PLITEQ

It's not magic, it's engineering.™

Impact and Airborne Sound Control

GenieMat™ Technical Installation Manual

Sound Control For Floors

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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.

With the use of GenieMat™ FAS, FAS-2, and FAS-HM adhesives, it can be installed under a variety of floor finishes and coverings, including nail-down and floating hardwood, engineered wood, and laminate, ceramic, stone, porcelain, and marble tile, vinyl composition tile (VCT), luxury vinyl tile (LVT), vinyl sheet, plank, and tile and carpet, in wood, steel, and concrete construction. 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 between 65°F - 95°F (18.30°C - 135.02°C) for 48 hours before, during, and after installation.

III. SUBFLOOR REQUIREMENTS AND 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 wood, concrete, and approved self-levelling materials.

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 lbs/1,000 ft^2 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, GenieMat™ FAS-HM adhesive must be used for conditions up to 10 lbs/1,000 ft^2 in 24 hours, or a Pliteq recommended vapor retardant must be used.

12. Maximum relative humidity must not exceed 85% RH, as measured by the relative humidity test method in accordance with the ASTM F2170 standard. If relative humidity exceeds acceptable limits, GenieMat™ FAS-HM adhesive must be used for conditions up to 90% RH, or 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.

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.

Products

I. GenieMat™ PMI

A. DESCRIPTION

Flat, resilient, single-ply white polyethylene foam perimeter isolation strip that is used to build a tub around the floor so that no hard floor covering surface touches any hard vertical surface (protrusion or wall).

B. APPLICATION

Attached at the base of the perimeter wall of the entire subfloor, as well as the perimeter of any protrusions, prior to unrolling and installing GenieMat™ products, in order to isolate or break the vibration transmission path between the floor and the wall.

II. GenieMat™ RST

A. DESCRIPTION

Robust reduced sound transmission mat made from 94% recycled rubber content used when superior sound control is required in multifamily housing, high-rises, or commercial buildings. It is available in rolls and five standard thicknesses - 2mm, 5mm, 10mm, 12mm, and 15mm. Custom sizes and thicknesses are available upon request.

B. APPLICATION

Used directly under a variety of floor coverings in wood, steel, and concrete construction, yielding exceptional results for impact sound insulation and substrate crack prevention.

III. GenieMat™ FF

A. DESCRIPTION

Robust dimpled rubber pad made from 92% recycled rubber content used when superior sound control is required in mechanical rooms, sound studios, home theatres, entertainment venues, medical facilities, exercise, gym, and dance floors, and commercial, industrial, and multifamily housing.

B. APPLICATION

Used directly under gypsum, light-weight, or full-weight concrete.

IV. GenieMat™ FAS

A. DESCRIPTION

GenieMat™ FAS is a high-solids, cross-linking, amide-ester-acrylate-resin blend adhesive. It is solvent-free, non-flammable, has low-odor and low-VOC content, contains no hazardous chemicals as per OSHA Regulation CFR 1910.1200, and meets all federal, state, and local government indoor air quality regulations. This specially formulated adhesive has good early strength buildup for immediate grab and gradually builds into a tenacious but resilient bond as the chemicals in the adhesive cross-link.

B. APPLICATION

GenieMat™ FAS is used for bonding GenieMat™ sound control underlayments to various subfloors/substrates, and for bonding specified wood finish floors to GenieMat™ sound control underlayments.

V. GenieMat™ FAS-2

A. DESCRIPTION

GenieMat™ FAS-2 is a cross-linking, pressure-sensitive, amide-ester-acrylate-resin blend adhesive. It is solvent-free, non-flammable, has low-odor, demonstrates excellent water and alkali resistance, features high aggressive peel strength and shear strength, and is very quick to use and easy to trowel. This specially formulated adhesive has plasticizer migration resistance that allows installation of a broad variety of vinyl floor products.

