



**It's not magic, it's engineering.™**

Impact and Airborne Sound Control

Sound Control For Floors

# GENIEMAT™ TECHNICAL INSTALLATION MANUAL

## Table of Contents

### Base Preparation

I.	General Information	3
II.	Job Site Conditions	3
III.	Subfloor Requirements & Preparation	3-4
IV.	Hazards	4
V.	Material Storage and Handling	5

### Installation

I.	GenieMat™ PMI	6
II.	GenieMat™ FF	6-8
III.	GenieMat™ RST	8-10
IV.	Alternative Installation Methods	10-11
V.	Floor Finish	11
VI.	Baseboard	11-12
VII.	Recommended Materials	13

### Warranty

I.	Warranty Information	14
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## Base Preparation

### I. GENERAL INFORMATION

The GenieMat™ 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 up to 94% recycled rubber content and backed by over 100 independent laboratory and field tests, GenieMat™ 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, stone, marble, pavers, hardwood, engineered wood, laminate, parquet, vinyl, VCT, LVT, and carpet. All floor covering assemblies shall have prior approval before installation.

### II. JOB SITE CONDITIONS

Areas to receive GenieMat™ should be weather tight and maintained at minimum, a constant room temperature of 65°F (10°C) for 48 hours before, during, and after installation.

### III. SUBFLOOR REQUIREMENTS & PREPARATION

#### A. GENERAL

**NOTE:** Please follow the subfloor requirements and preparation recommendations determined by the flooring manufacturer. Use the following subfloor requirements and preparation guidelines only when no such recommendations exist for the floor finishing product.

1. All subfloors/substrates must be inspected prior to installation.
2. Install GenieMat™ over concrete, approved self-levelling materials, and wood.
3. Wood subfloors should be double construction with a minimum thickness of one inch. The floor must be rigid and free from movement with a minimum of 18 inches of well-ventilated air space below.
4. Wood subfloors (when installed with use of grouted floor coverings like tile) must be prepared according to ANSI L/360 standards, as required by the floor covering manufacturer.
5. Concrete floors must be fully cured and permanently dry. Subfloor shall be dry, clean, smooth, level, and structurally sound. It should be free of dust, solvent, paint, wax, oil, grease, asphalt, sealers, curing and hardening compounds, alkaline salts, old adhesive residue, and other extraneous materials, according to ASTM F710.
6. Subfloor should be smooth to prevent irregularities, roughness, or other defects from affecting the material above it. The surface should be flat to the equivalent of 3/16" in 10', as described in ACI 117R, or as recommended by the floor manufacturer.

7. Mechanically remove all traces of old adhesives, paint, or other debris by scraping, sanding, or scarifying the substrate. DO NOT use solvents.
8. Grind high spots until level and fill low spots with an approved leveling compound.
9. All saw cuts (control joints), cracks, indentations, and other non-moving joints in the concrete must be filled with an approved patching/levelling compound. Allow patching material to dry thoroughly.
10. Any concrete subfloor can be a source of moisture-related flooring failures. It is the installer's responsibility to test the concrete or other cement-like material for moisture.
11. Maximum moisture vapor emission of the concrete must not exceed 5 ½ lbs/1,000 ft<sup>2</sup> in a 24 hour period, as measured by the calcium chloride test method in accordance with the ASTM F1869 standard. If vapor emissions exceed acceptable limits, the installation should not proceed until the problem has been corrected.
12. Moisture can also be measured using the RH, Relative Humidity test method per the ASTM F2170 standard. Moisture content should not exceed 75% RH. If levels are higher using either test method, a Pliteq recommended vapor retardant must be used.

#### IV. HAZARDS

##### A. SILICA WARNING

1. Concrete, floor patching compounds, toppings, and levelling compounds can contain free crystalline silica. Cutting, sawing, grinding, or drilling can produce respirable crystalline silica (particles 1-10 micrometers). Respirable silica is classified by OSHA as a 1A carcinogen and is known to cause respiratory diseases like silicosis. Avoid actions that cause dust to become airborne. Use local or general ventilation or protective equipment to reduce exposure below applicable exposure limits.

##### B. LEAD WARNING

1. Certain paints may contain lead. Exposure to excessive amounts of lead dust presents a health hazard. Refer to applicable federal, state, and local laws and the publication, *Lead Based Paint: Guidelines for Hazard Identification and Abatement in Public and Indian Housing*, available from the United States Department of Housing and Urban Development.

##### C. ASBESTOS WARNING

1. Resilient flooring, backing, lining felt, paint, or asphaltic "cutback" adhesives could contain asbestos fibers. Avoid actions that cause dust to become airborne. DO NOT sand, dry sweep, dry scrape, drill, saw, beadblast, mechanically chip, or pulverize. Regulations may require that the material be tested to determine asbestos content. Consult the documents titled, *Recommended Work Practices for Removal of Existing Resilient Floor Coverings*, available from the Resilient Floor Covering Institute.

