Enkasonic® Installation Bulletin

Read First

These suggestions represent generally accepted procedures for successful installation of Colbond Building Products. These instructions may be followed, modified, or rejected by the owner, engineer, contractor or their representative since they, not Colbond Inc., are responsible for planning and executing procedures appropriate to a specific application.

Installation

Subfloor & Site Preparation

- The subfloor must be structurally sound and able to withstand live and dead loads with a deflection limitation of L/360.
- Subfloor must be clean and free of residue that would interfere with the Enkasonic installation. Fill cracks and voids with caulking material to eliminate sound leaks.
- Expansion joints should be allowed to carry through the sound rated floor at the same width.

Enkasonic Installation

- Lay the Enkasonic directly over the subfloor with the black mesh down and white fabric side up. The Enkasonic should be pushed up tightly to the isolation barrier previously installed around the perimeter of the floor.
- Butt long edges of the Enkasonic together so fabric flap overlaps top of adjacent piece. Lay Enkasonic over the entire subfloor. Care should be taken when cutting corners or floor penetrations. Tape (duct tape or 2" (51 mm) wide cellophane tape) the 3" longitudinal fabric overlapping snug to the fabric on the adjoining Enkasonic strip. There must be no gap between adjacent Enkasonic strips and the Enkasonic must fit snugly against the wall or perimeter isolation barrier. All seams must be completely taped in order to prevent any foreign material from filling or flowing into the resilient nylon mat and compromise the acoustical isolation.
- Tape all wall/floor joints created when the Enkasonic butts the perimeter isolation strip.

Perimeter Isolation Barrier Installation

- The perimeter isolation material should be either the Maxxon Perimeter Isolation 2.5" (64 mm) x 1/8" (3 mm) or 3" (76 mm) x 1/4" (6 mm).
- Perimeter isolation barrier can be installed before or after the Enkasonic installation. Perimeter isolation barrier shall exceed the planned height of the floor system.
- Perimeter isolation barrier can be installed using glue or tape, below the height of the top of the finished floor, or staples in the top area which will be cut and removed as excess upon completion of the floor.
- Install the perimeter isolation barrier to the wall or vertical partition (including door frames) surrounding the perimeter of the subfloor receiving the Enkasonic system, and around the perimeter of any protrusion through the floor systems, such as floor drains, tubs, showers, columns, pipes, electrical conduits, etc.
- Tape the seam/joint that is created when the Enkasonic butts the perimeter isolation barrier strip.

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Double Layer Wonder-Board over Enkasonic

- 7/16” of Wonder-Board should be installed only when the ambient temperature within the building is above 55° F (13° C). Adequate ventilation should be provided to carry off excess moisture during ventilation.

- The first layer of the 7/16” of Wonder-Board joints must not be placed directly over an Enkasonic edge-butted joint. It is recommended that Wonder-Board joints paralleling the underlaying Enkasonic joints be offset a minimum of 8-10 inches (20.5- 25.5 cm). Note: Wonder-Board joints will have to pass over Enkasonic joints at right angles in order to complete the Wonder-Board pattern. The second layer of the 7/16” of Wonder-Board shall be placed perpendicular to the first layer.

- The Wonder-Board panels should be patterned with a 1/4” (6.5 mm) gap between the units. Snap chalk lines on the white Enkasonic fabric, marking the joint placement of the Wonder-Board panels.

- Prepare latex Portland cement slurry so that it is thick in consistency. Dip the 2” wide fiberglass tape into the slurry and center it on the chalk lines.

- Apply slurry on top of the tape. For added protection, it is recommended that a light skim coat of the latex Portland cement slurry be troweled approximately 1.5” (4 cm) at the edge of all four sides of the Wonder-Board units before laying Wonder-Board over the tape. Lay and position the Wonder-Board sheets over the slurried tape in a timely manner — leaving a minimum 1/4” (6.5 mm) gap. Walk on the edges of the Wonder-Board units — forcing slurry from the top of the joint.