B. APPLICATION

GenieMat™ FAS-2 is used for bonding GenieMat™ sound control underlayments to various subfloors/substrates, and for bonding all specified finish floors and coverings, including vinyl floor products, to GenieMat™ sound control underlayments.

VI. GenieMat™ FAS-HM

A. DESCRIPTION

GenieMat™ FAS-HM is a one-component, 100% solids, cross-linking, modified silane polymer-based adhesive. It is solvent-free, water-free, and isocyanate-free, non-flammable, has low-odor, negligible VOC content, contains no hazardous chemicals as per OSHA Regulation CFR 1910.1200, and meets all federal, state, and local government indoor air quality regulations. This specially formulated adhesive is a Class 1 vapor barrier, features extremely low-permeability ratings, withstands maximum moisture levels of 10 lbs and 90% RH, and is unaffected by concrete slab alkalinity, has good early strength buildup for immediate grab and gradually builds into a tenacious but resilient bond as the chemicals in the adhesive cross-link, and plasticizer migration resistance that allows installation of a broad variety of vinyl floor products.

B. APPLICATION

GenieMat™ FAS-HM is used in high-moisture applications for bonding GenieMat™ sound control underlayments to various subfloors/substrates, and for bonding specified finish floors and coverings to GenieMat™ sound control underlayments.

VII. GenieClip™ ACS

A. DESCRIPTION

Single-component, non-skinning, non-hardening synthetic rubber sealant that is developed for acoustical sealing of drywall partitions, corridors and party walls.

B. APPLICATION

Applied in the 1/4” gap around the perimeter of hung drywall in a de-coupled wall assembly to create an air-tight seal capable of reducing sound transmission and flanking noise. It is also used as a lap joint for partitions and perimeter sealant for polyethylene vapor barriers over fiberglass batt or other insulations. May be used in contact with polystyrene.

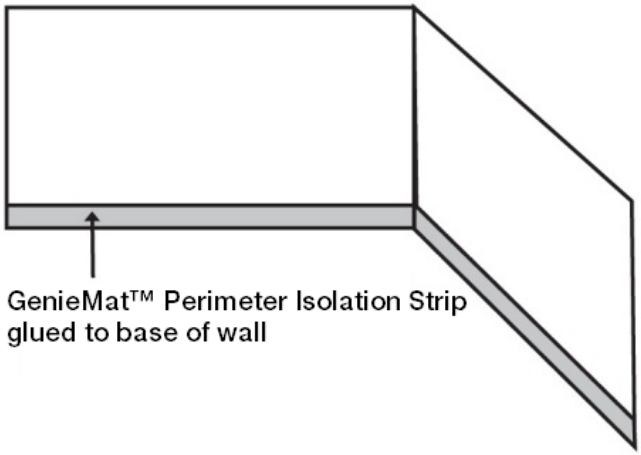
Installation

I. GenieMat™ PMI

A. GenieMat™ PMI INSTALLATION

1. Attach GenieMat™ PMI perimeter isolation strip to the base of the perimeter wall of the entire subfloor, as well as the perimeter of any protrusions (see *Diagram #1*).

Diagram #1



II. GenieMat™ RST

A. GenieMat™ RST INSTALLATION

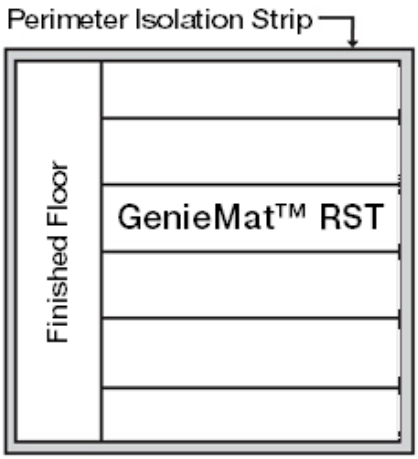
1. Unroll and place GenieMat™ RST underlayment perpendicular to subsequent installation direction of finished floor (see *Diagram #2*).

