



LVT and Plank over 2mm & 5mm ECOsilence Technical Manual

Installation • Warranty

Manufactured in the U.S.A.



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Supersedes all previous versions.
Check website for updates.

Installation

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| 2mm and 5mm ECOsilence Adhesive Coverage Rate Calculator | | | | |
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| ECOsilence | Trowel Size | | Coverage Rate Over Standard Substrates | Coverage Rate Over Sound Mats |
| 2mm ECOsilence |  1/32" x 1/16" x 1/32" (1 x 1.5 x 1 mm) | To secure 2mm ECOsilence to substrate and LVT/LVP to 2mm ECOsilence | 150 to 200 sq. ft./gal | 150 sq. ft./gal |
| 5mm ECOsilence |  1/16" x 1/16" x 1/16" (1.5 x 1.5 x 1.5 mm) | To secure 5mm ECOsilence to substrate and LVT/LVP to 5mm ECOsilence | 100 to 125 sq. ft./gal | 100 sq. ft./gal |
| Coverage rates shown here are for estimating purposes only. Actual jobsite coverage may vary according by application method, substrate, substrate conditions, trowel angle, and actual thickness applied. | | | | |

SUBSTRATE PREP

IMPORTANT: Areas to receive flooring must be weather tight and maintained at a minimum uniform temperature of 65° F (18° C) for 48 hours prior to, during, and after installation. Failure to comply could result in flooring failure.

Step 1: Concrete substrate shall be prepared according to ASTM F710 standards. This standard calls for complete removal of all extraneous materials that may affect the adhesive bond. These materials include, but are not limited to, dust, paint, wax, solvents, adhesive residue, curing & hardening compounds, and sealers. If re present, they must be removed prior to installation of flooring materials, and removed mechanically, without the use of chemicals, which could also act as a bond breaker for the adhesive.

The concrete should be given a sufficient amount of time to dry, naturally, before the application of adhesives. The moisture content should always be tested using the ASTM F-2170 testing for relative humidity. Relative humidity should result in a level of 80% or lower with diminishing results. If levels exceed these parameters, then the installation should not proceed until the situation has been corrected.

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.

NOTE: When using approved Mapei patching materials, Mapei's Primer T must be used over the surface of the patch before applying adhesive in Step 2 below. Failure to use primer may result in cohesive failure of the patching materials. Primer dilution shall be 2 parts water: 1 part primer.

Step 1: Gypsum substrates shall be prepared according to the ASTM F 2419 standards. This standard covers the practice of installation and preparation of the thick poured gypsum concrete underlayments over wood structural panel subfloors in commercial structures, or over concrete floors in commercial structures and preparation of the surface prior to the installation of resilient flooring.

NOTE: Per the ASTM C472 standard, the gypsum substrate shall have a compressive strength of 3000 psi or greater, and a density of 105 pcf.

Before installation of resilient flooring, gypsum must be primed with Mapei's Primer T at a dilution rate of 2 parts water: 1 part primer.

It is crucial that primer is allowed to penetrate deep into the pores of the gypsum. It may be necessary to apply multiple coats.

Drying time of gypsum shall be determined using the ASTM F2419 standards, which reference the ASTM C472 and ASTM D4263 standards for moisture content.

It is important for the gypsum substrate to be free of imperfections and that it be level to the equivalent of 3/16" in 10'. If substrate is damaged, it must be flash patched before installation of the resilient floor covering.

Flash patching can be completed using one of Mapei's approved patches or self-leveling materials. Please contact Mapei Technical Support for assistance.

Step 1: Wood subfloors should be double construction, rigid, and free from movement.

Wood subfloors (when installed with grouted floor coverings like tile) must be prepared according to ANSI L/360 standards, as required by the floor covering manufacturer.

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

Step 2: Day 1: It is essential to install the ECOsilence Perimeter Isolation Strip before placing and trimming ECOsilence impact sound insulation material!

