only cement board with MoldBlock® Technology.
- The only backerboard to obtain a perfect score on both ASTM G21 and D3273 testst for mold resistance.

HardieBacker® Cement Boards Products



HardieBacker® 500 Backer Board (0.42 in)

Sheet sizes: 3 ft. x 5ft. and 4 ft. x 8 ft. Weight: 2.6 lbs/sq.ft.

| APPLICATIONS | FEATURES | BENEFITS | |
|-----------------|---|--|--|
| FLOORS WALLS | Nominal thickness (0.42 in.) | Transitions perfectly to tapered edge drywall | |
| WET AREAS | Pre-printed fastener pattern | Less guesswork, measurement | |
| | Can be painted, textured or wallpapered | Cut finishing time down | |
| | No paper facing | Higher resistance against mold and delamination from water exposure | |

HardieBacker® 1/4 in. Underlayment

Sheet sizes: 3 ft. x 5 ft. and 4 ft. x 8 ft. Weight: 1.9 lbs/sq.ft.

| APPLICATIONS | FEATURES | BENEFITS | | |
|-------------------------------------|--|-----------------------------------|--|--|
| FLOORS COUNTER TOPS WET AREAS | EZ Grid [®] recessed pattern | Scoring guidance | | |
| | EZ Grid [®] 1 in. x 1in. | Facilitates layout | | |
| | Recessed fastener indications | Easier fastening and installation | | |



HardieBacker[®] Cement Boards Resources

If you have any questions on HardieBacker, please call us at 1-800-9-HARDIE or submit your question at hardiebacker@jameshardie.com.

CERTIFICATIONS













FOR MORE INFORMATION GO TO HARDIEBACKER.COM

For the mobile install guide or to have it e-mailed to you, snap this code.
Or text "BACKER" to 76477

