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

**DIVISION: 09—FINISHES**  
**Section: 09305—Tile Setting Materials and Accessories**

**REPORT HOLDER:**

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**EVALUATION SUBJECT:**

wedi® BUILDING BOARD

**1.0 EVALUATION SCOPE**

**Compliance with the following codes:**

- 2003 *International Building Code*® (IBC)
- 2003 *International Residential Code*® (IRC)
- 1997 *Uniform Building Code*™ (UBC)

**Properties evaluated:**

- Surface burning characteristics
- Water penetration
- Physical properties

**2.0 USES**

wedi® Building Board is used as a substrate for field-applied ceramic tile or dimension stone veneers on interior floors, walls and ceilings; and as a substrate for field-applied tile on floors, walls and ceilings of shower areas as specified in IBC Section 1210, IRC Section R307.2 and UBC Section 807; and as a substrate for field-applied ceramic tile veneer and dimension stone veneer on interior floors, walls and ceilings, and shower areas, in accordance with IBC Chapter 8, IRC Section R702 and UBC Chapter 8.

**3.0 DESCRIPTION**

The wedi® Building Boards are comprised of an extruded polystyrene (XPS) core with a fiberglass scrim and polymer-modified cementitious coating, factory-applied to both faces of the core. The wedi® Building Boards are 36 inches (914 mm) wide and 60 inches (1524 mm) long, are 1/4, 1/2 or 5/8 inch (6.4, 12.7 and 15.9 mm) thick, and weigh approximately 0.53, 0.57 and 0.59 pound per square foot (2.6, 2.8 and 2.9 kg/m<sup>2</sup>), respectively. The wedi® Building Boards have a flame-spread

index of less than 25 and a smoke-developed index of less than 450 when tested in accordance with ASTM E 84.

wedi® Building Boards shall be stored on a flat level surface, in an enclosed shelter providing protection from damage and exposure to the elements and direct sunlight. Direct contact with materials containing volatile components shall be avoided. Care shall be taken to protect the boards from flame or other ignition sources during storage and installation.

**4.0 DESIGN AND INSTALLATION**

**4.1 Design:**

**4.1.1 Walls:** The maximum installed weight of the veneer to be applied to 1/2-inch- or 5/8-inch-thick (13 mm or 16 mm) wedi® Building Boards installed on walls in accordance with Section 4.2 of this report shall not exceed 23 psf (112 kg/m<sup>2</sup>).

**4.1.2 Ceilings:** The maximum installed weight of the veneer to be applied to 1/2-inch- or 5/8-inch-thick (13 mm or 16 mm) wedi® Building Boards installed on ceilings in accordance with Section 4.2 of this report shall not exceed 15 psf (73 kg/m<sup>2</sup>).

**4.2 Installation:**

**4.2.1 General:** During installation of the wedi® Building Boards, ambient room temperatures shall be maintained between 50°F and 100°F (10°C and 38°C). The wedi® Building Boards may be cut with a saw or utility knife to the desired dimensions. All framing shall comply with the applicable code with a maximum member spacing of 16 inches (406 mm) on center for walls, floors and ceilings. Moisture content of wood framing shall have reached equilibrium prior to installation of the wedi® Building Boards. Allowable deflection of framing shall be limited to 1/360 of the span.

The wedi® Building Boards shall be installed on wood or steel framing using 2-inch-long (51 mm) self-tapping screws having a shank diameter of 0.12 inch (3.05 mm). The screws shall be installed through a 1 1/4-inch-diameter (31.8 mm) flat washer. The screws shall have an alkali- and corrosion-resistant coating. The seams, edges, corners and all openings around fixtures shall be sealed with 3-inch-wide (76 mm) fiberglass mesh tape and shall be treated with latex-modified portland cement mortar complying with ANSI A 118.4. The wedi® Building Boards shall be installed in accordance with this report and the manufacturer's installation instructions, which shall be available at the jobsite.

