# PROFLEX® BACKER BOARD

2025-03-28

## 1. PRODUCT NAME
PROFLEX® Backer Board

## 2. MANUFACTURER
**PROFLEX® Products, Inc**.
1603 Grove Ave.
Haines City, FL 33122
Toll Free: 877-577-6353
Fax: 863-937-9624
Internet: www.proflex.us

## 3. PRODUCT DESCRIPTION
PROFLEX® Backer Board is made of proprietary and patent pending technology. Ingredients include Magnesium Oxide, Magnesium Chloride as the primary components, with additional natural mineral components, woven and non-woven strengthening fibers. PROFLEX® Backer Board is manufactured with a patent pending process and formula, using primary components of magnesium oxide and magnesium chloride. The manufacturing process uses less than 50% of the energy consumed to make a comparable Portland cement-based wall board, and contains a minimum of 5% transferred post-industrial recycled material, and 100% of manufacturing post-industrial waste is recycled into future production runs.

***Uses***
PROFLEX® Backer Board is the ideal backer board for tubs, showers, floors, outdoor kitchens, fireplace surrounds receiving stone or brick veneer, and much, much more. In addition to walls and floors, it can also be used for exterior applications such as soffit cladding, as an exterior sheathing behind stucco applications when structural strength is not required for the exterior sheathing, as an interior or exterior skin for SIP panels, in homes where breathable walls are desired, for fireplace surrounds, as wall board for those who are chemically sensitive, and as a mold resistant and flame rated paneling in mobile and manufactured homes.

***Advantages***
- Installs with conventional fasteners and can be scored and snapped with a regular utility knife
- Weighs 50% per square foot less than other cement boards
- Is non-nutrient for mold & mildew, without added chemicals
- Contains no harmful silica
- Will not warp, swell, delaminate or disintegrate when exposed to moisture
- Rated “Extra Heavy””, meaning it can be installed as a tile backer under the most demanding conditions like food plants, industrial kitchens, and other high impact areas.

***PACKAGING***
36” x 60” x 1/2” (15sqft) - 50 sheets per pallet
36” x 60” x 1/4 (15sqft) - 5 0 sheets per pallet
May be stored indoors or outdoors. When storing outdoors, a waterproof cover is required. Store flat and level, on pallets that fully support the entire sheet. If exposed to rain or snow, dry the sheets of material before installation.

## 4. TECHNICAL DATA
**Physical Properties**
- Meets Class 1- Class A flame & smoke ratings under ASTM E84.
- PFB 1/2” has been approved as a part of a 2hr fire assembly.

- Is classified as non-nutrient for fungus under ASTM D3273.
- May contribute to LEED MR8, minimum, EQ 3.1 and MR 4.1
- Rated "Extra Heavy" under ASTM C-627

| Property | Method | ½' | ¼' |
|---|---|---|---|
| Mold/Fungus | ASTM D3273 | 0" | 0" |
| Flame* | ASTM E85 | Class 1<br>Class A* | Class 1<br>Class A* |
| Smoke* | ASTM E85 | Class 1<br>Class A* | Class 1<br>Class A* |
| Combustibility | BS EN1 182 | Class1A* | Class1A* |
| Floor System | ASTM C627 | Extra Heavy* | |
| Formaldehyde | EN120 | 0* | 0* |
| Asbestos | NIOSH9002 | 0* | 0* |
| Weight/SF | (nominal) | 2.3 lbs | 1.2 lbs |

***PERFORMANCE SPECIFICATIONS FOR 1/2" BACKERBOARD***

| Property | Test Method | Result | Requirement |
|---|---|---|---|
| *Sound* | *ASTM E90*<br>*Wall system* | *STC 31*<br>*STC 47* | |
| *Thermal* | *ASTM C-518-04* | *1" R = .493 (°F ft2h.BTU)* | |
| *Length Tolerance*<br>*Width Tolerance* | *CCMC 6.4.2* | *-3*<br>*-1* | *± 3* |
| *Humidified Deflection* | *CAN/CSA-A82.20.3.M91* | *1 mm* | *≤4* |
| *Flexural Strength, Wet* | *ASTM C947-89* | *3.14 MPa* | |
| *Thickness tolerance mm* | *CCMC 6.4.1* | *.6* | *≤1.6* |
| *Hardness, N*<br>*Core*<br>*End*<br>*Edge* | *CAN3-0188.0- M78* | *2674*<br>*2483*<br>*2438* | *≥2200* |
| *Max. Moisture Absorption* | *ASTM C 1185* | *27%/24 hrs*<br>*29%/48 hrs* | |
| *Fastener Pull Through* | *CAN/CSA-A82.20.3-M91* | *958* | *≥320* |
| *Fastener Lateral Resistance* | *ASTM D 1037- 93* | *720 dry*<br>*558 wet*<br>*481 aged* | *≥400* |
| *Humidified Deflection* | *CAN/CSA-A82.20.3-M91* | *1mm* | *≤4mm* |
| *Impact-Fracture point* | *CCMC 5.1.2* | *5 ft.lb. load* | |
| *Impact- Indentation* | *CCMC 5.1.2* | *.66 dry indentation* | *≤1* |
| *Impact- Indentation* | *CCMC 5.1.2* | *.71 wet indentation* | *≤1* |

