

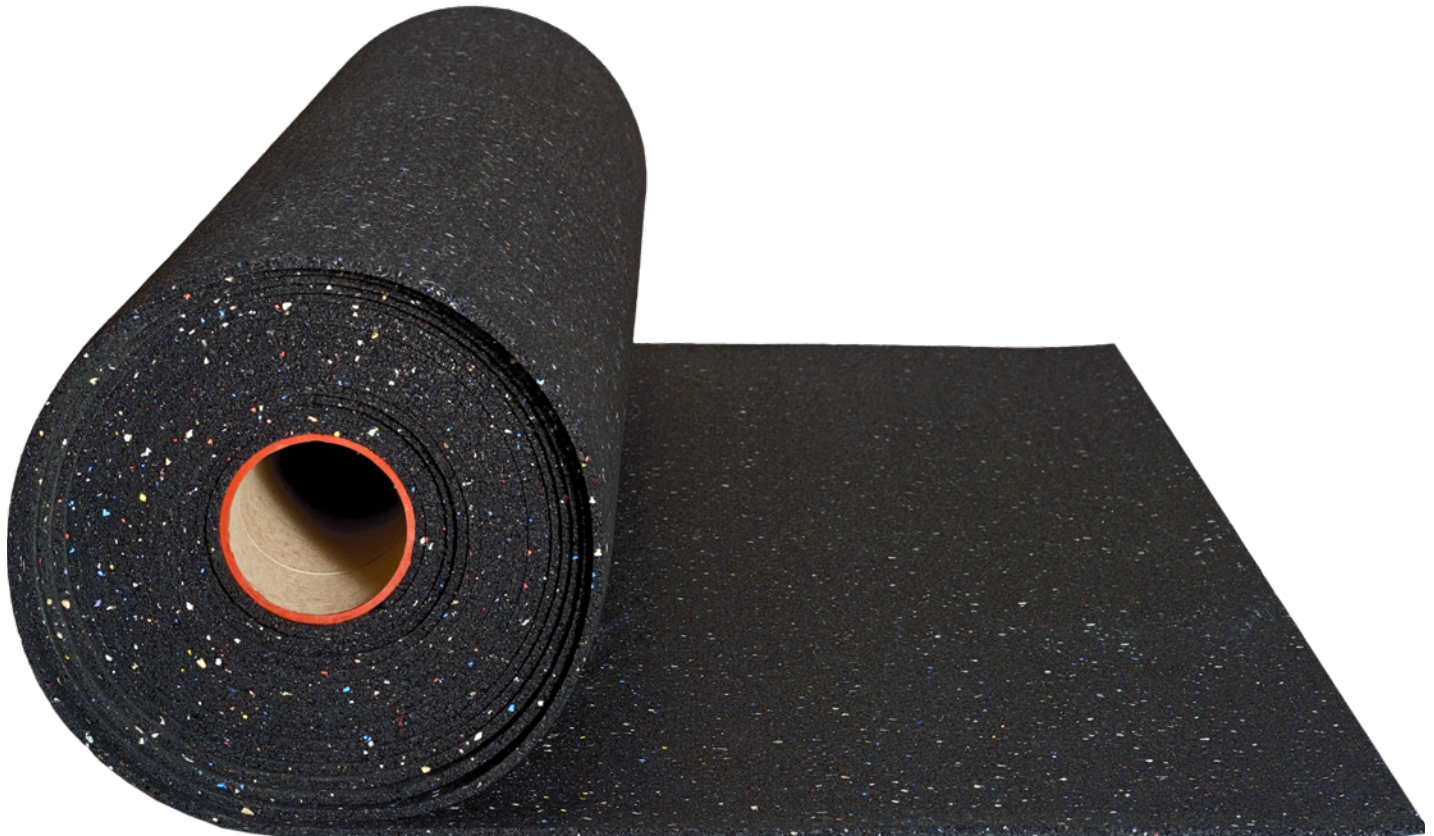
## ISO-STEP<sup>®</sup> FLOOR UNDERLAYMENT INSTALL GUIDE LVT SPECIAL PROCEDURES

The following installation instructions are given as a general guide to avoid common errors. Installer should follow best practices for construction and workmanship. Acoustical Solutions bears no responsibility for installation or contractor selection. Please contact a sales representative if you have questions, concerns or specific project requirements.

