

WONDERBOARD® BACKERBOARD

1. Product Name

WonderBoard® Backerboard

2. Manufacturer

Custom Building Products

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3. Product Description

WonderBoard® Backerboard is a fiberglass mesh reinforced cement backerboard for residential and commercial tile, stone, slate and thin brick applications. High flexural strength, along with moisture resistance, makes WonderBoard an ideal for both interior and exterior substrate applications.

Uses for WonderBoard include:

- Walls
- Floors
- Ceilings
- Counters
- Vanities

COMPOSITION & MATERIALS

WonderBoard panels are composed of stable Portland cement, aggregates and reinforcement.

SIZES

- 36" x 60" x 1/2" (914 x 1524 x 13 mm) for floors, walls and countertops
- 36" x 60" x 1/4" (914 x 1524 x 6mm) for floors and countertops

BENEFITS

- Patented open mesh edges allow tapeless installation and provides outstanding edge bond strength
- Aligns to 1/2" (13 mm) drywall without use of shims or spacers on wall studs
- WonderBoard includes a pre-printed grid pattern on the panel surface and is easy to score, snap, cut and fasten, simplifying installation
- Remains stable when exposed to moisture, reducing risk of moisture damage

LIMITATIONS

- Do not use WonderBoard for exterior surfaces where imposed wind loads exceed 30 lb/ft² (146 kg/m²).
- Do not use WonderBoard as a structural load bearing member.
- WonderBoard is not a waterproof barrier. If the area behind the backerboard must be kept dry, use RedGuard® Waterproofing and Crack Prevention.

Membrane or Custom® 9240 Waterproofing and Anti-Fracture Membrane

- Do not use drywall fiberglass tape for this product.
- Do not use wallboard joint compound for this product.

4. Technical Data

APPLICABLE STANDARDS

American National Standards Institute (ANSI) — ANSI A108, A118 & A136 American National Standards for the Installation of Ceramic Tile

ASTM International (ASTM)

- ASTM C473 Standard Test Methods for Physical Testing of Gypsum Panel Products
- ASTM C627 Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester
- ASTM C947 Standard Test Method for Flexural Properties of Thin-Section Glass-Fiber-Reinforced Concrete (Using Simple Beam With Third-Point Loading)
- ASTM D1037 Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials
- ASTM D2394 Standard Methods for Simulated Service Testing of Wood and Wood-Base Finish Flooring
- ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- ASTM E330 Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

National Fire Protection Association (NFPA) — NFPA 255 Standard Method of Test of Surface Burning Characteristics of Building Materials

Tile Council of North America (TCNA) — TCA Handbook for Ceramic Tile Installation, TCA Method EJ171

Underwriters Laboratories, Inc. (UL) — ANSI/UL 263 Fire Tests of Building Construction and Materials

Underwriters' Laboratories of Canada (ULC) — CAN/ULC S101 Standard Method of Fire Endurance Tests of Building Construction and Materials

APPROVALS

Fire Performance

WonderBoard has achieved a fire resistance rating for cementitious backer units per ANSI/UL 263 and CAN/ULC S101, Report No. 21766.

Environmental Considerations

Custom Building Products is committed to environmental responsibility in both products produced and in manufacturing practices.

Use of WonderBoard products can contribute to LEED® certification.

TECHNICAL PROPERTIES

Property	Results
ASTM C947	
Flexural strength	900 psi (62.9 kg/cm ²)
ASTM D1037	
Fastener holding	140 lb (63.5 kg)
Linear variation with moisture change	0.07%
ASTM C473	
Facial dimension	± 1/8" (3 mm)
Thickness	± 1/32" (0.8 mm)
ASTM C627	
Robinson floor test	Extra heavy duty
ASTM D2394	
Compression Indentation	< 0.05 @ 2500 psi (176 kg/cm)
ASTM E330	
Wind load	30 lb per ft ² (13.6 kg/m ²)
Tensile bond to surface	50 psi min
Shear bond strength to surface	50 psi min
Bacterial & fungus resistance	No growth
Fire Performance	ASTM E84
Flamespread	0
Smoke developed	0
Weight	4 lb/ft ² (19.5 kg/m ²)

5. Installation

Use a polymer-modified mortar meeting ANSI A118.4 standards, such as FlexBond® Crack Prevention Mortar, for leveling bed and joint treatment; mortars meeting ANSI A118.1, A118.4 or A118.11 or a Type I ceramic tile adhesive can also be used. Follow instructions for each mortar or adhesive.

Use 1.5" (38 mm) galvanized roofing nails or 1.25" (32 mm) SuperiorBilt® backerboard screws. For wood or 20 gauge steel framing, use 1.25" (32 mm) SuperiorBilt backerboard screws or an equivalent. Nails should meet or be equivalent to Federal Specification FF-N105B/Type 2 Style 20.

Tiled surfaces that exceed 36' (11 m) in a continuous plane or with surfaces that abut a dissimilar structure should incorporate perimeter and generic movement joints in the tile network. Location width and details of control joints must follow sound architectural practices. See TCA Handbook EJ171.