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

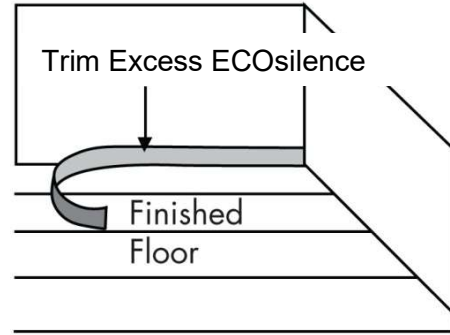
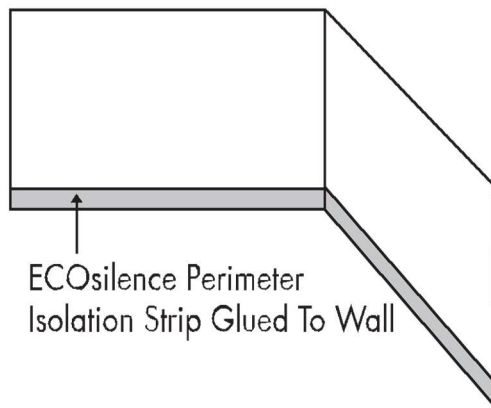


Diagram #2

Temporarily fasten the ECOsilence Perimeter Isolation Strip in place with masking tape, duct tape, carpet tape or spot gluing. The Perimeter Isolation Strip will later be trimmed flush with the finished floor. (Diagram #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.

If you have not already done so, remove the shrink-wrap from the roll of ECOsilence and unroll it onto the floor. Shaking the material once it is unrolled can help it to relax.

Place the ECOsilence material so that it is perpendicular to the subsequent installation direction of the topping material (see diagram #3).

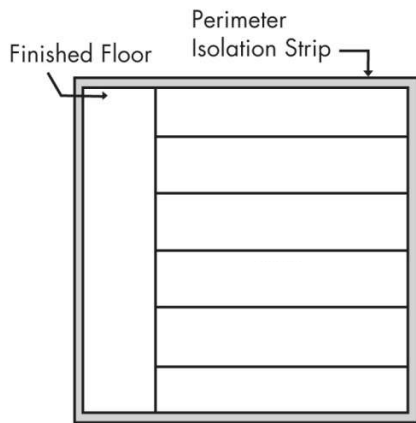


Diagram #3

ECOsilence sound mat shall be adhered to the substrate using the approved trowel.
2MM sound mat – 1/32” x 1/16” x 1/32” trowel using the required E-Grip Evolve.
5MM sound mat – 1/16” square notch trowel using the required E-Grip Evolve.

After laying sound mat into adhesive bed, roll with the following rollers: For **2MM** ECOsilence use a 35 lb. roller. For **5mm** ECOsilence use a 75-100 lb. roller. Allow adhesive to cure for 24 hours before proceeding to **Step 3**.

Step 3: Day 2: Apply LVT over ECOsilence sound mat using the approved trowel size listed below.

- **2MM sound mat - 1/32" x 1/16" x 1/32" trowel** using the required E-Grip Evolve adhesive. Coverage rate approximately 150 sq. ft. /gal.
- **5MM sound mat – 1/16" square notch trowel** using the required E-Grip Evolve adhesive. Coverage rate approximately 100 sq. ft. /gal.

Very Important to follow adhesive application instructions to ensure a successful installation. ECOsurfaces cannot be held liable for improper installation techniques.

Areas to receive flooring **must** be weather tight and maintained at a minimum uniform temperature of 65° F (18° C) for 48 hours prior to, during, and after installation.

NOTE: Adhesive coverages listed are for estimating purposes only. Actual jobsite coverage may vary.

1. Apply adhesive to ECOsilence surface using trowel listed below per sound mat thickness.
 - **2MM sound mat** – Apply LVT using a **1/32" x 1/16" x 1/32" trowel** using the required E-Grip Evolve adhesive with approx. 150 sq ft/gal. coverage rate.
 - **5MM sound mat** – Apply LVT using a **1/16" square notch trowel** using the required E-Grip Evolve adhesive with approx. 100 sq ft/gal. coverage rate.
2. Work only in small sections, where it's possible to install LVT planks into adhesive bed within the specified ***working time**.
3. Allow adhesive to ****flash** until adhesive valley is clear and adhesive ridge is gummy to the touch, approx. 30-45 minutes over 2mm ECOsilence, and approx. 90-120 minutes over 5mm ECOsilence.
4. Carefully lay planks into adhesive bed, working off the planks to eliminate excess movement before adhesive cures.
5. After completing each section within arm's reach, roll the planks with a 100 lb. roller.
6. **NO** foot traffic for a minimum of 48 hours after installation and light rolling loads for a minimum of 72 hours.
7. Wait a minimum of 72 hours before returning furniture to the surface.
8. **IMPORTANT** – Chair mats and floor protection **are required**. ECOsurfaces cannot be held liable for failure to protect flooring surface.

* **Flash Time:** The waiting time required before installing flooring.