Be sure to inspect materials upon delivery. Please note any damage on the delivery ticket and notify Acoustical Solutions immediately. Materials should be stored in original packing in a clean, climate controlled environment free of moisture. Installation should not commence until building is enclosed and under standard occupancy conditions and surfaces are of acceptable condition and properly prepared. Do not install materials of unacceptable quality.

# LVT over 2mm & 5mm Iso-Step<sup>®</sup>

*Note: This guide does not apply to 10mm and 12mm thicknesses of Iso-Step<sup>®</sup> Floor Underlayment.*



## ISO-STEP<sup>®</sup> FLOOR UNDERLAYMENT INSTALL GUIDE LVT SPECIAL PROCEDURES

### SUBSTRATE PREPARATION

**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 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 an approved ASTM standardized test method. Approved methods are the ASTM F-1869 Calcium Chloride test or the ASTM F-2170 testing for relative humidity. Calcium chloride results must not exceed 5 pounds and relative humidity should result in a level of 80% or lower with diminishing results. If levels exceed these parameters, than an Ecore approved vapor retardant must be utilized.

**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.

One of the first things to remember is that gypsum and concrete are not compatible chemically. If concrete makes contact with a gypsum-based product, the resulting chemical reaction is known as "ettringite," which destroys the integrity of the bond between the two surfaces. Does this mean that cement-based products cannot be used over gypsum? MAPEI's solution is to require a layer of primer between these surfaces to prevent them from coming into contact.



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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 current offerings and installation recommendations of approved products: 1-800-992-6273.

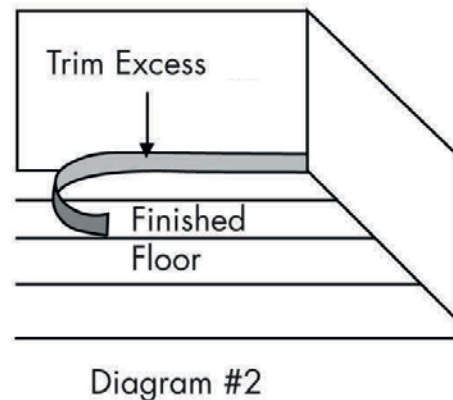
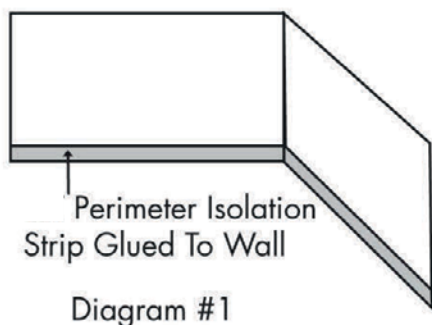
**Step 1:** **Wood** subfloors should be double construction, rigid, and free from movement.

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 Perimeter Isolation Strip before placing and trimming Iso-Step<sup>®</sup> impact sound insulation material!

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 fasten the 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 new top layer of flooring installed over the Iso-Step<sup>®</sup> layer. (Diagram #2)



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If you have not already done so, remove the shrink-wrap from the roll of Iso-Step<sup>®</sup> and unroll it onto the floor. Shaking the material once it is unrolled can help it to relax.

Place the Iso-Step<sup>®</sup> Floor Underlayment material so that it is perpendicular to the subsequent installation direction of the topping material (see diagram #3).

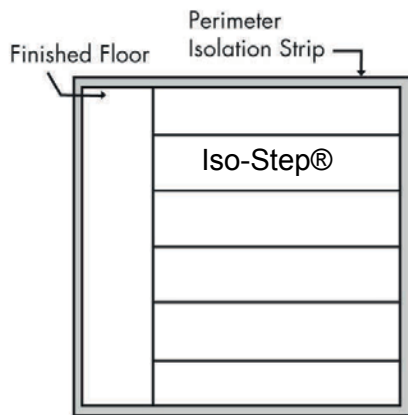


Diagram #3

Iso-Step<sup>®</sup> 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 EGRIP Evolve.  
**5MM sound mat – 1/16" square notch trowel** using the required EGRIP Evolve.

