



# LVT and Plank over 2mm & 5mm QT Technical Manual

## SPECIAL PROCEDURES INSTALLATION & WARRANTY

Manufactured in the U.S.A. by:

**ecore™**

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Supersedes all previous versions  
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**2mm and 5mm QT Adhesive Coverage Rate Calculator**

| QT            | Trowel Size  |   | Coverage Rate Over Standard Substrates | Coverage Rate Over Sound Mats |
|---------------|--|---|--|-------------------------------|
| <b>2mm QT</b> | <br>1/32" x 1/16" x 1/32"<br>(1 x 1.5 x 1 mm)     | Use to secure 2mm QT to substrate and LVT/LVP to 2mm QT | 150 to 200 sq. ft./gal                 | 150 sq. ft./gal               |
| <b>5mm QT</b> | <br>1/16" x 1/16" x 1/16"<br>(1.5 x 1.5 x 1.5 mm) | Use to secure 5mm QT to substrate and LVT/LVP to 5mm QT | 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 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 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.

**SUBSTRATE PREP & PERIMETER ISOLATION STRIP**

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 QT Perimeter Isolation Strip before placing and trimming QT impact sound insulation material!

Attach the QT 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).

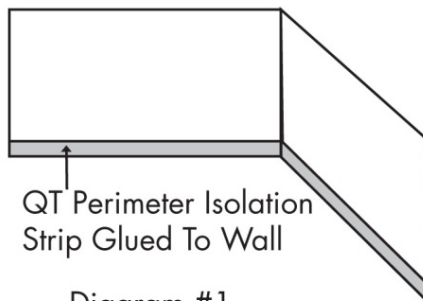


Diagram #1

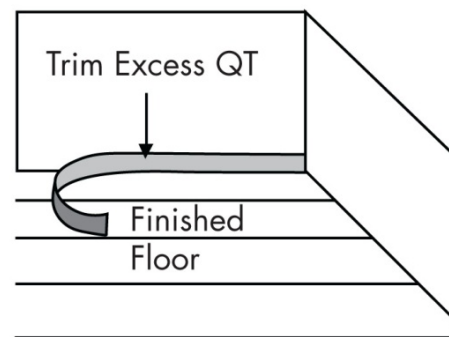


Diagram #2

Temporarily fasten the QT 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)

## INSTALLATION

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 QT and unroll it onto the floor. Shaking the material once it is unrolled can help it to relax.

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

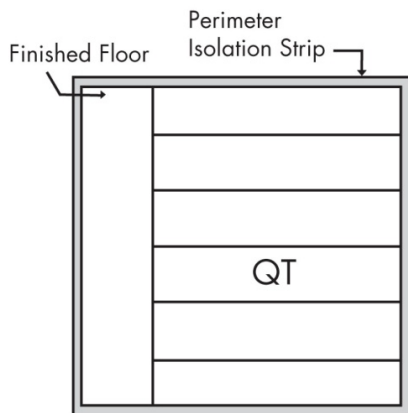


Diagram #3

QT 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, it shall be rolled with a three section flooring roller. For **2MM** QT use a 35 lb roller. For **5mm** QT use a 75-100 lb roller. Allow adhesive to cure for 24 hours before proceeding with **Step 3**.

**Step 3: Day 2:** Apply LVT/LVP over QT 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. Ecore cannot be held liable for improper installation techniques.

## INSTALLATION

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 3: Day 2 Continued – Application of adhesive and Installing Tile and Plank)

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

1. Apply adhesive to surface of QT sound mat using appropriate trowel listed below. Trowel size varies with sound mat thickness.
  - **2MM sound mat** – Apply LVT/LVP using a **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** – Apply LVT/LVP using a **1/16” square notch trowel** using the required E-Grip Evolve adhesive. (Coverage rate approx. 100 sq ft/gal.)
2. Work only in small sections to install 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 QT, and approximately 90-120 minutes over 5mm QT. (See page 7)
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. Wait a minimum of 72 hours before returning furniture to the surface.
7. **IMPORTANT** – Chair mats are required under caster wheels/rolling chairs. This system is not intended for use under constant heavy rolling loads. Ecore 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 OVER QT**

# E-Grip Evolve

**Premium High Performance Adhesive for QT Sound Underlayment, Luxury Vinyl Tile and Plank**

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

| Application Characteristics over Porous Substrates |            |                          |
|--|------------|--------------------------|
|  | Flash Time | Working Time             |
| Permanent bonding (Rubber)                         | 0 minutes  | Approximately 30 minutes |

| Application Characteristics over Nonporous Substrates |              |                             |
|---|--------------|-----------------------------|
|   | Flash Time * | Working Time **             |
| Permanent bonding (Rubber)                            | 0 minutes    | Approximately 30-45 minutes |

| Application Characteristics over Sound Mat  |   |  |
|---|---|--|
|   | Flash Time *  | Working Time **  |
| Permanent bonding (LVT/LVP) over <b>5mm</b> 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 | 120-165 minutes, or approximately 30-45 minutes <b>after</b> flash time over sound mat |
| Permanent bonding (LVT/LVP) over <b>2mm</b> 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  | 45-75 minutes, or approximately 15-30 minutes <b>after</b> 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 OVER STANDARD SUBSTRATES

## E-Grip Evolve

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

### DESCRIPTION

E-Grip Evolve is suitable for installation of Luxury Vinyl Tile and Plank over other approved substrates. **For installation involving QT sound mats in conjunction with LVT/LVP, please refer to previous page's instructions.**

### Application Characteristics over Porous Substrates

|   | Flash Time   | Working Time                |
|---|--|-----------------------------|
| Permanent bonding (LVT/LVP)<br>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 |

### Application Characteristics over Nonporous Substrates

|   | Flash Time *   | Working Time **             |
|---|--|-----------------------------|
| Permanent bonding (LVT/LVP)<br>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.



**ADHESIVE DATA**

| <b>Limitations</b>   |
|--|
| 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 |

| QT  | Trowel Size  |  | Coverage Rate Over Standard Substrates | Coverage Rate Over Sound Mats |
|---|--|--|--|-------------------------------|
| <b>2mm QT</b>   | <br>1/32" x 1/16" x 1/32"<br>(1 x 1.5 x 1 mm)     | Use to secure <b>2mm</b> QT to substrate and LVT/LVP to 2mm QT | 150 to 200 sq. ft./gal                 | 150 sq. ft./gal               |
| <b>5mm QT</b>   | <br>1/16" x 1/16" x 1/16"<br>(1.5 x 1.5 x 1.5 mm) | Use to secure <b>5mm</b> QT to substrate and LVT/LVP to 5mm QT | 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 |  |  |  |                               |

| <b>PHYSICAL DATA</b>     |  |
|--------------------------|--|
| 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              | <b>Protect from freezing</b><br>Freeze/Thaw stable up to 5 cycles at 0°F (-18°C) |

## **WARRANTY**

### **Limited Lifetime Warranty**

The QT 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.

Ecore offers a limited lifetime warranty on the QT brand of Impact Sound Insulation products against defects in material and workmanship and they shall meet all published specifications and shall perform effectively. Ecore warrants that during the warranty period QT 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.

Approved LVT for use over select Ecore 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 user's intended use.

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