2. Trim ends of each section to fit floor surface area.

3. Align lengthwise edges of underlayment with neighboring sheets by butting up or overlapping them.

4. Determine whether installation will be floating floor or glue-down and follow the corresponding instructions.

Diagram #2



B. FLOATING FLOOR INSTALLATION

1. Use duct tape or high-quality carpet tape to secure butt joints and seams, and prevent underlayment from moving.

2. Proceed to *Finished Floor Installation*.

C. GLUE-DOWN INSTALLATION

1. Fold the first sheet of underlayment halfway lengthwise.

2. Spread adhesive using the appropriate notch trowel and GenieMat™ FAS adhesive (refer to *GenieMat™ FAS data sheets*).

3. Carefully lay underlayment into wet adhesive.

4. Fold over second half of first sheet and first half of second sheet.

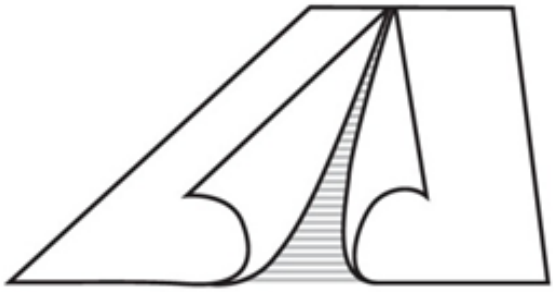
5. Spread adhesive perpendicular to seam (see *Diagram #3*).

6. Continue this process for each consecutive sheet.

7. Use a 30 to 50 lb roller over sheets to ensure proper transfer of adhesive.

8. Provide enough time to allow adhesive to set before installing finished floor.

Diagram #3



III. GenieMat™ FF

A. GenieMat™ FF INSTALLATION

1. Unroll and place GenieMat™ FF underlayment dimple-side down and membrane-side up.

2. Trim ends of each section to fit floor surface area.

3. Align lengthwise edges of underlayment with neighboring sheets by butting them up.

4. Use duct tape or high-quality carpet tape to secure butt joints and seams, and prevent underlayment from moving.

B. CONCRETE INSTALLATION

1. Install concrete product to the thickness specified and according to the recommendations of the manufacturer. Minimum thickness of the concrete may vary with the thickness of the GenieMat™ FF underlayment.

2. Properly heat and ventilate the building interior before, during, and after the installation of the concrete product to a constant room temperature of 50°F minimum and controlled humidity of 50% maximum.

3. Open windows daily a minimum of 2” to allow for the evaporation of moisture.

4. Before applying the sealer or installing the finished floor, be sure that the concrete is sufficiently cured by testing it using the plastic sheet method per ASTM D4263 or a method recommended by the manufacturer.

IV. FINISHED FLOOR

A. FINISHED FLOOR INSTALLATION

Install all finished floors according to manufacturer’s recommendations.

If installing a floating floor, interlock or glue planks together without gluing the planks to the underlayment.

If manufacturer recommends installation of plywood or cement board between the underlayment and finished floor, adhere the board to the underlayment.

DO NOT nail or screw through the underlayment.

Adhere all finished flors using appropriate notch trowel and GenieMat™ FAS adhesive (refer to GenieMat™ FAS data sheets).

Alternative adhesives recommended by manufacturer shall be pre-approved by Pliteq Technical Services.

Install grouted flooring materials in a thin or thick-set mortar bed applied directly over underlayment.

Tile and stone sizes smaller than 4” x 4” shall be pre-approved by Pliteq Technical Services.

V. VINYL FLOOR COVERING

A. VINYL FLOOR COVERING INSTALLATION

NOTE: Follow the flooring manufacturer’s directions for the installation of vinyl floor coverings. Seek Pliteq approval before using their recommended adhesives, procedures, and equipment.