After laying sound mat into adhesive bed, it shall be rolled with a three section flooring roller. For **2MM** Iso-Step<sup>®</sup> use a 35 lb roller. For **5mm** Iso-Step<sup>®</sup> use a 75-100 lb roller. Allow adhesive to cure for 24 hours before proceeding with **Step 3**.

**Step 3: Day 2:** Apply LVT over Iso-Step<sup>®</sup> 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 with 1/32" trowel to be approximately 150 sq ft/gal.
- **5MM sound mat – 1/16" square notch trowel** using the required E-Grip Evolve adhesive. Coverage rate with 1/16" trowel to be approximately 100 sq ft/gal.

**Very Important** to follow adhesive application instructions to ensure a successful installation. Acoustical Solutions 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



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### (Step 3: Day 2 Continued – Application of adhesive and Installing LVT Plank)

**NOTE:** Adhesive coverage's listed above are for estimating purposes only. Actual jobsite coverage may vary depending on application method, substrate conditions, trowel angle, and actual thickness applied.

1. Apply adhesive to surface of Iso-Step<sup>®</sup> sound mat using appropriate trowel listed below. Trowel size will vary dependent upon the thickness of the sound mat.
  - **2MM sound mat** – Apply LVT using a **1/32" x 1/16" x 1/32" trowel** using the required E-Grip Evolve adhesive. Coverage rate with 1/32" trowel to be approximately 150 sq ft/gal.
  - **5MM sound mat** – Apply LVT using a **1/16" square notch trowel** using the required E-Grip Evolve adhesive. Coverage rate with 1/16" trowel to be approximately 100 sq ft/gal.
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, approximately 30-45 minutes over 2mm Iso-Step<sup>®</sup>, and approximately 90-120 minutes over 5mm Iso-Step<sup>®</sup>.
4. Carefully lay planks into the adhesive bed. Work off of the planks to eliminate excess movement before adhesive cures.
5. After completing each section within arm's reach, roll the planks with the specified 100 lb. three section flooring roller.
6. Prohibit foot traffic for a minimum of 48 hours after installation and light rolling loads for a minimum of 72 hours.
7. The recommended wait time is a minimum of 72 hours before returning furniture to the surface.
8. **IMPORTANT** – Chair mats are required under caster wheels/rolling chairs. This system is not intended for use under constant heavy rolling loads. Acoustical Solutions cannot be held liable for failure to protect flooring surface.

**\*Working Time** – The maximum amount of time that an adhesive can remain exposed to the air and still effectively bond to the floor covering.



## ISO-STEP® FLOOR UNDERLAYMENT INSTALL GUIDE LVT SPECIAL PROCEDURES

### E-Grip Evolve

**Premium High Performance Adhesive for Sound Underlayment, LVT Tile, and Plank**

#### DESCRIPTION

*Note: E-Grip Evolve should not be used with 10mm and 12mm thicknesses of Iso-Step® Floor Underlayment. Use E-Grip III instead.*

E-Grip Evolve is a high performance, wet-set adhesive designed for use with Iso-Step® sound underlayment membranes, and LVT. With its strong, durable, moisture-resistant and alkali-resistant bond, it is ideal for commercial applications. E-Grip Evolve has an excellent open time, develops strength quickly, and resists indentation. Its low volatile organic content makes it ideal for use in occupied buildings.

#### Application Characteristics over Porous Substrates

	Flash Time	Working Time
Permanent bonding (Rubber)	0 minutes	Approx 30 minutes
Permanent bonding (LVT) over 5mm Iso-Step® sound mat using a 1/16" square notch trowel	90-120 minutes or until adhesive valley is clear and adhesive ridges are gummy to the touch	Approx 30-45 minutes over Iso-Step® sound mat

#### Application Characteristics over Nonporous Substrates

	Flash Time *	Working Time **
Permanent bonding (Rubber)	0 minutes	Approx 30-45 minutes
Permanent bonding (LVT) over 2mm QT sound mat 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	Approx 15-30 minutes

**\* Flash Time:** The amount of time recommended for the adhesive to remain exposed to the air following application and before installation of the floor covering.

