Technical Bulletin

ICC-ESR 1519 Report For QuietBrace®, Regular Fiber Sheathing and SoundChoice®

QUIETBRACE® a Temple-Inland product — Sound-Deadening Structural Sheathing

FIBERBOARD a Temple-Inland product — Exterior Wall Sheathing

SOUNDCHOICE® a Temple-Inland product — Sound-Deadening Fiberboard

Temple-Inland®

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CS 2007.2

ICC EVALUATION SERVICE

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ICC-ES Evaluation Report

ESR-1519

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES
Section: 06 16 00—Sheathing

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EVALUATION SUBJECT:

FIBERBOARD REGULAR SHEATHING, FIBERBRACE™ AND QUIETBRACE™ STRUCTURAL WALL SHEATHING AND SOUNDCHOICE™ SOUND DEADENING FIBERBOARD

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2009 *International Building Code®* (2009 IBC)
- 2009 *International Residential Code®* (2009 IRC)
- 2006 *International Building Code®* (2006 IBC)
- 2006 *International Residential Code®* (2006 IRC)

Properties evaluated:

- Structural
- Sound transmission control

2.0 USES

The Fiberboard Regular Sheathing is intended for application as wall sheathing for use behind an exterior finish in wall assemblies where fiberboard sheathing is permitted to be applied over the wood wall framing. FiberBrace™ and QuietBrace™ structural panels are used as wall sheathing as permitted by the applicable code to resist in-plane shear and transverse (out-of-plane) loads. SoundChoice™ Sound Deadening Fiberboard panels are used as a component in sound transmission classified wall and floor/ceiling assemblies.

3.0 DESCRIPTION

3.1 General:

Temple-Inland fiberboard products are fibrous-felted homogenous panels made from ligno-cellulosic fibers. The fiberboard products are coated on all sides and edges with asphalt. The panels comply with IBC Section 2303.1.5 and IRC Table R602.3(1), Footnote "h"; and conform to ASTM C 208.

3.2 Fiberboard Regular Sheathing:

Temple-Inland Fiberboard Regular Sheathing is classified as a Type IV, Grade I, wall sheathing in accordance with ASTM C 208. It is available in $^{1}/_{2}$-inch-thick (12.7 mm) panels. The panels are produced in 48-inch-by-96-inch, 48-inch-by-108-inch and 48-inch-by-120-inch (1.2 m by 2.4 m, 2.7 m and 3.0 m) standard sizes.

3.3 FiberBrace™ and QuietBrace™ Structural Wall Sheathing:

Temple-Inland FiberBrace™ and QuietBrace™ panels are classified as a Type IV, Grade 2, structural wall sheathing in accordance with ASTM C 208. Temple-Inland Fiberboard sheathing is available in $^{1}/_{2}$-inch- and $^{25}/_{32}$-inch-thick (12.7 mm and 19.8 mm) panels. The panels are produced in 48-inch-by-96-inch, 48-inch-by-108-inch and 48-inch-by-120-inch (1.2 m by 2.4 m, 2.7 m and 3.0 m) standard sizes.

3.4 SoundChoice™ Sound Deadening Fiberboard:

Temple-Inland SoundChoice™ Sound Deadening Fiberboard is classified as a Type I sound deadening board in accordance with ASTM C 208. It is $^{1}/_{2}$ inch thick (12.7 mm) and is produced in a 48-inch-by-96-inch (1.2 m by 2.4 m) standard panel size. The panel is used as a component in wall or floor/ceiling assemblies requiring sound transmission ratings. See Table 1 for sound transmission class (STC) and impact insulation class (IIC) ratings of assemblies.

4.0 DESIGN AND INSTALLATION

4.1 Fiberboard Regular Sheathing:

Installation of the Fiberboard Regular Sheathing must comply with Sections 2304.6 and 2304.9 of the IBC or Table R602.3(1) of the IRC, as applicable.

4.2 FiberBrace™ and QuietBrace™ Structural Wall Sheathing:

When used as a component of a braced wall panel, installation of the FiberBrace™ or QuietBrace™ Structural Wall Sheathing must comply with Sections 2304.6, 2306.6, 2308.9.3, and 2305.3.8 and Table 2308.9.3(4) of the IBC, or Section R602.10 and Table R602.3(1) of the IRC. The installation of FiberBrace™ Structural Wall Sheathing as wall sheathing must be as noted in Section 2304.6 of the IBC or Sections R602.3 and R602.10.5.2 of IRC, as applicable.

4.3 Transverse Load Design:

The $^1/_2$-inch-thick (12.7 mm) Temple-Inland FiberBrace™ and QuietBrace™ Structural Wall Sheathing panels have allowable negative and positive out-of-plane (transverse) pressures of 60 psf (2.9 kPa) and 66 psf (3.2 kPa), respectively, at a deflection of L/180 of the panel span. The design wind pressures must be in accordance with IBC Section 1609.1.1 and IRC Tables R301.2(2) and R301.2(3).

4.4 SoundChoice™ Sound Deadening Fiberboard:

Temple SoundChoice™ Sound Deadening Fiberboard partition wall or floor/ceiling systems must be installed in accordance with Table 1 for each assembly as noted in Figures 1 and 2.