- Avoid applying to much pressure when filling the joint from the top. Excessive pressure may cause a ridge that could develop on the underside of the Wonder-Board panel, creating an uneven surface and a potential plane of weakness.
- Lay another strip of the Wonder-Board fiberglass tape directly over the joint. Trowel a very thin skim coat of latex Portland cement over the tape, creating a smooth surface for bonding the tile. If the Wonder-Board is uneven prior to the joint bond taking set, light loads (box of tiles, etc.) placed at different locations can be used as a method to level the panels.

- Allow 48 hours for the joints to harden.

Finishing

- After the finished flooring is installed, trim the perimeter of the isolation barrier to 1/4” (6.5 mm) below the finished flooring. Fill the groove with a bead of acoustical or elastomeric sealant. Do not allow hard grout to come in contact with the wall. If the floor is carpet or vinyl, trim the perimeter isolation barrier flush with the surface before the finished flooring is installed. Shim the molding to 1/16” to 1/32” (1.6 mm to 0.8 mm) above the finished flooring — preventing a transmission path of sound between the finished flooring and wall.

- If a flat base is adhered to the wall, space it 1/8” (3 mm) up from the finished flooring and run a bead of acoustical sealant into the void. If a cove base is used, fill the joint between the last course of finished flooring and the base with acoustical sealant.

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Hardwood Floor over Enkasonic

- After the Enkasonic is installed, place one layer of 1/2" (13 mm) minimum thickness plywood, APA Rated Sheathing, on top of the matting. Offset the joints (seams) and leave a small gap between sheets of 1/16" to 3/32" (1.5 mm or 2.5 mm) in order to prevent any expansion of the plywood from buckling the layer.

- If the subfloor has an unusual amount of surface distortion, cut the plywood sheets into smaller units such as 4' x 4' or 2' x 2' (120 cm x 120 cm or 60 cm x 60 cm) panels. Then, lay the smaller panels in an offset joint pattern so that the grain of each panel is perpendicular to the grain of the adjacent panel.

- Tape the joints with duct tape in order to keep the construction traffic from moving the panels and to prevent any adhesive — which will be used in the next step — from infiltrating into the Enkasonic. Expansion gaps between adjacent panels are still necessary.

- Apply a non-water based adhesive to the top of the first plywood layer and then place a second layer of 1/2" (13 cm) minimum thickness plywood 90° to the first layer, offset, so that the seams do not line up and then screw the center and corners of this top layer of plywood to the bottom layer of plywood. This top plywood layer should be constructed with full sheets.

- If the initial layer of plywood consisted of panels rather than full sheets, the top layer of full plywood sheets should be positioned at 45° to the general trend of the bottom layer. This will stiffen the 2-layer floating composite to about the same rigidity as 2 layers of full sheets.

- In lieu of using wood screws, the 2 layers could also be fastened together by power stapling in a 6" (15.5 cm) pattern using staples with minimum 1" (0.5 cm) wide crown. Do not penetrate into the Enkasonic or subfloor with either wood screws or staples.

Finishing

- Install tongue and groove wood floor on top of the floating 2-layer plywood composite. Make sure that nails or power cleats are offset so they do not penetrate through the Enkasonic matting into the subfloor.

- After the finished flooring is installed, trim the perimeter of the isolation barrier to 1/4" (6.5 mm) below the finished flooring. Fill the groove with a bead of acoustical or elastomeric sealant. Do not allow hard grout to come in contact with the wall. If the floor is carpet or vinyl, trim the perimeter isolation barrier flush with the surface before the finished flooring is installed. Shim the molding to 1/16" to 1/32" (1.6 mm to 0.8 mm) above the finished flooring — preventing a transmission path of sound between the finished flooring and wall.

- If a flat base is adhered to the wall, space it 1/8" (3 mm) up from the finished flooring and run a bead of acoustical sealant into the void. If a cove base is used, fill the joint between the last course of finished flooring and the base with acoustical sealant.

