



# ECOsilence Technical Manual

## Installation & Warranty

Revised 08Dec2021  
Supersedes all previous versions  
Check website for updates

Manufactured in the U.S.A

### General

Job Site Conditions	1
Subfloor Requirements	1
Hazards	2
Storage and Handling	2

### Installation

Perimeter Isolation Strip	2
Installation	3
Alternative Installation Methods	4
Baseboard	5
Recommended Materials	6

### Warranty

Warranty	7
----------	---

## GENERAL INFORMATION

The ECOsilence line of products for impact sound insulation are engineered to provide better performance than any other sound control product available and have been rigorously tested to achieve proven results. It can be installed under most types of grouted, glued, and floating floors, including ceramic tile, stone, brick, pavers, hardwood, engineered wood, laminate, parquet, LVT, and carpet. Sheet vinyl is not an approved installation method over the ECOsilence material. All floor covering assemblies shall have prior approval before installation.

### I JOB SITE CONDITIONS

Areas to receive ECOsilence should be weather tight and maintained at minimum, a constant room temperature of 65°F (10°C) for 48 hours before, during, and after installation.

### II SUBFLOOR REQUIREMENTS & PREPARATION

#### A. GENERAL

**NOTE:** Please follow the subfloor requirements and preparation recommendations determined by the flooring manufacturer when no such recommendations exist for the floor finishing product.

1. All subfloors/substrates must be inspected prior to installation.
2. Install ECOsilence over concrete, gypsum, self-leveling materials, and wood.
3. Wood subfloors should be double construction, rigid, and free from movement.
4. Wood subfloors (when installed with grouted floor coverings like tile) must be prepared according to ANSI L/360 standards, or as required by the floor covering manufacturer.

**NOTE:** Particleboard, "chipboard," masonite, and luan are not suitable underlayments.

5. Concrete floors must be fully cured and permanently dry. Subfloor shall be dry, clean, smooth, level, and structurally sound. It should be free of dust, solvent, paint, wax, oil, grease, asphalt, sealers, curing and hardening compounds, alkaline salts, old adhesive residue, and other extraneous materials, according to ASTM F710.
6. Subfloor should be smooth to prevent irregularities, roughness, or other defects from telegraphing through the material. The surface should be flat to the equivalent of 3/16" (3.9mm) in 10' or as recommended by the flooring manufacturer.
7. Mechanically remove all traces of old adhesives, paint, or other debris by scraping, sanding, or scarifying the substrate. DO NOT use solvents.
8. Grind all high spots until level and fill low spots with an approved patching/leveling compound.
9. All saw cuts (control joints), cracks, indentations, and other non-moving joints in the concrete must be filled with a Portland-based patching/leveling compound and dried thoroughly.
10. Any concrete subfloor can be a source of moisture-related flooring failures. It is the installer's responsibility to test the concrete or other cement-like material for moisture.
11. The maximum concrete moisture content or RH (Relative Humidity) must be measured using the ASTM F2170 standard test method.
  - A. Concrete substrates and any thickness of ECOsilence
    - i) E-Grip III – RH limit of 85% – normally selected
    - ii) E-Grip 95 – RH limit of 95% – higher RH applications
    - iii) E-Grip 99 – RH limit of 99% – highest RH applications
  - B. Gypsum, concrete substrates and up to 5mm ECOsilence
    - i) E-Grip Evolve – RH limit of 80%

If levels are higher, the installation must not proceed until the problem is corrected.

**Note:** The selected Portland-based patching and self-leveling materials must be moisture resistant and rated to withstand the RH moisture levels on the project.

12. In the event that a moisture mitigation system is required, it must conform to the ASTM F3010 Standard Practice for Two-Component Resin Based Membrane Forming Moisture Mitigation Systems for use Under Resilient Floor Coverings. In addition, the finished prepared surface on which the flooring is to be installed must conform to the ASTM F710 standards.
13. Perform pH tests on all concrete floors. If greater than the allowable limit of the selected adhesive, neutralize prior to installation.
14. If using other approved adhesives, please refer to manufacturer's acceptable limits.

