



# LVT / Plank Over 2mm & 5mm ECOsilence Technical Manual

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Supersedes all previous versions  
Check website for updates

## **Installation**

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ES-Evolve 85 Adhesive is a pressure-sensitive adhesive designed for the installation of ECOsilence rubber sound control underlayment and luxury vinyl tile (LVT) or luxury vinyl plank (LVP) over ECOsilence.

<b>Table1: ES-Evolve 85 Adhesive Trowel Size and Coverage Rates</b>				
<b>ECOsilence Thickness</b>	<b>Trowel Size</b>		<b>Coverage Rate Over Standard Substrates</b>	<b>Coverage Rate Over ECOsilence</b>
<b>2mm &amp; 5mm</b>		Use to secure ECOsilence to substrate and LVT/LVP to ECOsilence	150-200 sq. ft./gal	125-150 sq. ft./gal
Coverage rates shown here are for estimating purposes only. Actual jobsite coverage may vary according to application method, substrate, substrate conditions, trowel angle, and actual thickness applied.				

**Of Note and Limitations:**

- **Do not allow adhesive to cure on your hands or the flooring; it is very difficult to remove, and we strongly suggest wearing gloves.**
- **Areas and materials 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.**
- **Flash Time:** The waiting time required before installing flooring.
- **Working Time:** The window of time for the adhesive to accept flooring
- **Flash and working times may vary based on temperature, humidity, and substrate porosity,**
- Do not install over substrates containing asbestos.
- Particleboard, chipboard/OSB, masonite, and luan are not suitable underlayments.
- For interior installations only.
- Do not apply over existing adhesive residue.
- Use only when substrate temperature is between 65°F and 90°F (18°C and 32°C).
- Radiant heat – ECOsilence is suitable for installation over radiant heat when fully adhered. Follow floor manufacturer’s instructions for installation over radiant heat.
- Follow floor manufacturer’s instructions for installation and substrate preparation.
- Clean adhesive from flooring surface & tools with water while adhesive is fresh/wet.
- Bond tests are recommended.

**Step 1: Substrate preparation**

**Concrete** substrates 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 any of these are present, they must be removed prior to installation of flooring materials. Keep in mind that they should be removed mechanically without the use of chemicals, which could also act as a bond breaker for the adhesive.

The concrete should be at least 28 days old before the application of adhesives. The moisture content should be tested using the ASTM F2170 testing for relative humidity, with a result of 85% or lower with diminishing results. If levels exceed this limit, 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.

**Gypsum** substrates shall be prepared according to ASTM F 2419, which covers the installation and preparation of thick poured gypsum concrete underlayments over wood structural panel subfloors and over concrete floors and preparation of the surface prior to the installation of resilient flooring.

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

**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.

**NOTE:** When using Mapei patching materials, Mapei's Primer T must be used over the surface of the patch before applying adhesive. Failure to use primer may result in failure of patching materials. Primer dilution shall be per Mapei.

Primer must be allowed to penetrate deep into the pores of the gypsum. It may be necessary to apply multiple coats.

It is important for the gypsum substrate to be free of imperfections and that it be flat to the equivalent of 3/16 inches in 10 feet. If substrate is damaged, it must be flash patched before installation of the resilient floor covering with a Mapei-approved cementitious patch or self-leveler. Please contact Mapei Technical Support for assistance.

**Wood** subfloors should be double construction, rigid, and free from movement.

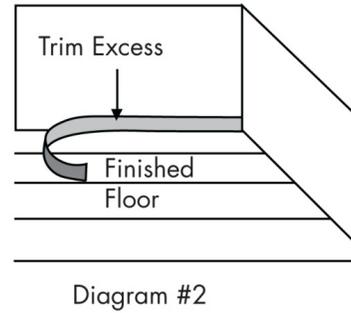
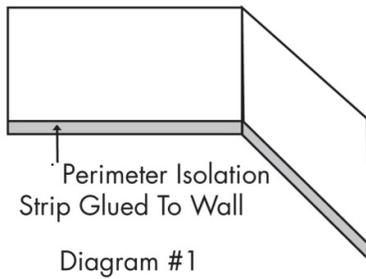
Wood subfloors (when installed with grouted floor coverings like tile) must be prepared according to ANSI L/360 standards, as required by the floor covering manufacturer.

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

## **Step 2: Installing Perimeter Isolation Strip**

Install the Perimeter Isolation Strip **before** placing and trimming the ECOsilence!