****Working Time:** The window of time for the adhesive to accept flooring.

**ADHESIVE INSTALLATION FOR ADHERING LVT/LVP ONTO ECOsilence
AND THEN ADHERING THE ECOsilence ONTO STANDARD
SUBSTRATES**

E-Grip Evolve
Premium High Performance Adhesive for ECOsilence Sound Underlayment, Luxury Vinyl Tile and Plank

DESCRIPTION
E-Grip Evolve is a high performance, wet-set adhesive designed for use with ECOsilence sound underlayment membranes, LVT and Plank.

| Permanent bonding of ECOsilence over Porous Substrates | | |
|---|-------------------|--------------------------|
| | Flash Time | Working Time |
| Permanent bonding ECOsilence | 0 minutes | Approximately 30 minutes |

| Permanent bonding of ECOsilence over Nonporous Substrates | | |
|--|---------------------|-----------------------------|
| | Flash Time * | Working Time ** |
| Permanent bonding ECOsilence | 0 minutes | Approximately 30-45 minutes |

| Permanent bonding (LVT/LVP) over ECOsilence | | |
|--|---|--|
| | Flash Time * | Working Time ** |
| Permanent bonding (LVT/LVP) over 5mm ECOsilence using a 1/16" square notch trowel | 90-120 minutes or until adhesive valley is clear and adhesive ridges are gummy to the touch | 120-165 minutes, or approx. 30-45 minutes after flash time over sound mat |
| Permanent bonding (LVT/LVP) over 2mm ECOsilence using a 1/32"x1/16"x1/32" trowel | 30-45 minutes or until adhesive valley is clear and adhesive ridges are gummy to the touch | 45-75 minutes, or approx. 15-30 minutes after flash time over sound mat |

*** Flash Time:** The waiting time required before installing flooring.

****Working Time:** The window of time for the adhesive to accept flooring.

Note: Flash and working times may vary based on temperature, humidity, substrate porosity, trowel size and jobsite conditions.

**ADHESIVE INSTALLATION FOR LVT/LVP DIRECTLY ONTO
STANDARD SUBSTRATES**

E-Grip Evolve
Premium High Performance Adhesive for ECOsilence Sound Underlayment under Luxury Vinyl Tile and Plank



DESCRIPTION
E-Grip Evolve is suitable for installation of LVT tile and plank over other approved substrates. **For installation involving ECOsilence sound mats in conjunction with LVT/LVP, please refer to previous page's instructions.**

| Permanent bonding (LVT/LVP) over Porous Substrates | | |
|---|--|-----------------------------|
| | Flash Time | Working Time |
| Permanent bonding (LVT/LVP) Use Manufacturer's Recommended Trowel Size | 15-30 minutes or until adhesive valley is clear and adhesive ridges are wet to the touch | Approximately 15-30 minutes |

| Permanent bonding (LVT/LVP) over Nonporous Substrates | | |
|---|--|-----------------------------|
| | Flash Time * | Working Time ** |
| Permanent bonding (LVT/LVP) Use Manufacturer's Recommended Trowel Size | 30-45 minutes or until adhesive valley is clear and adhesive ridges are wet to the touch | Approximately 30-45 minutes |

* **Flash Time:** The waiting time required before installing flooring.
 ****Working Time:** The window of time for the adhesive to accept flooring.
Note: Flash and working times may vary based on temperature, humidity, substrate porosity, trowel size and jobsite conditions.

| Limitations |
|--|
| Do not install over substrates containing asbestos |
| For interior installations only |
| Do not apply over existing adhesive residue |
| Use only when substrate temperature is between 65°F and 90°F (16°C and 32°C) |
| Follow flooring manufacturer's instructions for installation and substrate preparation |

| ECOsilence | Trowel Size | | Coverage Over Standard Substrates | Coverage Over Sound Mats |
|---|--|---|-----------------------------------|--------------------------|
| 2mm ECOsilence |  1/32" x 1/16" x 1/32" (1 x 1.5 x 1 mm) | To secure 2mm ECOsilence to substrate and LVT/LVP to 2mm ECOsilence | 150 to 200 sq. ft./gal | 150 sq. ft./gal |
| 5mm ECOsilence |  1/16" x 1/16" x 1/16" (1.5 x 1.5 x 1.5 mm) | To secure 5mm ECOsilence to substrate and LVT/LVP to 5mm ECOsilence | 100 to 125 sq. ft./gal | 100 sq. ft./gal |
| Coverage rates shown here are for estimating purposes only. Actual jobsite coverage may vary according by application method, substrate, substrate conditions, trowel angle, and actual thickness applied | | | | |

