



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



Revised 10Aug2022
Supersedes all previous versions
Check website for updates

Installation

E-TAK Adhesive Trowel Recommendations	3
Substrate Preparation	3
Install Perimeter Isolation Strip	4
Install ECOsilence	5
Adhesive LVT/LVP over ECOsilence	6
Adhesive LVT/LVP over Substrate	7
Adhesive Limitations and Physical Data	8

Warranty

Warranty	9
----------	---

2mm and 5mm ECOsilence E-TAK 99 Adhesive Coverage Rate Calculator				
ECOsilence Thickness	Trowel Size		Coverage Rate Over Standard Substrates	Coverage Rate Over ECOsilence
2mm	 1/32" x 1/16" x 1/32" (1 x 1.5 x 1 mm)	Use to secure 2mm ECOsilence to substrate and LVT/LVP to 2mm ECOsilence	150 to 200 sq. ft./gal	85 sq. ft./gal
5mm	 1/16" x 1/16" x 1/16" (1.5 x 1.5 x 1.5 mm)	Use to secure 5mm ECOsilence to substrate and LVT/LVP to 5mm ECOsilence	100 to 125 sq. ft./gal	70 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.

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.

NOTE: Bond tests are recommended.

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 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 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 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.

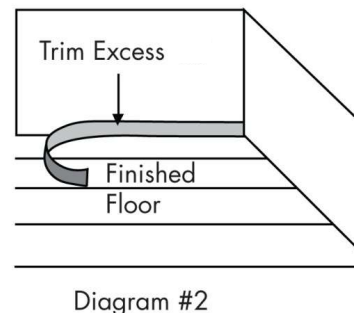
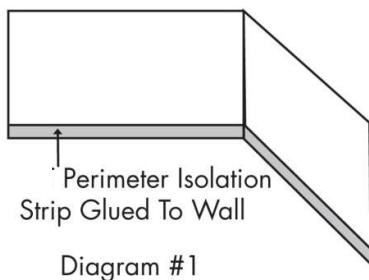
Step 1: Wood subfloors should be double construction, rigid, and free from movement.

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," OSB, masonite, and luan are not suitable underlayments.

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

Attach the 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).



Temporarily tape the Perimeter Isolation Strip on wall with tape. It will be trimmed flush with the finished floor. (See 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.

Remove the shrink-wrap and unroll the ECOsilence. Shake material to relax. It is OK to flip the QTscu in case of curling.

Place material to be perpendicular to the installation direction of the topping material (see diagram #3).

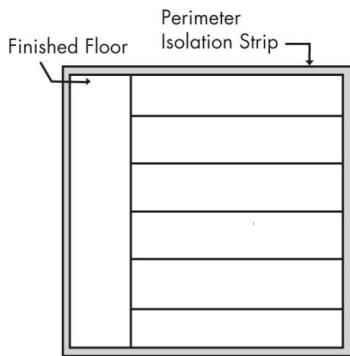


Diagram #3

Adhere ECOsilence with the following trowel:

2MM ECOsilence – 1/32” x 1/16” x 1/32” trowel using the required E-TAK 99

5MM ECOsilence – 1/16” square notch trowel using the required E-TAK 99

Lay the ECOsilence into adhesive bed and roll floor

Use a 35 lb. roller for the **2MM** material and a 75-100 lb. roller **for 5mm** material. It may be necessary to weight material to keep it flat when adhering.

Allow adhesive to cure for 24 hours before proceeding with **Day 2**.

Day 2: Apply LVT/LVP over the ECOsilence using trowel size below:

- **2MM ECOsilence – 1/32” x 1/16” x 1/32” trowel** using the required E-TAK 99 adhesive. Coverage rate approximately 85 sq ft/gal.
- **5MM ECOsilence – 1/16” square notch trowel** using the required E-TAK 99 adhesive. Coverage rate approximately 70 sq ft/gal.