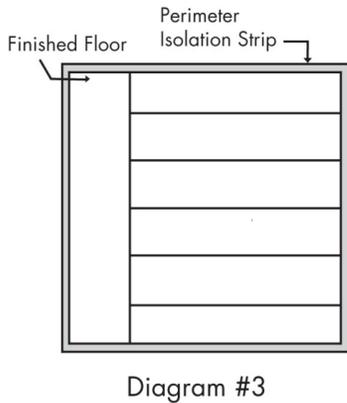
1. Attach Perimeter Isolation Strip to perimeter wall of entire subfloor, as well as around the perimeter of any protrusions, to isolate or break the vibration transmission path between floor and wall (see diagram #1).



2. Temporarily hold the Perimeter Isolation Strip on wall with tape. It will be trimmed flush with the finished floor. (See diagram #2)

**Step 3: Installing ECOsilence onto Substrate**

1. 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.
2. Remove the shrink-wrap and unroll the ECOsilence. Shake material to relax.  
**Hint:** *It is OK to flip the ECOsilence in case of curling.*
3. Position ECOsilence to be perpendicular to LVT/LVP installation direction (see diagram #3).



<b>Installing ECOsilence onto Substrate</b>		
	<b>Flash Time *</b>	<b>Working Time *</b>
Permanent bonding (ECOsilence) Using a 1/32" x 1/16" x 1/32" U notch trowel	0 minutes	20 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 vary based on temperature, humidity, and substrate porosity.

4. Adhere ECOsilence to the substrate with a **1/32” x 1/16” x 1/32” U notch trowel** using the ES-Evolve 85 at a yield of approx. 150 – 200 SF / gal.
5. Lay the ECOsilence **into a WET adhesive bed**, butt all seams, and roll floor. Use a **35 lb. roller for the 2MM ECOsilence** and a **75-100 lb. roller for 5mm ECOsilence**.  
**Hint: It is OK to flip the ECOsilence in case of curling.**

**NOTE: Allow adhesive to cure for 24 hours before proceeding with LVT/LVP installation.**

**Step 4: Installing LVT/LVP onto the ECOsilence**

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.

**NOTE:** Bond tests are recommended.

<b>Installing LVT/LVP onto ECOsilence</b>		
	<b>Flash Time *</b>	<b>Working Time **</b>
Permanent bonding (LVT/LVP) over ECOsilence using a 1/32” x 1/16”x 1/32” U notch trowel	20 - 30 minutes Allow adhesive to flash* until adhesive <b>valleys are clear &amp; the bridges are white and semi wet</b> and adhesive can transfer to your finger.	Up to 120+ 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 vary based on temperature, humidity, and substrate porosity.

1. Apply ES-Evolve 85 to ECOsilence surface with a **1/32” x 1/16” x 1/32” U notch trowel** at a yield of 125-150 sq. ft./gal.
2. Work in small sections to install into adhesive bed within the specified **working time\*\***.
3. Allow adhesive to flash\* until the **adhesive valleys are clear, and the ridges are white and semi wet**, and adhesive can transfer to your finger, approx. 20 to 30 minutes. Flash and working times may vary based on temperature, humidity, substrate porosity, trowel size and jobsite conditions.
4. Lay planks into the adhesive bed. Work off the planks to eliminate excess movement.
5. After completing each section within arm’s reach, roll the planks with 100 lb. roller.

6. **NO** foot traffic for a minimum of 48 hours after installation and 72 hours before returning furniture to the surface and light rolling loads.
7. **IMPORTANT** – Chair mats and floor protection **are required**. ECOsurfaces cannot be held liable for failure to protect flooring surface.

**Step 5: Installing LVT/LVP onto Substrate**

Prepare substrate as directed above.

Apply ES-Evolve 85 using manufacturer’s recommended trowel size and allow to flash as directed below.

<b>Installing LVT/LVP onto Substrate</b>		
	<b>Flash Time *</b>	<b>Working Time **</b>
Permanent bonding Use manufacturer’s recommended trowel size.	Up to 30 minutes Allow adhesive to flash* until adhesive <b>valleys are clear &amp; the ridges are white and semi wet</b> and adhesive can transfer to your finger.	Up to 120+ minutes

**Limited Warranty**

ECOsurfaces offers a limited warranty on the ECOsilence brand against defects in material and workmanship, and ECOsilence 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, any job installation that does not remain unchanged as installed by the original owner, and uses and installations that are contrary to ECOsilence specifications, recommendations or instructions 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 goods. Warranty only applies to the original owner.

Please see the ECOsurfaces Warranty Guide for length specifics.

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. For complete and latest warranty information, please visit [www.ECOsurfaces.com](http://www.ECOsurfaces.com).



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