**\*\*Working Time:** The maximum amount of time that an adhesive can remain exposed to the air and still effectively bond to the floor covering.

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



## ISO-STEP<sup>®</sup> FLOOR UNDERLAYMENT INSTALL GUIDE LVT SPECIAL PROCEDURES

### E-Grip Evolve

**Premium High Performance Adhesive for Iso-Step<sup>®</sup> Sound Underlayment, LVT Tile, and Plank**

#### DESCRIPTION

E-Grip Evolve is suitable for installation of LVT tile and plank over other approved substrates. **For installation involving Iso-Step<sup>®</sup> sound mats in conjunction with LVT, please refer to previous page instructions.** With its strong, durable, moisture-resistant and alkali-resistant bond, it is ideal for commercial applications. E-Grip Evolve has an excellent open time, develops strength quickly, and resists indentation. Its low volatile organic content makes it ideal for use in occupied buildings.

#### Application Characteristics over Porous Substrates

	Flash Time	Working Time
Permanent bonding (LVT)	15-30 minutes or until adhesive valley is clear and adhesive ridges are wet to the touch	Approx 15-30 minutes

#### Application Characteristics over Nonporous Substrates

	Flash Time *	Working Time **
Permanent bonding (LVT)	30-45 minutes or until adhesive valley is clear and adhesive ridges are wet to the touch	Approx 30-45 minutes

\* **Flash Time:** The amount of time recommended for the adhesive to remain exposed to the air following application and before installation of the floor covering.

\*\***Working Time:** The maximum amount of time that an adhesive can remain exposed to the air and still effectively bond to the floor covering.

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





## ISO-STEP<sup>®</sup> FLOOR UNDERLAYMENT INSTALL GUIDE LVT SPECIAL PROCEDURES

### ADHESIVE DATA

#### 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

Luxury Vinyl Tile, Luxury Vinyl Plank, Iso-Step <sup>®</sup> Rubber Underlayment	1/16" x 1/16" x 1/16" (1.5 x 1.5 x 1.5 mm)  (as specified by manufacturer)	100 to 125 sq. ft./U.S. gal (2.45 to 3.06 m <sup>2</sup> per L)
Luxury Vinyl Tile, Luxury Vinyl Plank, Iso-Step <sup>®</sup> Rubber Underlayment	1/32" x 1/16" x 1/32" (1 x 1.5 x 1 mm)  (as specified by manufacturer)	150 to 200 sq. ft./U.S. gal (3.68 to 4.9 m <sup>2</sup> per L)

† 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
MVER (ASTM F-1869)	5 lbs diminishing
Freeze/Thaw	<b>Protect from freezing</b> Freeze/Thaw stable up to 5 cycles at 0°F (-18°C)

## ISO-STEP<sup>®</sup> FLOOR UNDERLAYMENT INSTALL GUIDE LVT SPECIAL PROCEDURES

The Iso-Step<sup>®</sup> line of products for impact sound insulation is engineered to provide better performance than any other sound control product available, and has been rigorously tested to achieve proven results. Made from 94% resilient recycled rubber and backed by more than 400 independent laboratory and field tests, Iso-Step<sup>®</sup> has been selected and used in some of the best hotels and condominiums in the world. It can be installed under most types of grouted, glued, and floating floors including ceramic tile, brick, pavers, hardwood, engineered wood, parquet, LVT, and carpet. All floor covering assemblies shall have prior approval before installation.

**NOTE: All floor covering assemblies shall have prior approval before installation.**

Approved LVT for use over select 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.

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 advice given by our sales representatives or applications engineering staff.

These warranties are in lieu of any other warranty expressed or implied. Acoustical Solutions 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.