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### V. MATERIAL STORAGE AND HANDLING

#### A. GENERAL

1. Deliver the material to the job site in its original unopened packaging with all labels intact and stored appropriately to prevent damage.
2. Inspect all material for visual defects before beginning the installation. Pliteq will honor no labor claim on material installed with any visually apparent defects.
3. Verify the material delivered is the correct type, thickness, and amount. Report any discrepancies immediately.
4. The material and any adhesive must be acclimated at room temperature for a minimum of 24 hours before starting the installation.
5. Roll material is stretched slightly when it is rolled at the factory. At the job site, the installer should allow all cuts to relax before gluing down. Shaking the material once it is unrolled can help it to relax more quickly.

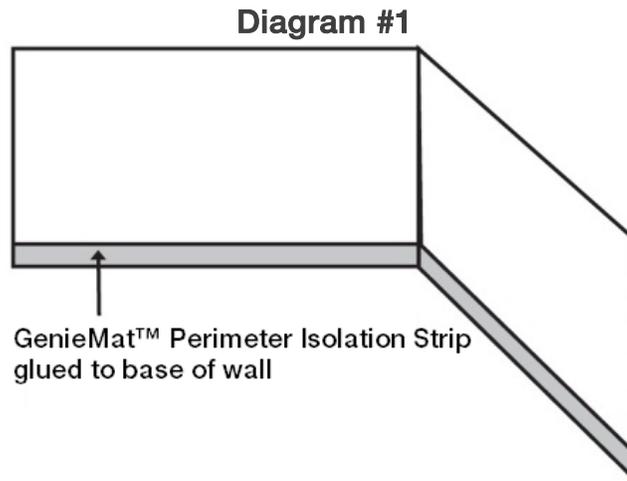
## Installation

### I. GenieMat™ PMI

#### A. GENERAL

**NOTE:** It is essential to install the GenieMat™ PMI perimeter isolation strips before placing and trimming GenieMat™ RST or FF impact sound insulation material.

1. Attach the GenieMat™ PMI 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).



2. Temporarily fasten the GenieMat™ perimeter isolation strips 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 above the GenieMat™ RST or FF layer.

### II. GenieMat™ FF

GenieMat™ FF floating floor material is a dimpled, resilient base mat for installation under monolithic underlayment to produce some of the thinnest sound rated systems in the industry. Available in rolls and four standard thicknesses – 6mm, 10mm, 17mm, and 25mm. Custom sizes and thicknesses are available upon request. It is also available with a reinforcing fabric membrane.

#### A. INSTALLING GenieMat™ FF

1. Attach GenieMat™ PMI perimeter isolation strips to the wall (see Diagram #1).

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.
3. If you have not already done so, remove the shrink-wrap from the roll of GenieMat™ FF and unroll it onto the floor. Shaking the material once it is unrolled can help it to relax.
4. Always lay the GenieMat™ FF so that the dimples are down against the subfloor and the membrane surface is on top.
5. Trim the ends of each section as necessary in order to fit the surface area to be covered. Maintain the required ambient conditions for any adhesive application and bonding.
6. Align the lengthwise edge of the material exactly with that of the neighboring section. Edges must contact but not overlap.
7. Dry lay the rolls onto the subfloor. Use high quality 3” wide duct tape to secure all joints and seams, including between the GenieMat™ FF and PMI.

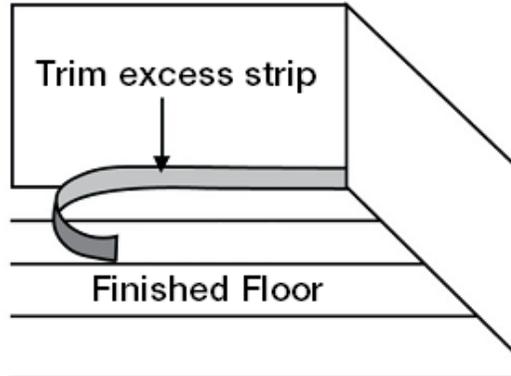
### B. INSTALLATION OF GYPSUM TOPPING

1. Install gypsum flooring underlayment product to the thickness as specified. Install the gypsum layer according to the recommendations of the gypsum manufacturer. Thickness of the gypsum layer may depend on thickness of the GenieMat™ FF layer.
2. Properly heat and ventilate the building interior before, during, and after the installation of the gypsum product, to a constant room temperature of 50°F(min.) and controlled humidity of 50%(max.). Under these conditions, a 1” thick gypsum floor underlayment should be cured in about seven to ten days.
3. Open windows daily a minimum of 2” to allow for the evaporation of moisture.