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. Failure to comply could result in flooring failure.

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

NOTE: Bond tests are recommended.

1. Apply E-TAK 99 to surface using trowel required for each thickness:
 - **2MM ECOsilence** – Apply LVT/LVP using a **1/32” x 1/16” x 1/32” trowel** using the required E-TAK 99 adhesive. Coverage rate approximately 85 sq ft/gal.
 - **5MM ECOsilence** – Apply LVT/LVP using a **1/16” square notch trowel** using the required E-TAK 99 adhesive. (Coverage rate approx. 70 sq ft/gal.)
2. Work in small sections to install into adhesive bed within the specified ****working time**.
3. Allow adhesive to flash*, approximately 30-45 minutes over 2mm ECOsilence, and approximately 25 – 30 minutes over 5mm ECOsilence. (See next page)
4. Lay planks into the adhesive bed. Work off of 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.

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

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

ADHESIVE INSTALLATION: ADHERING ECOsilence ONTO STANDARD SUBSTRATES FOLLOWED BY LVT/LVP ONTO ECOsilence

E-TAK 99

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

DESCRIPTION

E-Tak 99 is a high performance, wet-set adhesive designed for use with ECOsilence, LVT and Plank.

Application Characteristics over Porous Substrates

	Flash Time *	Working Time *
Permanent bonding (Rubber)	20 minutes or semi-wet	45 minutes

Application Characteristics over Nonporous Substrates – Burnished / non-porous concrete requires use of Diambush™ 100 grit prior to application.

	Flash Time *	Working Time **
Permanent bonding (Rubber)	20 minutes or semi-wet	45 minutes

Application Characteristics over ECOsilence

	Flash Time *	Working Time **
Permanent bonding (LVT/LVP) over 5mm ECOsilence using a 1/16" square notch trowel	30 – 45 minutes	2 – 4 hours
Permanent bonding (LVT/LVP) over 2mm ECOsilence using a 1/32"x1/16"x1/32" trowel	25 – 30 minutes	2 – 4 hours

*** 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 of LVT/LVP ONTO STANDARD SUBSTRATES

E-TAK 99

Premium High Performance Adhesive for Luxury Vinyl Tile and Plank

DESCRIPTION
 E-TAK 99 is suitable for installation of Luxury Vinyl Tile and Plank over other approved substrates. **For installation involving ECOsilence in conjunction with LVT/LVP, please refer to the previous page’s instructions.**

Application Characteristics over Porous Substrates		
	Flash Time *	Working Time *
Permanent bonding (LVT/LVP) Use manufacturer’s recommended trowel size	30 – 45 minutes	2 – 4 hours

Application Characteristics over Nonporous Substrates – Burnished / non-porous concrete requires use of Diambrush™ 100 grit prior to application.		
	Flash Time *	Working Time **
Permanent bonding (LVT/LVP) Use manufacturer’s recommended trowel size	30 – 60 minutes or until tacky	2 – 4 hours

* **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 (18°C and 32°C)
Follow flooring manufacturer's instructions for installation and substrate preparation

PHYSICAL DATA	
Adhesive Type	Vinyl Acrylic Polymer
Antimicrobial	Yes
Color	Off-white
Consistency	Creamy
Density	7.5 to 9.2 lbs/gal (.09 to 1.1 kg per mL)
VOC Content	<50 g per L
Shelf Life	2 years when stored at 73° F (23°C)
Flash point	>212°F (100°C)
pH	8 to 10
Maximum RH (ASTM F-2170)	99%* RH Pressure Sensitive, 95% wet
Freeze/Thaw	Protect from freezing

*See product TDS Disclaimer for Adhesive with 99% RH Limit

Limited Warranty

ECOsurfaces offers a limited warranty on the ECOsilence brand of 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 good. 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.



833-888-1760

www.ECOsurfaces.com

Manufactured in the U.S.A

©2022 All designs and colors are copyrighted by ECOsurfaces.