METHODS

Wood Floors:

For the subfloor, securely glue and fasten minimum 5/8" (16 mm) exterior grade plywood or OSB panels (PRP-108) to the floor joists. Floor joists should be spaced a maximum of 16" (40 cm) o.c.; a 3/4" (19 mm) exterior grade plywood or OSB subfloor with I-joists spaced a maximum of 19.2" (48 cm) o.c. is also acceptable.

When setting dimensional stone larger than 12" x 12" (30 x 30 cm), a 3/4" (19 mm) subfloor is required. All plywood or OSB subfloor sheets must be gapped 1/8" (3 mm). Use 1" (2.5 cm) bond breaker tape over gaps in the subfloor to prevent gaps from filling with thin-set.

Using a 1/4" (6 mm) square notch trowel, apply a setting bed of polymer modified mortar to the subfloor. Immediately laminate the WonderBoard to the subfloor, leaving a 1/8" - 3/16" (3 - 5 mm) space between the boards at all joints and corners. Stagger joints so they do not line up with underlying substrate joints. While the setting bed mortar is still workable, fasten WonderBoard every 4" - 6" (10 - 15 cm) o.c. throughout the board field and around all edges. Around the perimeter of each board, locate fasteners within 1/2" - 1" (1.3 - 2.5 cm) of the edge. Fill all joints with polymer modified mortar. On all joints and corners, pre-fill the gap with bonding material; then embed 2" (5 cm) mesh tape and smooth material over the joint and corner. Use 1" (2.5 cm) bond breaker tape over gaps in the subfloor.

Walls and Ceilings:

For wall framing, edges parallel to framing should be continuously supported (typical sleeper studs should be used). Framing for a tub surround or prefabricated shower pan should be plumb and square. Provisions for the sheet membrane pan liner must be made to ensure proper backerboard installation at the interface of the tub or pan flange.

For ceiling framing, the complete ceiling assembly allowable deflection due to dead load should not exceed 1/360 of the span. Framing members in the ceiling should not exceed 16" (40 cm) o.c. The weight applied to the ceiling frame, including insulation, backerboard, bonding material and facing material, should not exceed 15 lb/ft² (73 kg/m²). Backerboard edges parallel to the framing should be continuously supported. Provide additional blocking, when necessary, to permit proper backerboard attachment and reduce deflection between the joists.

Leaving a 1/8" - 3/16" (3 - 5 mm) space at all joints and corners, install the WonderBoard panels. Stagger board joints with those of adjacent rows. Fasten the backer-board every 6" (15 cm) along the joist or rafter. It is recommended that blocking be installed between the joists to support the ends of the backerboard. On all joints and corners, pre-fill the gap with bonding material, and then embed 2" (5 cm) mesh tape and smooth the material over the joint and corner.

A moisture barrier must be installed to protect the wall cavity for wet area installations. Nail or staple 15 lb roofing felt or 4 mil polyethylene sheeting to the studs. Precut WonderBoard panels and make any necessary cutouts. Install WonderBoard, leaving a 1/8" – 3/16" (3 – 5 mm) space at all joints and corners.

Stagger board joints with those of adjacent rows.

Fasten backerboards every 8" (20.3 cm) o.c. along studs. At all joints and corners, pre-fill gaps with polymer-modified mortar, then embed 2" (5 cm) alkali-resistant fiberglass mesh tape and smooth material over joint and corner. Any shelf, ledge or horizontal surface subjected to water exposure must have a slight downward slope for water runoff. These areas also require proper waterproofing. Apply RedGard according to directions.

For installation of tile, natural stone or a similar material, comply with ANSI A108 standard specifications. Install according to installation instructions for the corresponding mortar data sheets.

PRECAUTIONS

This product, when cut, drilled or abraded, produces dust containing free silica, which may cause cancer or delayed lung injury (silicosis) if inhaled. Work outdoors, in a well-ventilated area, or use mechanical ventilation. Wear safety glasses and a dust mask; in very dusty areas or where airborne dust exceeds PEL, wear a NIOSH/MSHA approved respirator. This product contains one or more chemicals known to the State of California to cause cancer.

BUILDING CODES

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

6. Availability & Cost

WonderBoard is available through retail distributors throughout the United States. Visit the www.custombuildingproducts.com website for additional information about availability.

7. Warranty

This product is eligible for Custom Building Products Lifetime Installations Systems Warranty.

Custom Building Products ("Custom") warrants to the original consumer purchaser that its product shall be free from defects in material and workmanship under normal and proper usage for a period of one year following the date of original purchase. Custom's sole liability under this warranty shall be limited to the replacement of the product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty will not extend to any product which has been modified in any way or which has not been used in accordance with Custom's printed instructions. Custom makes no other warranties either express or implied. This warranty gives you specific legal rights, and you may have other rights that vary from state to state.

For details and complete warranty information, contact Custom Building Products or visit the Custom Building Products website: www.custombuildingproducts.com.

8. Maintenance

Properly installed product requires no special maintenance.

9. Technical Services

For technical assistance, contact Custom Building Products or visit the website: www.custombuildingproducts.com.

10. Filing Systems

Additional product information is available from the manufacturer upon request.

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