**4.2.2 Floors:** When used as underlayment, wedi® Building Board shall be installed over a subfloor consisting of minimum 5/8-inch-thick (15.8 mm) exterior-grade plywood. Plywood edges shall be tongue-and-groove or all edges shall be supported with blocking. The subfloor shall be glued and mechanically fastened, in accordance with the applicable code, to floor joists spaced a maximum of 16 inches (406 mm) on center. A setting bed of latex-modified portland

cement mortar complying with ANSI A 118.4 shall be applied to the subfloor using a  $\frac{1}{4}$ -inch-by- $\frac{1}{4}$ -inch-by- $\frac{1}{4}$ -inch (6.4 by 6.4 by 6.4 mm) square-notched trowel. Immediately after the setting bed is applied, the wedi® Building Boards shall be set into the mortar with ends and edges staggered and tightly butted. While the mortar bed is still workable, the panels shall be fastened to the subfloor at 12 inches (305 mm) on center throughout the board using fasteners described in Section 2.2.1. Joints in the wedi® Building Board shall be staggered from the subfloor joints. Edge fasteners shall be located approximately  $\frac{3}{4}$  inch (19 mm) from corners and edges. The seams, edges, corners and all openings around penetrations shall be treated as noted in Section 4.2.1 of this report.

**4.2.3 Walls and Ceilings:** When used on walls and ceilings, wedi® Building Boards shall be a minimum of  $\frac{1}{2}$  inch (12.7 mm) thick. Edges of wedi® Building Boards shall be continuously supported on framing or blocking. Holes drilled into the wedi® Building Board, as relief for small obstructions or protrusions, shall subsequently be filled with latex-modified portland cement mortar complying with ANSI A 118.4.

The wedi® Building Boards shall be installed with ends and edges tightly butted. Joints shall be staggered from those in adjacent rows.

The wedi® Building Boards shall be fastened at a maximum of 12 inches (305 mm) on center on walls and 6 inches (152 mm) on center for ceilings, using fasteners noted in Section 4.2.1 of this report. Perimeter fasteners shall be located approximately  $\frac{3}{4}$  inch (19 mm) from corners and edges. The seams, edges, corners and all openings around fixtures shall be treated as noted in Section 4.1 of this report.

**4.2.4 Wet Areas:** wedi® Building Boards used in wet areas such as shower floors, walls, bath surrounds or other high-moisture areas shall be installed with a polyurethane caulk complying with ASTM C 920 at the seams and fastener points. Holes drilled into the wedi® Building Boards, as relief for small obstructions or protrusions, shall be subsequently filled with polyurethane caulk. Studs above shower floors shall be notched or furred to accommodate the thickness of the waterproof membrane or pan. The opening for a tub or precast shower receptor shall not be more than  $\frac{1}{4}$  inch (6.4 mm) larger than the size of the unit installed. A minimum  $\frac{1}{4}$ -inch (6.4 mm) bead of polyurethane caulk shall be applied continuously to the exposed edge of the panel, and consecutive panels shall be tightly butted into the fresh caulking. Excessive caulking shall be troweled flat over the joints. All fastener locations shall be fully covered with polyurethane caulk. The seams, edges, corners and all openings around fixtures shall be covered with 3-inch-wide (76.2 mm) fiberglass mesh tape and shall be treated with latex-modified portland cement mortar complying with ANSI

A 118.4. The remainder of the installation shall be in accordance with Sections 4.1, 4.2 and 4.3 of this report.

**4.2.5 Application of Ceramic Tile:** Ceramic tile shall meet the requirements of the applicable code and shall be installed over the wedi® Building Boards in accordance with the applicable code.

## 5.0 CONDITIONS OF USE

The wedi® Building Boards described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The wedi® Building Boards shall be installed in accordance with this report and the manufacturer's published installation instructions.
- 5.2 All wall, ceiling and floor framing shall be designed for deflections of less than  $\frac{1}{360}$  of the span.
- 5.3 The wedi® Building Boards shall not be used structurally to resist axial, transverse or racking loads.
- 5.4 The wedi® Building Boards shall be limited to use in interior installations only.
- 5.5 The wedi® Building Boards shall be limited to use in Type V-B (IBC) or Type V-N (UBC) construction or structures constructed in accordance with the IRC.
- 5.6 wedi® Building Boards are manufactured at the wedi® GmbH facility located in Emsdetten, Germany, under a quality control program with inspections by Omega Point Laboratories, Inc. (AA-657).

## 6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Evaluation Guideline for Composite Backer Board (EG159), dated December 2004.
- 6.2 Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Sheathing Panels Used as Weather-resistive Barriers (AC71), dated February 2003.
- 6.3 Manufacturer's published installation instructions.
- 6.4 A quality control manual.

## 7.0 IDENTIFICATION

Each wedi® Building Board shall be labeled with the wedi® GmbH company name, the product name, the name of the inspection agency (Omega Point Laboratories), the product dimensions and the evaluation report number (ESR-1773).