### III HAZARDS

#### A. SILICA WARNING

1. Concrete, floor patching compounds, toppings, and leveling compounds can contain free crystalline silica. Cutting, sawing, grinding, or drilling concrete can produce respirable crystalline silica (particles 1-10 micrometers). Respirable silica is classified by OSHA as an IA carcinogen and is known to cause silicosis and other respiratory diseases. Avoid actions that cause dust to become airborne. Use local or general ventilation or protective equipment to reduce exposure below applicable exposure limits.

#### B. LEAD WARNING

1. Certain paints may contain lead. Exposure to excessive amounts of lead dust presents a health hazard. Refer to applicable federal, state, and local laws and the publication, *Lead Based Paint: Guidelines for Hazard Identification and Abatement in Public and Indian Housing*, available from the United States Department of Housing and Urban Development.

#### C. ASBESTOS WARNING

1. Resilient flooring, backing, lining felt, paint, or asphaltic "cutback" adhesives could contain asbestos fibers. Avoid actions that cause dust to become airborne. DO NOT sand, dry sweep, dry scrape, drill, saw, beadblast, mechanically chip, or pulverize. Regulations may require that the material be tested to determine asbestos content. Consult the documents titled, *Recommended Work Practices for Removal of Existing Resilient Floor Coverings*, available from the Resilient Floor Covering Institute.

### IV MATERIAL STORAGE AND HANDLING

1. Deliver the material to the job site in its original unopened packaging with all labels intact and stored inside to prevent damage.
2. Inspect all material for visual defects before beginning the installation. ECOsurfaces will honor no labor claim on material installed with any visually apparent defects.
3. Verify the material delivered is the correct type, thickness, and amount. Report any discrepancies immediately.
4. The material and any adhesive must be acclimated at room temperature for a minimum of 24 hours before starting the installation.
5. Roll material is stretched slightly when it is rolled at the factory. At the job site, the installer should allow all cuts to relax before gluing down. Shaking the material once it is unrolled can help it to relax more quickly.

### V INSTALLATION OF PERIMETER ISOLATION STRIP

The Perimeter Isolation isolates the floor from the wall and breaks the vibration transmission path.

**NOTE: It is essential to FIRST install the Perimeter Isolation Strip before placing and trimming the ECOsilence Impact Sound Insulation Material!**

1. Attach Perimeter Isolation Strip to the wall perimeter of the entire subfloor, as well as to the perimeter of any protrusions, to isolate or break the vibration transmission path between the floor and the wall (diagram #1).

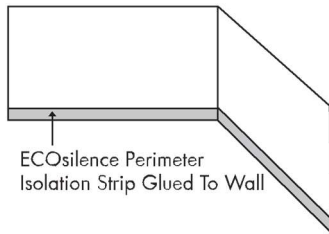


Diagram #1

2. Temporarily fasten the Perimeter Isolation Strip in place with masking tape, duct tape, carpet tape, or spot gluing. **The Perimeter Isolation Strip should be secured at the bottom only as the top will later be trimmed flush with the new top layer of flooring.** (see diagram #2)
3. Install the finished floor in accordance with the flooring manufacturer's directions. After installing the finished floor, trim the excess perimeter isolation strip around the entire perimeter of the finished floor (see diagram #2).

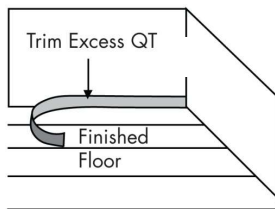


Diagram #2

## VI INSTALLATION OF THE ECOSILENCE

1. **FIRST** Attach the perimeter isolation strip to the wall as described above.
2. Assume the walls you are butting up against are not square. Using a chalk line, create a starting point for an edge of the material to follow.
3. If you have not already done so, remove the shrink-wrap from the roll and unroll it onto the floor. Allow to relax 2 hours. Shaking the material once it is unrolled can help it to relax.
4. Place the ECOsilence material so that it is perpendicular to the subsequent installation direction of the finished flooring (see diagram #3).