## 5. INSTALLATION

PROFLEX®

# BACKER BOARD

2025-03-28

**Tools Needed for installation:**

- *Utility knife with conventional blades*
- *Saber Saw with hardened blade for curves and cutouts*
- *48" wallboard T square and/or other straightedge*
- *Electric screw driver with depth collar*
- *Dust mask*
- *Safety goggles or glasses meeting ANSI Z87.1 standard*

**Tools needed for finishing:**

- *Mixing buckets for powder joint compound*
- *Mixing tools*
- *Standard joint compound application trowels and accessories*
- *Standard sanding tools*

***Recommended Fastener Spacing and Tool Requirements***

| Location | Structure | Type/Length | Spacing |
|---|---|---|---|
| *Wall or Ceiling* | *Steel Framing* | *Corrosion resistant 1-1/4" bugle head tapping screw* | *6" O.C. on wall frame 6" O.C. on ceiling joist* |
| *Wall or Ceiling* | *Wood Framing* | *Corrosion resistant 1-1/4" bugle head, coarse thread, self-drilling screw* | *6" O.C. on wall frame 6" O.C. on ceiling joist* |
| *Wall or Ceiling* | *Wood Framing* | *Galvanized 7 d or 8 d framing nails* | *6" O.C. on wall frame 6" O.C. on ceiling joist* |
| *Floor Countertop* | *Wood Framing L/360 structural rating* | *Corrosion resistant 1-1/4" wallboard or backer screw, galvanized nail or wide crown staple* | *8" OC in both directions throughout field* |

**Walls and Ceilings:** receiving ceramic, porcelain, or stone tile finish, stud spacing shall be no more than 16" O.C. If ceiling joists are at 24" O.C. then Walls and Ceilings provide blocking between joists. Apply with the rough face out for tile installation. If some area will not be covered with tile, apply with the smooth face out. Adhesives and latex modified mortars will bond effectively with either face. In wet locations, apply a vapor barrier over the framing members. Measure and mark backer board to fit the space to be covered. Using a straight edge or T square, score the board with a conventional utility knife. Snap the board along the cut, and then score the back side with the utility knife. Reverse snap if necessary. Fasten with recommended fasteners as described in the fastener chart. Drive fastener heads flush with surface of board. Fill all joints between boards and in corners with material to be used as adhesive. Embed a 2" wide alkali resistant mesh joint tape in the adhesive or mortar over all joints. Allow joints to cure before applying tile. Caulk joints at tub or shower edge with a mold-resistant caulk.

**Installing on Floors:** For the strongest installation, rated "Extra Heavy" under ASTM C-627, use ½" board. The ¼" board is suitable for use in residential Installing on Floors bathrooms and kitchens where heavy equipment is not regularly moved across the floor. For both ½" and ¼" board, follow the fastener schedule page. Fasteners should be no closer to the edge of the board than ¾" for floor installation. Ensure plywood subfloor and floor structure is sound. Replace any loose, warped, uneven or damaged sections of floor.

Use minimum 5/8" exterior grade plywood or 23/32" exterior grade OSB, complying with local building codes and ANSI A108.11. Ensure that floor is clean, flat, and level. The floor must be engineered not to exceed the L/360 deflection criteria, including live and dead design loads for the specific joist spacing used. Review local building codes for specifications on structural strength of floors. Spread with a ¼" x ¼" notched trowel a bed of firm mixed, latex modified, dry set mortar between sub-floor and board™. (Mortar should comply with ANSI A118.1) Score and snap board to fit the installation space. Lay board over mortar bed, staggering joints. Avoid placing board joints directly over plywood joints, while leaving ⅛" to ¼" gap at all perimeter edges. Fasten board following the fastener schedule for floor installation Fill completely all joints except perimeter with the same mortar used as the setting bed. Spread a 4" wide bed of mortar over the joints and embed 2" wide alkali resistant fiberglass tape in the mortar. Allow mortar to dry before installing tile. Tile must be installed with latex modified mortar.