5.0 CONDITIONS OF USE

The Fiberboard Regular Sheathing, FiberBrace™ and QuietBrace™ Structural Wall Sheathing and SoundChoice™ Sound Deadening Fiberboard panels 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 products must be installed in accordance with this report, the manufacturer's published instructions and the applicable code. In the event of conflict between the manufacturer's instructions and this report, this report governs.

5.2 Use of the fiberboard materials is limited to installation on buildings of Type V-B (IBC) construction and buildings constructed in accordance with the IRC.

5.3 Fiberboard shearwalls must not be used to brace concrete or masonry walls.

5.4 Cutting holes or openings in sheathing used as wall bracing is not permitted.

5.5 Where sheathing is installed on the exterior side of an exterior wall, the sheathing must be covered with a water-resistive barrier and approved exterior wall covering in accordance with the requirements of the applicable code.

5.6 Fiberboard panels must not be utilized as a nailing base.

5.7 The fiberboard panel products are manufactured in Diboll, Texas, under a quality control program with inspections by American Fiberboard Association (AA-697).

6.0 EVIDENCE SUBMITTED

6.1 Reports of tests in accordance with ASTM C 209, as required by ASTM C 208.

6.2 Reports of tests in accordance with ASTM E 90 and ASTM E 492.

6.3 Reports of transverse load tests in accordance with Section 11 of ASTM E 72-05.

6.4 Quality documentation.

6.5 Manufacturer's published installation instructions.

7.0 IDENTIFICATION

Each package of Temple-Inland fiberboard panels is labeled with the name and address of the manufacturer (Temple-Inland); product name; panel thickness; panel size; name of the inspection agency (American Fiberboard Association); AFA Mill number; evaluation report number (ESR-1519); and the phrase "Conforms to ASTM C 208, Type, and Grade.

TABLE 1—SOUNDCHOICE™ SOUND DEADENING INSTALLATION DESCRIPTION

PARTITION WALL SYSTEM (SEE FIGURE 1)	
STC 50	**Wood framing:** Staggered 2×4 studs, 24 inches o.c. each side of 2×6 top and bottom plates. Adjacent studs on alternating sides of top and bottom plates are 12" o.c. **Inner material:** Temple-Inland SoundChoice™ applied vertically both sides of wall with $1^1/_2$-inch-long galvanized roofing nails spaced 12 inches o.c. at each stud, $^1/_2$ inch from panel edges. Allow $^1/_8$-inch gaps at panel edges. **Wall cavity:** Lined with nominal 2-inch glassfiber batts, friction fit. **Outer wall facing:** $^5/_8$-inch gypsum board applied vertically with joints staggered relative to the inner fiberboard. Attach with 8d nail, $1^1/_2$ inches long, spaced 8 inches on center.
FLOOR/CEILING SYSTEMS (SEE FIGURE 2)	
STC 50 IIC 50	**ASSEMBLY 2A** **Ceiling:** $^5/_8$-inch gypsum wallboard screwed to resilient channels with $1^1/_2$-inch-long Type S screws spaced 24 inches o.c.; joints taped. **Wood framing:** 2-by wood floor joists @ 16 inch o.c.; bays to have 3-inch glass fiber insulation. **Sheathing:** $^5/_8$-inch rated sheathing subfloor. **Inner material:** $^1/_2$-inch Temple-Inland SoundChoice™ stapled to the $^5/_8$-inch subfloor sheathing. **Underlayment:** $^1/_2$-inch rated T&G plywood underlayment over 1-by-3 furring strips **Floor covering:** 0.075-inch vinyl sheet.
	ASSEMBLY 2B **Ceiling:** $^5/_8$-inch gypsum wallboard screwed to resilient channels with $1^1/_2$-inch-long Type S screws spaced 24 inches o.c.; joints taped. **Wood framing:** 2-by wood floor joists @ 16 inch o.c.; bays to have 3-inch glass fiber insulation. **Sheathing:** $^5/_8$-inch rated sheathing subfloor. **Inner material:** $^1/_2$-inch Temple-Inland SoundChoice™ stapled to the $^5/_8$-inch subfloor sheathing. **Underlayment:** $^1/_2$-inch rated underlayment plywood glued to the $^1/_2$-inch Temple-Inland SoundChoice. **Floor covering:** Pad and carpeting.

For **SI:** 1 inch = 25.4 mm.