**NOTE:** A building without all of these conditions present will significantly increase the curing time of the gypsum product.

4. Before applying the sealer or installing the finished floor goods, be sure that the gypsum underlayment is sufficiently cured by testing it using the plastic sheet method per ASTM D4263 or a method recommended by the gypsum manufacturer.
5. Install the finished floor in accordance with the flooring manufacturer’s directions. After installing the finished floor, trim the excess GenieMat™ PMI around the entire perimeter of the finished floor (see Diagram #2). You may consult with the floor covering installer to see if they would like the GenieMat™ PMI to remain in place.

Diagram #2

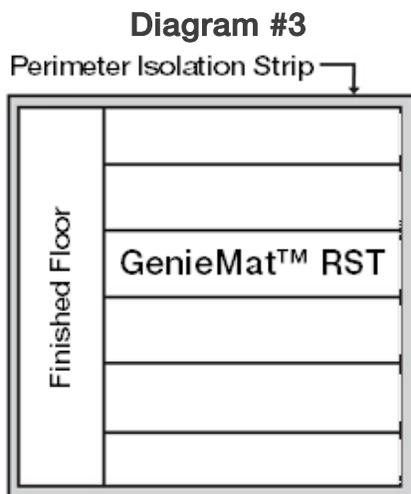


### III. GenieMat™ RST

GenieMat™ RST reduced sound transmission is a flat, resilient, sound control underlayment that is used directly under a variety of floor finishes, including ceramic tile, vinyl, wood, laminate, and stone, yielding exceptional results over both concrete and wood joist constructions. GenieMat™ RST is available in rolls and five standard thicknesses – 2mm, 5mm, 10mm, 12mm, and 15mm. Custom sizes and thicknesses are available upon request.

#### A. INSTALLING GenieMat™ RST

1. Attach the GenieMat™ PMI perimeter isolation strips to the wall (see Diagram #1).
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.
3. If not already done, remove the shrink-wrap from the roll of GenieMat™ RST and unroll it onto the floor. Shaking the material once it is unrolled can help it to relax.
4. Place the GenieMat™ RST material so that it is perpendicular to the subsequent installation direction of the topping material (see Diagram #3).



5. Trim the ends of each section as necessary in order to fit the surface area to be covered. You may trim section ends to exact dimensions required (e.g. joints with walls, etc.).

6. Align the lengthwise edge of the material exactly with that of the neighboring section. Edges may be butted up against each other or overlapped.

### B. GLUING GenieMat™ RST

**NOTE:** When using grouted or fully adhered flooring materials, the GenieMat™ RST shall be fully adhered to the substrate with a suitable adhesive. No substitutions are permitted.

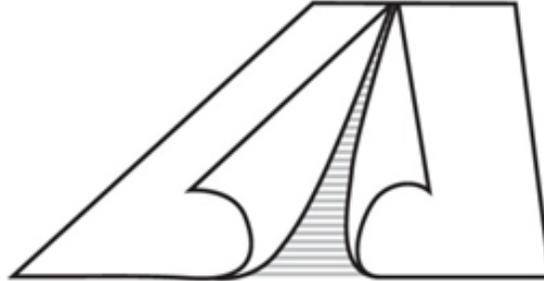
1. Fold the first drop lengthwise (half the width of the roll). Spread adhesive using proper notch trowel.

**NOTE:** Temperature and humidity affect the open time of adhesive. The installer should monitor on-site conditions and adjust open time accordingly.

2. Carefully lay the material into the wet adhesive. DO NOT let the material fall because this will trap air beneath the material.

3. Fold over second half of first sheet and first half of second sheet (see Diagram #4).

**Diagram #4**



4. Spread the adhesive. At seam area, spread adhesive at 90 degrees to seam to prevent excessive adhesive oozing up to the surface of the material.
5. Continue the process for each consecutive drop. Always work at a pace so that you are always folding material back into wet adhesive.
6. Never leave adhesive ridges or puddles, as they may affect the above material.
7. Use a 30 to 50 lb roller to roll over the floor within 45 minutes to ensure proper transfer of adhesive. Overlap each pass of the roller by 50% of the previous pass to ensure that the floor is properly rolled.

#### IV. ALTERNATIVE INSTALLATION METHODS

##### A. USING TAPE (FOR FLOATING FLOOR COVERING INSTALLATIONS)

1. Dry lay the rolls onto the subfloor following the directions on page 8.
2. Use duct tape or a high-quality carpet tape to secure the butt joints and seams.
3. A high quality 3" wide duct tape can be used to prevent the GenieMat™ RST from moving on the substrate.