**Installing on Countertops:** Install minimum ½" exterior grade plywood or OSB board over cabinets. Provide blocking supports under joints and every Installing on Countertops 16". If using ¾" plywood, provide supports every 24". For both ½" and ¼" board, follow the fastener schedule. Fasteners should be no closer to the edge of the board than ¾" for countertop installation. Spread with a ¼" x ¼" notched trowel a bed of firm mixed, latex modified mortar between plywood and board OR use the same tile-setting adhesive to be used for the tile installation. (Mortar should comply with ANSI A118.1) Score and snap board to fit the installation space. Lay board over mortar bed, staggering joints. Avoid placing board joints directly over plywood joints, while leaving a ⅛" gap where countertop meets vertical surfaces. Fasten the board following the fastener schedule for countertops. Fill completely all joints except where countertop meets vertical surfaces with the same mortar used as the setting bed. Spread a 4" wide bed of mortar or adhesive over the joints and embed 2" wide alkali resistant fiberglass tape. Allow mortar or adhesive to dry before installing tile.

***ADDITIONAL SURFACES***

**Exterior Stone and Tile Backer**: board may be used as a tile and facing stone backer on exterior walls. The installation should not extend from the exposed wall surface through the grade line. If it is used at or below grade, a control joint must be installed between the materials above and below grade, and an exterior grade waterproofing membrane must be applied to fully cover all surface areas and exposed edges, and the membrane must extend 8 " above the finish grade line. Follow the guidelines for installation as an interior wall tile backer. In exterior applications only a surface applied waterproofing membrane (PROFLEX® HYDRA-SEAL) will fully satisfy the warranty. A vapor barrier behind the board is not warranted in exterior applications.

**Tile Backer for Fireplace Inserts and Wood Stoves**: PROFLEX® Backer board is rated non-combustible and is suitable as a tile backer for fireplace inserts and wood stoves. Follow installation guidelines provided here for interior installation, and provided by the stove or insert manufacturer, and local building codes. Framing around fireplace inserts must be constructed to withstand the expansion and contraction of the appliance, and must be flat and true. Product must not be fastened to the heat shield of the appliance. Not recommended as a finish material behind wood stoves. Tile, stone, or other non-combustible finish materials should be installed over board in compliance with local building codes.

**Cutting PROFLEX® Backer board** Mark board to be cut to fit when less than a full sheet is needed. Using the wall board square or other straightedge, score the board with one firm pass of a utility blade. Snap the board along the cut, and back score to complete the cut. For special curve cuts or cutouts, use a saber saw with a hardened blade. Support the board firmly when cutting with a saw. Provide adequate ventilation to prevent accumulation of airborne dust. The PROFLEX® Backer board dust is not toxic, but may be an irritant to eyes and mucous membranes. Use safety equipment to protect eyes and breathing passages.

**Finishing PROFLEX® Backer board** Product is a permeable, or "breathing" material. To prevent excess moisture absorption during application of finishes, apply a low-VOC or zero-VOC penetrating sealer to board before applying joint compounds or finishing plasters. This will prevent uneven drying. Fill all joints between boards completely with a non-shrinking, quick drying joint filler. Allow to dry completely, then apply paper joint tape embedded in joint compound. Joint tape may be applied with quick drying or standard joint compound, or with earth plaster joint compounds. If applying light texture or no texture, continue applying finish

coats to the joints to achieve a smooth, flat surface throughout the installation. Sand lightly between coats. Because PROFLEX® Backer board has no paper face, joint compounds can be feathered in, and sanding can be kept to a minimum. If applying earth plasters, use manufacturer's instructions for application of these plasters. Earth plasters may appear dry on the surface and still retain moisture underneath. Provide adequate ventilation and air movement to completely dry earth plasters before continuing construction process. Use moisture meters to determine when plaster is completely dry. If painting, apply a primer and finish coat according to paint manufacturer's instructions.

## 6. AVAILABILITY

PROFLEX® Products are available nationwide.
To locate PROFLEX® products in your area, please contact:
Phone: 877-577-6353
Website: www.proflex.us

## 7. WARRANTY

PROFLEX® Products, Inc. offers a limited warranty for this product when used in accordance with printed specifications. A copy of the limited warranty can be obtained by calling technical services at 877-577-6353 or visiting www.proflex.us

## 8. MAINTENANCE

None required, but installation performance and durability may depend on properly maintaining products supplied by other manufacturers.

## 9. TECHNICAL SERVICES

Technical assistance
Information is available by calling the Technical Support
Toll Free: 877-577-6353
Fax: 863-937-9624
Technical and safety literature: To acquire technical and safety literature, please visit our website www.proflex.us

## 10. FILING SYSTEM

Division 9