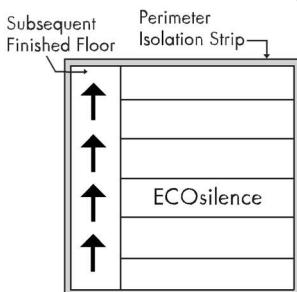


Diagram #3

5. Trim as necessary to fit surface area to be covered. You may trim section ends to exact dimensions required (e.g., joints with walls, etc.).

6. Align the lengthwise edge of the material with that of the neighboring section. Edges must contact but not overlap.

## VII GLUING THE ECOSILENCE

**NOTE: When using grouted or fully adhered flooring materials, ECOsilence shall be fully adhered to the substrate with a suitable adhesive. No substitutions are permitted. ECOsilence may be loose laid for floating floors.**

1. After ECOsilence is rolled out and allowed to relax, fold the material back halfway (half the width of the roll). Spread adhesive using the proper notch trowel:
  - a. Less than 4mm ECOsilence – Use a 1/16" x 1/32" x 1/32" U notched trowel
  - b. 4mm and thicker – Use a 1/16" square notched trowel.

**NOTE: ECOsurfaces recommends using E-Grip III when installing grouted materials, or for ECOsilence thicknesses greater than 5mm. If using a differently specified adhesive when installing grouted materials, follow manufacturer's specifications for its use and installation.**

**NOTE: Temperature and humidity affect the open time of adhesive. The installer should monitor on-site conditions and adjust open time accordingly.**

2. Carefully lay the material into the wet adhesive. Do not allow the material to "flop" into place because this will trap air beneath the material.
3. Fold over second half of first sheet and first half of second sheet (See diagram 4.)

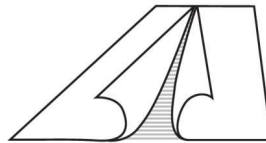


Diagram #4

4. Spread the adhesive. At seam area, spread the adhesive at 90 degrees to prevent excessive the adhesive from oozing up through the seam. Never leave adhesive ridges or puddles, as they may telegraph through the material.
5. Continue the process for each consecutive drop. Always work at a pace so you are always folding material back into wet adhesive.
6. Roll the floor using a 35-75 lb. roller to ensure proper adhesive transfer. Overlap each roll of the roller 50% of the previous pass. Roll the width first, then the length.
7. Repeat procedure for all sections of ECOsilence until room is finished.

## VIII ALTERNATIVE INSTALLATION METHODS

### A. General

1. Follow the flooring manufacturer's directions for installing the flooring. Use their recommended adhesives, procedures, and equipment.
2. **Do not mechanically fasten any material through ECOsilence. Any mechanical connection, such as nails, screws, staples, etc., will transmit noise through to the building structure, compromising the performance of the ECOsilence.**

**B. FLOATING FLOORING**

**NOTE: Gluing down ECOsilence is not required for floating floors**

1. Attach perimeter isolation strip per above.
2. Dry lay the rolls onto the subfloor with duct or carpet tape to hold all seams together.

**B. PLYWOOD OR CEMENT BOARD**

1. The plywood or cement board should be glued down using an approved adhesive.
2. Apply adhesive to the ECOsilence using the manufacturer's recommended trowel size.
3. **Do not mechanically fasten any material through ECOsilence. Any mechanical connection, such as nails, screws, staples, etc., will transmit noise through to the building structure, compromising the performance of ECOsilence.**

**C. SHEET VINYL OR LUXURY VINYL TILE AND PLANK**

1. **Sheet vinyl is not an approved installation method over the ECOsilence material. Please contact ECOSurfaces for factory laminated sheet vinyl products.**
2. For LVT installation, refer to the LVT manufacturer's instructions.

**D. CERAMIC AND PORCELAIN TILE**

1. Apply approved mortar directly onto ECOsilence as directed by mortar manufacturer.
2. Follow mortar and tile manufacturers' installation procedures.