**NOTE:** Gluing down of the GenieMat™ RST is not required for floating floors.

##### B. SAME ASSEMBLY USING BOTH GenieMat™ FF AND GenieMat™ RST

1. The most common method for this type of installation begins by installing GenieMat™ FF.
2. Install the dimpled material in accordance with the instructions provided in the section "Installing GenieMat™ FF" beginning on page 6 of this manual.
3. Have the monolithic underlayment material installed per the manufacturer's recommendations.

4. Once set to the manufacturer's specifications, start the installation of the GenieMat™ RST with the instructions provided in the section "Installing GenieMat™ RST" beginning on page 8 of this manual.

### C. ADDITIONAL ALTERNATIVE INSTALLATION METHODS

1. For additional alternative installation methods, contact Pliteq's Engineering Department.

## V. FLOOR FINISH

### A. GENERAL

1. Follow the flooring manufacturer's directions for installing the flooring. Use their recommended adhesives, procedures, and equipment.
2. **Do not** mechanically fasten any material through GenieMat™. Any mechanical connection, such as nails, screws, staples, etc., will transmit noise through to the building structure, compromising the performance of GenieMat™.

### B. INSTALLATION

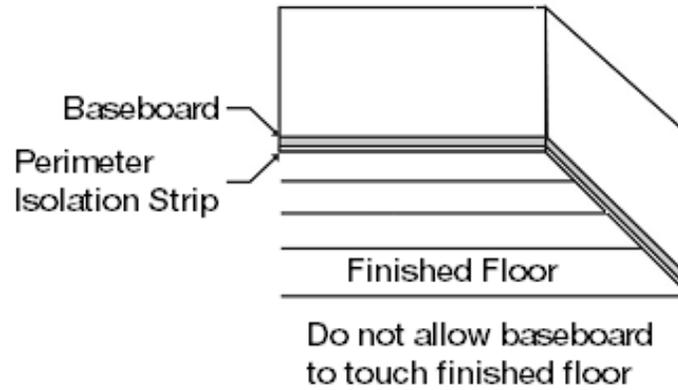
1. Install self-locking floors, such as wood laminates, over GenieMat™ RST following the manufacturer's recommendations.
2. Glue standard wood flooring directly to GenieMat™ using the flooring manufacturer's recommended adhesive.
3. If a flooring manufacturer recommends the installation of a layer of plywood or cement board between the GenieMat™ and the finished flooring, glue the recommended board using a suitable adhesive.
4. Install grouted flooring materials in a thin or thick-set mortar bed applied directly on the GenieMat™ RST. Tile and stone sizes smaller than 4" x 4" shall be pre-approved by Pliteq's Engineering Department.
5. When the flooring installation is complete, trim any excess GenieMat™ material so that it is flush with the surface of the finished floor.

## VI. BASEBOARD

### A. INSTALLATION OF BASEBOARD

1. After perimeter installation strip has been trimmed to finished floor height install the baseboard.
2. Fix the baseboard to the wall above the GenieMat™ and finished floor layers. The baseboard must be 1/4"(min.) above the finished floor and not come into contact with it (see Diagram #5).

Diagram #5



3. Seal the entire perimeter with a permanently flexible acoustical caulk.

### VII. RECOMMENDED MATERIALS

**NOTE:** All materials shall be delivered to the job site in the original containers with the manufacturer's identification on each package. Unauthorized modification to any product is not permitted. The following materials are listed because of their extensive testing and field experience with GenieMat™ products. If you would like us to evaluate any materials as alternatives, call Pliteq's Engineering Department at (416) 449-0049.

#### A. URETHANE ADHESIVES

1. GenieMat™ FAS by Pliteq Inc. (416) 449-0049
2. Bostik's Best® by Bostik® (800) 592-8858
3. DriTac 7500/7600 by DriTac (800) 394-9310
4. Henry #971 (800) 232-4832

#### B. THIN-SET MATERIALS

1. Laticrete® 253 Gold
2. Laticrete® 254 Platinum
3. Laticrete® Sure Set
4. Bostik® Hydroment® Single-Flex™ Mortar
5. ARDEX FB9L (724) 203-5000
6. ARDEX X701
7. ARDEX X7G Plus
8. ARDEX S16

#### C. GROUT MATERIALS

1. Laticrete® PermaColor™ Grout
2. Laticrete® SpectraLOCK® Grout
3. Bostik® Hydroment® Joint Filler
4. ARDEX Flex Grout

#### D. ACOUSTICAL CAULKING

1. GenieClip™ ACS by Pliteq Inc. (416) 449-0049

## Warranty

### I. WARRANTY INFORMATION

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. Pliteq Inc. is a corporation duly organized and validly existing under the laws of the province of Ontario.

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