Hardwood Floor Installation

- Plywood thicker than 1/2" (13 mm) can be used. In athletic areas, such as floors and gymnasiums, 2 layers of 5/8" (16 mm) plywood generally are floated over the Enkasonic. When carpet is preferred as the finished floor covering, the Enkasonic overlay is a minimum of 2 layers of 5/8" (16 mm) plywood.

- The only special material requirement for the 2 layers of plywood is that it be stamped APA Rated Sheathing. This is necessary in order to meet the structural requirements of the Enkasonic system. All stamped span ratings on APA Rated Sheathing are acceptable for the Enkasonic system. The veneer grade is not critical. Hence, CD is acceptable, if it is not bowed or warped. Standard practice for material suppliers, however, is to store CD as if bowing or warping were not critical to end-use application. Therefore, you may be forced to

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Hardwood Floor over Enkasonic *(cont.)*

use a more expensive veneer grade such as BC in order to get panels that are not bowed. With regards to exposure durability, interior panels are acceptable if the plywood panels are protected from moisture during storage prior to installation.

- Wood frame construction requires a resiliently suspended ceiling with a minimum of 3 1/2" (9 cm) (R-11) insulation packed between joists in order to achieve optimum acoustical ratings in an Enkasonic hardwood floor system.

Cellular Concrete over Light-Weight Enkasonic

- The Enkasonic matting can be used over wood frame or concrete subfloors. Install the perimeter isolation strips around all walls, doorways and any floor penetrations higher than the pour depth. The isolation strip can be placed or stapled to the wall above the pour depth. Tape all seams where the Enkasonic mat meets the isolation strips to seal the joints and keep the underlayment from flowing through.
- Lay the Enkasonic with the black nylon mesh side down, and the fabric facing up. Make sure that the filter fabric overlaps the adjacent strip. Also, there must be no gap between adjacent strips. Butt Enkasonic up tight to the perimeter walls.
- Tape the overlapped seams with duct tape. This will seal them, keeping the Maxxon underlayment from entering the underside.
- Spray Maxxon Floor Primer over the Enkasonic at a rate of 300 ft^2/gal (27.9 m^3/L).
- The minimum depth of cellular light weight concrete over Enkasonic is 1 1/2" (38.1 mm). The Crack Suppression Mat (CSM) is recommended for crack control.
- After the cellular light-weight concrete sets, trim the perimeter isolation strip flush to the surface of the underlayment. As an option, this area could be caulked with elastomeric or acoustical sealant.

Mortar Bed over Enkasonic

Follow the Tile Council of America Handbook Method F111: Cement Mortar, Cleavage Membrane over a Concrete Floor.

- Use a 1 1/4" to 2" (32 mm to 50 mm) mortar bed, supported by a wire mesh.
- After the mortar bed has been leveled to the proper plane, it shall be moist cover cured for 24 hours before the finished floor installation. The maximum variation in the slab shall not exceed 1/4" (32 mm) in 10' (3 m).
- All traffic shall be kept off of the fresh mortar bed for at least 72 hours unless the "wet-set" method is used (ANSI A108.1).

Finishing

- After the finished flooring is installed, trim the perimeter of the isolation barrier to 1/4" (6.5 mm) below the finished flooring. Fill the groove with a bead of acoustical or elastomeric sealant. Do not allow hard grout to come in contact with the wall. If the floor is carpet or vinyl, trim the perimeter isolation barrier flush with the surface before the finished flooring is installed. Shim the molding 1/16" to 1/32" (1.6 mm to 0.8 mm) above the finished flooring — preventing a transmission path of sound between the finished flooring and wall.
- If a flat base is adhered to the wall, space it 1/8" (3 mm) up from the finished flooring and run a bead of acoustical sealant into the void. If a cove base is used, fill the joint between the last course of finished flooring and the base with acoustical sealant.
- Damp cover cure the finished installation for at least 72 hours and keep all traffic off the floor for at least 72 hours.

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