**E. GLUE DOWN WOOD FLOORING**

1. Follow the flooring manufacturer's directions for installing the flooring. Use their recommended adhesives, procedures, and equipment.
2. **Do not mechanically fasten any material through ECOsilence. Any mechanical connection, such as nails, screws, staples, etc., will transmit noise through to the building structure, compromising the performance of ECOsilence.**

**F. NAILED DOWN WOOD FLOORING**

1. Follow the flooring manufacturer's directions for installing the flooring. Use their recommended adhesives, procedures, and equipment.
2. **Do not mechanically fasten any material through ECOsilence. Any mechanical connection, such as nails, screws, staples, etc., will transmit noise through to the building structure, compromising the performance of the ECOsilence.**

**IX BASEBOARD****A. INSTALLATION OF BASEBOARD**

1. Only install baseboard **after Perimeter Isolation Strip has been trimmed to finished floor height**. See diagram 5.
2. **In order to isolate the floor from the wall and break the vibration transmission path, the baseboard must not touch the finished floor.**
3. Seal under baseboard with an ASTM C920 approved elastomeric joint sealant.

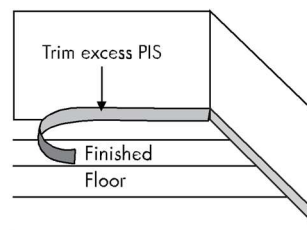


Diagram #5

## X Recommended Materials

**NOTE:** All materials shall be delivered to the job site in the original containers with the manufacturer's identification on each package. Unauthorized modification to any product is not permitted.

### A. APPROVED URETHANE ADHESIVES

**Please note: The following urethane adhesives are ONLY suitable for Concrete and Portland-based patches and self-levelers. They are not suitable for gypsum.**

1. E-Grip III (833) 888-1760
2. Bostik's Best
3. Bostik Green Fusion
4. Mapei Ultrabond ECO 980
5. Chemrex 941 by BASF

### B. APPROVED ACRYLIC ADHESIVE

1. E-Grip Evolve by (833) 888-1760
  - a. E-Grip Evolve is approved for use over **gypsum substrates**.
  - b. Gypsum substrates **must first be primed** with one of the recommended primers listed below **prior to application** of the E-Grip Evolve adhesive.
  - c. E-Grip Evolve is also approved for ECOsilence thickness up to 5mm. For ECOsilence thickness greater than 5mm, use a urethane from above list.

### C. APPROVED THIN-SET MATERIALS

1. ANSI A118.4 Standard Modified Dry-Set Cement Mortar
2. ANSI A118.15 Improved Modified Dry-Set Cement Mortar

### D. APPROVED GROUT MATERIALS

1. ANSI A118.6 Standard Performance Grout
2. ANSI A118.7 High Performance Grout
3. ANSI A118.8 Modified Epoxy Grout

### D. APPROVED GYPSUM PRIMERS

1. Mapei – Primer T
2. Ardex – P51
3. Bostik – Universal Primer
4. Specco S-55

### E. APPROVED CEMENTITIOUS BACKERBOARDS

1. ANSI A118.9 Standard Cementitious Backer Board Unit (CBU)

### F. APPROVED ACOUSTICAL SEALANT

1. ASTM C920 Standard Specification for Non-hardening Elastomeric Joint Sealant

## Warranty

ECOsurfaces offers a limited lifetime warranty on the ECOsilence brand of Impact Sound Insulation products against defects in material and workmanship, and it shall meet all published specifications and perform effectively. ECOsurfaces warrants that during the warranty period, ECOsilence shall not harden, become brittle, chip, crack, tear, or exhibit any signs of excessive deterioration except for normal wear and tear. All other warranties, including implied warranties for a particular purpose, wear due to ultraviolet degradation, and uses and installations that are contrary to ECOsilence specifications, recommendations or instructions are expressly excluded. The sole remedy against the seller will be to repair, to replace, or to issue a credit not exceeding the selling price of the defective goods. Lifetime means for so long as the job installation remains unchanged by the original owner.

The recommendations for applications and installation contained within this document are based on our extensive experience and current technological practice. ECOsurfaces' liability and responsibility in the event of damages is limited to the extent defined in our General Terms and Conditions of Business and is not in any way increased by advice given by our sales representatives or applications engineering staff. For complete and latest warranty information, please see [www.ecosurfaces.com](http://www.ecosurfaces.com)



**(833) 888-1760**

**[www.ecosurfaces.com](http://www.ecosurfaces.com)**

**Manufactured in the U.S.A**

© 2021 All designs and colors are copyrighted by ECOsurfaces