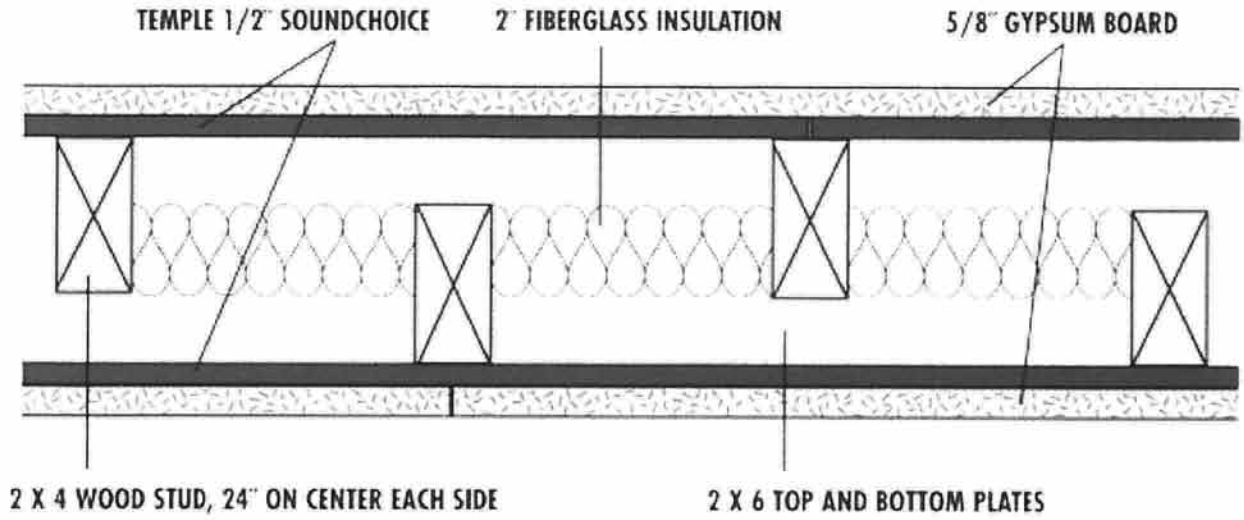
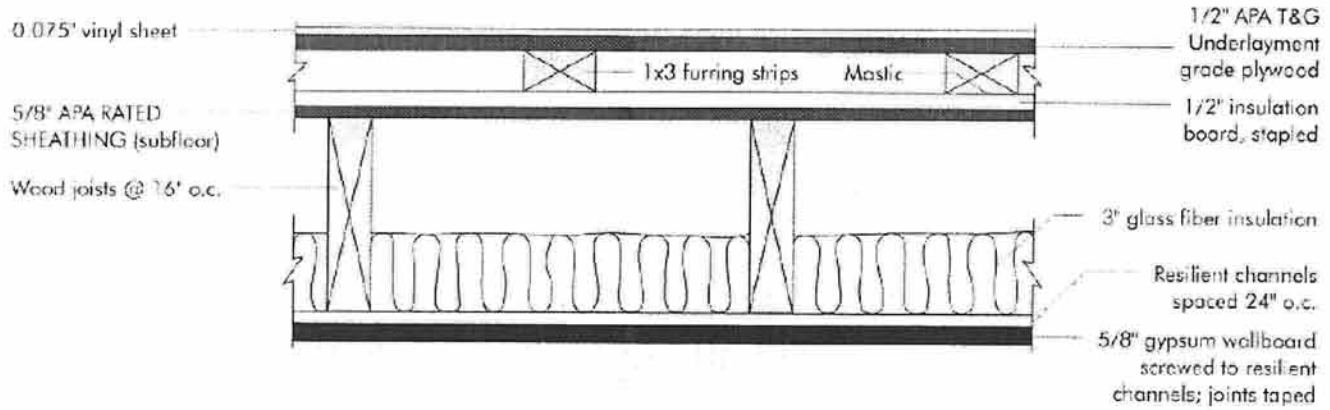
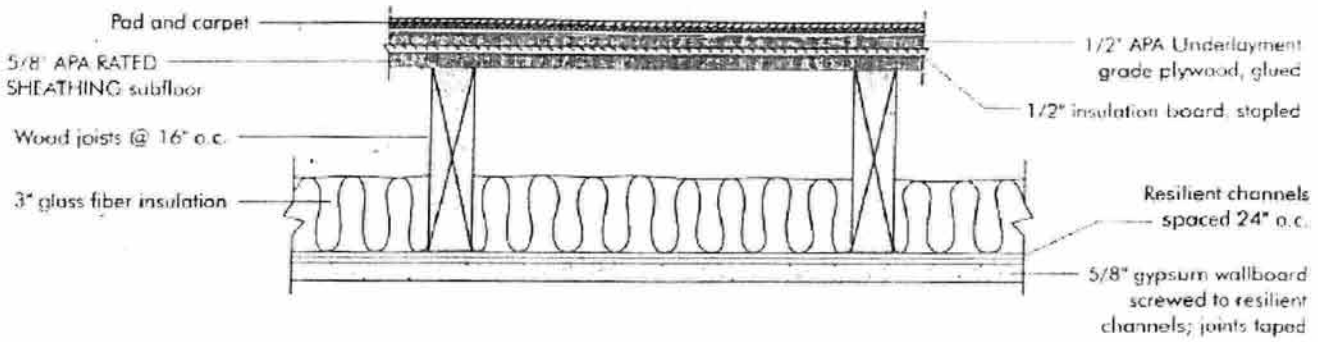


FIGURE 1—$^1/_2$-INCH TEMPLE-INLAND SOUNDCHOICE PARTITION WALL SYSTEM



ASSEMBLY 2A



ASSEMBLY 2B

FIGURE 2—SOUNDCHOICE FLOOR/CEILING SOUND DEADENING SYSTEMS