1. Install self-locking floors, such as vinyl plank, over GenieMat™ RST following the flooring manufacturer’s recommendations.

2. Adhere all other vinyl sheet, plank, or tile flooring goods directly to GenieMat™ RST using GenieMat™ FAS, FAS-2, or FAS-HM adhesive, depending on the application. Follow instructions on the adhesive pail or those available from Pliteq or the flooring manufacturer.

3. When the flooring installation is complete, trim any excess GenieMat™ material so that it is flush with the surface of the floor covering.

VI. BASEBOARD

A. BASEBOARD INSTALLATION

1. Trim excess GenieMat™ PMI perimeter isolation strip flush or below the surface of the finished floor or vinyl floor covering (see *Diagram #4*).

2. Install baseboard to wall 1/4" minimum above GenieMat™ PMI and floor surface (see *Diagram #5*).

3. Seal entire perimeter with GenieClip™ ACS acoustical sealant.

Diagram #4

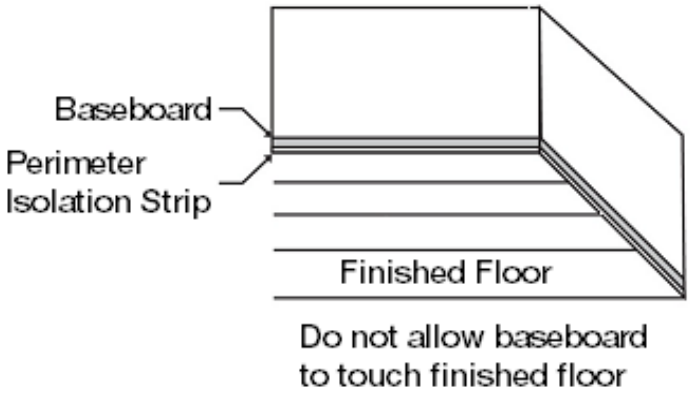
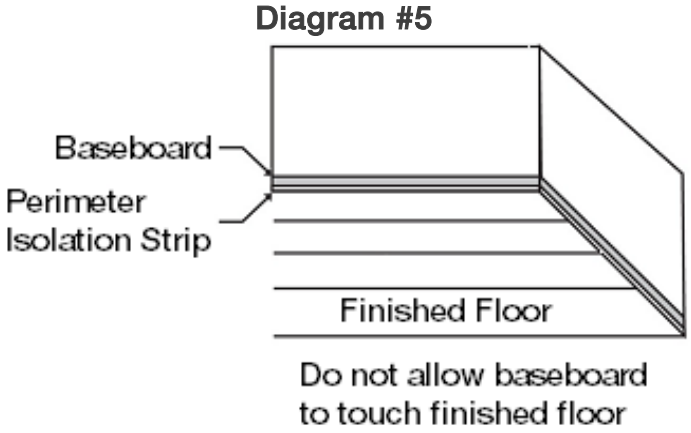


Diagram #5



Recommended Products

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 Technical Services at (416) 449-0049.

I. FLOOR ADHESIVES

A. Pliteq GenieMat™ FAS / FAS-2 / FAS-HM - (416) 449-0049

B. Taylor 2071

C. Taylor 2091

D. Taylor MSPR

E. Bostik's BEST®

F. Henry® 971 PlankPro™

II. THIN-SET MATERIALS

A. Laticrete® 253 Gold

B. Laticrete® 254 Platinum

C. Bostik Hydroment® Single-Flex™

D. ARDEX FB9L

III. GROUT MATERIALS

A. Laticrete PermaColor™ Grout

B. Laticrete SpectraLOCK® Grout

C. Bostik Hydroment® Joint Filler

D. ARDEX Flex Grout

IV. ACOUSTICAL SEALANT

A. Pliteq GenieClip™ ACS - (416) 449-0049

B. Tremco Acoustical Sealant

C. Pecora AC-20® FTR

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 warranties 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.