DIVISION: 07—THERMAL AND MOISTURE PROTECTION
Section: 07450—Fiber-Reinforced Cementitious Panels

WONDERBOARD TILE BACKERBOARD

CUSTOM BUILDING PRODUCTS, INC.

1.0 SUBJECT
Wonderboard Tile Backerboard.

2.0 DESCRIPTION
2.1 General:
Wonderboard Tile Backerboard is used as a backerboard and underlayment for ceramic tile applications on building interiors. The backerboard is comprised of lightweight concrete and glass mesh. The glass mesh is bonded to each side of the core using a portland cement slurry. The boards are 1/2 inch (12.7 mm) thick; 32 or 36 inches (813 or 914 mm) wide; 48, 60 or 96 inches (1219, 1524 or 2438 mm) long; and weigh approximately 3.0 pounds per square foot (14.6 kg/m²). The boards have a maximum flame-spread rating of 25 and a maximum smoke-developed rating of 450 when tested in accordance with UBC Standard 8-1 (ASTM E 84), and are noncombustible in accordance with UBC Standard 2-1 (ASTM E 36).

2.2 Installation:
2.2.1 General: The Wonderboard Tile Backerboard must be delivered to the jobsite in unopened packages, and stored in an enclosed shelter providing protection from damage and exposure to the elements. Damaged materials must be removed from the premises. During backerboard installation, ambient room temperatures must be maintained within the range of 50°F to 100°F (10°C to 37.7°C). Adequate ventilation must be provided to carry off excess moisture. Wonderboard must not be installed when it is wet.

Wonderboard Tile Backerboard is either scored and snapped or saw-cut to desired dimensions. All framing to which the Wonderboard Tile Backerboard is applied must conform to the requirements of the code and be free from holes and breaks. Wonderboard must not be installed when it is wet.

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Tiled surfaces must be protected from structural movement by use of control or expansion joints in accordance with the manufacturer’s recommendations and sound architectural practices.

Wonderboard Tile Backerboard has not been evaluated as a waterproof membrane. Therefore, a moisture barrier is required in rooms or areas where high humidity or moisture is present, such as bathrooms and showers. The moisture barrier consists of Type 15 asphalt-saturated felt or other approved water-vapor-permeable barrier material. The moisture barrier must be installed over framing and must be free from holes and breaks.

Wonderboard Tile Backerboard is fastened to wood framing using 1 1/2-inch-long (38 mm) galvanized roofing nails having a head diameter of 0.40 inch (10.2 mm) and a Shank diameter of 0.12 inch (3.0 mm). The panels are attached to No. 20 gage steel framing (and optionally to wood framing) using Rock-on® 1 1/4-inch-long (31.7 mm), 8-18 Hi-Lo Type S screws having a 0.40-inch-diameter (10.2 mm) wafer head.

When attachment is made to steel framing heavier than No. 20 gage (up to No. 14 gage), Rock-on® 1 1/4-inch-long (31.7 mm), 8-18 Type S-12 screws are used. All screws must have an alkali-resistant coating.

Joints and bond facing materials must be treated with dry-set mortar meeting ANSI A 118.1 requirements, latex-modified dry-set or portland cement mortar meeting ANSI A 118.4 requirements, or Type I organic adhesive meeting ANSI A 136.1 requirements.

The tile backerboard must be installed in accordance with this report and the manufacturer’s installation instructions.

2.2.2 Floors: Wonderboard Tile Backerboard used as underlayment must be installed over a subfloor consisting of minimum-1/2-inch-thick (12.7 mm) exterior-grade plywood that is glued and mechanically fastened to floor joists spaced not more than 16 inches (406 mm) on center. A setting bed of latex-modified mortar is applied to the subfloor using a 1/4-inch-by-1/4-inch-by-1/8-inch (6.4 by 6.4 by 6.4 mm) square-notched trowel. Immediately after the setting bed is applied, the Wonderboard Tile Backerboard is laminated to the subfloor, leaving a 1/8-inch to 1/4-inch (3.2 mm to 4.8 mm) space between the boards at all joints and corners. While the mortar bed is still workable, the backerboard must be fastened every 6 to 8 inches (152 to 203 mm) on center through-out the board. Edge fasteners must be located 1/2 inch to 2 inches (38 mm to 51 mm) from...
the edge of the board. All joints and corners must be filled with latex-modified mortar. Taping of floor joints is not required.

2.2.3 Walls: Wonderboard Tile Backerboard used on walls must be fastened to wall studs spaced a maximum of 16 inches (406 mm) on center. Edges of backerboard parallel to framing must be continuously supported. Additional blocking must be provided as necessary to permit proper backerboard attachment. Holes drilled into the backerboard, as a relief for small obstructions or protrusions, must subsequently be filled with tile setting material.

Studs above shower floors must be notched or furred to accommodate the thickness of the waterproof membrane or pan. The opening for a tub or precast shower receptor must not be more than 1/2 inch (12.7 mm) larger than the size of the unit installed.

The backerboard must be installed with a 1/8-inch to 3/16-inch (3.2 mm to 4.8 mm) space at all joints and corners, a 1/4-inch (6.4 mm) space above receptors, and a 1/2-inch (12.7 mm) space above shower floor membranes. Backer-board joints must be staggered with those of adjacent rows. The backerboard is fastened every 8 inches (203 mm) on center with fasteners noted in Section 2.2.1. Edge fasteners must be located 1/2 inch to 2 inches (12.7 mm to 51 mm) from the edge of the board. Where open-mesh wrapped edges meet, gaps must be filled with bonding material. On all other joints and corners, gaps must be prefilled with bonding material and covered with 2-inch (51 mm) mesh tape embedded in additional bonding material.

2.2.4 Application of Ceramic Tile: Ceramic tile meeting the requirements of the code is installed over the Wonderboard Tile Backerboard in accordance with the requirements of the code.

2.3 Identification:

2.3.1 Each Wonderboard Tile Backerboard bears the Custom Building Products, Inc., address and name or trademark, the product name and the evaluation report number (ICBO ES ER-5771 or NER-447).

2.3.2 The report holder’s contact information is the following:

CUSTOM BUILDING PRODUCTS, INC.
13001 SEAL BEACH BOULEVARD
SEAL BEACH, CALIFORNIA 90740

3.0 EVIDENCE SUBMITTED
Data and reports of tests in accordance with ANSI A118.9-1990, and with UBC Standards 2-1 (ASTM E 136) and 8-1 (ASTM E 84); descriptive literature and product specifications; and installation instructions.

4.0 FINDINGS
That Wonderboard Tile Backerboard complies with the 1997 Uniform Building Code™, subject to the following conditions:

4.1 The board is installed in accordance with this report and the manufacturer's installation instructions.

4.2 The board is used for interior installations only.

4.3 The board is not used structurally to resist axial, transverse or racking loads.

4.4 All walls and floors to which the board is attached are designed in such a manner that deflections do not exceed 1/360 of span under total design load conditions.

4.5 The spacing of members supporting the board (joists, studs, etc.) does not exceed 16 inches (406 mm).

4.6 If the area behind the backerboard is required to be kept dry, a moisture barrier is installed.