| PHYSICAL DATA | |
|--------------------------|---|
| Adhesive Type | Vinyl Acrylic Polymer |
| Antimicrobial | Yes |
| Color | Off-white |
| Consistency | Creamy |
| Density | 8.3 lbs/gal (3.77 kg per 3.79 L) |
| VOC Content | .28 lbs/gal (34 g/l) |
| Shelf Life | 2 years when stored at 73° F (23°C) |
| Flash point | >212°F (100°C) |
| pH | 7 to 9 |
| Maximum RH (ASTM F-2170) | 80% RH diminishing |
| Freeze/Thaw | Protect from freezing Freeze/Thaw stable up to 5 cycles at 0°F (-18°C) |

Limited Lifetime Warranty

The ECOsilence line of products can be installed under most types of grouted, glued, and floating floors including ceramic tile, stone, marble, brick, pavers, hardwood, engineered wood, laminate, parquet, sheet vinyl, LVT and carpet. All floor covering assemblies shall have prior approval before installation.

The recommendations for applications and installation are based on our extensive experience and on current technological practice. Our 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 the above recommendations or by advice given by our sales representatives or applications engineering staff.

ECOsurfaces offers a limited lifetime warranty on the ECOsilence brand of Impact Sound Insulation products against defects in material and workmanship and they shall meet all published specifications and shall 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. For means of identification, Lifetime means for as long as the job installation remains unchanged by the original owner.

All other warranties, including implied warranties for a particular purpose, wear due to ultraviolet degradation, and uses and installation that are contrary to ECOsurfaces specifications, recommendations or instructions are expressly excluded.

Limited System Warranty

ECOsurfaces, subject to the terms and conditions set forth below, warrants that its products or system will be free from manufacturing defects and will not fail under normal usage for a period of 5 years when used with our recommended system adhesive and used within its shelf life in accordance with our published technical data sheets and other written instructions. All applicable building codes, regulations and industry standards must be strictly followed. For purposes of this limited warranty, a system is defined as a group of three or more ECOsurfaces products used together in the same assembly and installed in accordance with our published installation instructions. System warranty must be fully registered and approved by ECOsurfaces prior to installation of the flooring materials.

Expona LVT for use over select ECOsilence sound mats is intended for residential and light commercial use. For means of identification, Residential is defined as a single family detached dwelling and Light Commercial is defined as multi-family residential projects such as condominiums, apartments, timeshares, and other such dwellings that are not subjected to industrial traffic or heavy rolling loads. It is the sole responsibility of the installer, general contractor, architect or specifier, as a condition of warranty coverage, to first determine suitability and compatibility of our system for the end users intended use.

All other warranties, including implied warranties for a particular purpose, are expressly excluded. The sole remedy against the seller will be the replacement or repair of the defective goods, or at seller's option, credit may be issued not exceeding the selling price of the defective good.

Exclusions from Warranty Coverage

The following are specifically excluded from coverage under this warranty:

1. Structural failure, inadequate subflooring or improper subfloor preparation.
2. Damages caused by Acts of God, including, but not limited to hurricane, flooding, earthquakes, or other types of natural disaster, or as a result of unforeseen circumstances.
3. Acts of negligence or product misuse and abuse.
4. Failure to comply with our technical data sheets and other written instructions, applicable building codes and regulations, and standard industry practices.
5. Normal wear and tear resulting from usage.
6. Cracking of substrate due to structural movement and or telegraphing of cracks to the top surface of the flooring materials.
7. Damage caused by excess deflection or other failure of the substrate.
8. Wear from chairs or other furniture without proper floor protectors will void the warranty. Care should be taken to protect the flooring from damage by using good quality protective feet for chairs, tables, and other furniture. Chair mats are required under chairs with casters/wheels.
9. Labor costs for installation of original or replacement material.
10. Problems caused by moisture, hydrostatic pressure, or alkali in the sub-floor.
11. Problems caused by uses, maintenance, and installation that are contrary to ECOsurfaces specifications, recommendations or instructions.
12. Installation of ECOsurfaces sound mats or LVT with adhesives other than those recommended by ECOsurfaces.
13. Installation of unapproved LVT flooring materials.

These warranties are in lieu of any other warranty expressed or implied. ECOsurfaces shall not be liable for any incidental or consequential damages which may result from a defect. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. These warranties give you specific rights, and you may also have rights which may vary from state to state. To know what your legal rights are in your state, consult your local or state Consumer Affairs Office or your State Attorney General.



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