

### Product Guide Specification

#### Pliteq GenieMat RST-02, RST-05, RST-10, RST-12, RST-15

*Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including MasterFormat, SectionFormat, and PageFormat, contained in the CSI Manual of Practice.*

*The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings.*

*Delete all "Specifier Notes" when editing this section.*

### SECTION 09 60 13 ACOUSTIC UNDERLAYMENT

*Specifier Notes: This section covers Pliteq, Inc. "GenieMat RST" installed with "GenieMat FAS" adhesive underneath finish flooring to reduce airborne and impact sound transmission. Consult Pliteq Inc. for assistance in editing this section for the specific application.*

## Part 1.0 - General

### 1.1 Summary

- A. The work of this section includes:
  - 1. Types of re-bonded recycled rubber sound control underlayment to be placed under flooring in living units.
  - 2. Adhesive
- B. Related Sections: Section(s) related to this article include:
  - 1. Concrete Substrate
  - 2. Plywood Substrate
  - 3. Tile
  - 4. Carpeting
  - 5. Noise Control and Vibration Isolation

## 1.2 References

- A. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title, or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority and standard designation.
- B. American Society for Testing and Materials (ASTM):
  - 1. ASTM E492 Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine
  - 2. ASTM C627 Standard Test Method for Evaluating Ceramic Floor Tile Installation Systems Using the Robinson-Type Floor Tester
  - 3. ASTM E989 Standard Classification for Determination of Impact Insulation Class (IIC)
  - 4. ASTM E1007 Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structures
  - 5. ASTM E2179 Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors
  - 6. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
  - 7. ASTM E336 Standard Test Method for Measurement of Airborne Sound Insulation in Buildings
  - 8. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in-situ Probes
  - 9. ASTM D5116 CHPS/CA 01350 – Collaborative of High Performance Schools, Low-Emitting Materials Criteria
  - 10. ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
- C. South Coast Air Quality Management District (SCAQMD) Rule # 1168
  - 1. VOC standards for adhesive and sealant applications
- D. Leadership in Energy and Environmental Design – LEED®
  - 1. International Organization for Standardization® document, ISO 14021 – Provides guidance on the terminology, symbols, testing, and verification methodologies that an organization should use for self-declaration of the environmental aspects of its products and services.

## 1.3 System Description

- A. Performance Requirements: Provide recycled rubber resilient flooring, which has been manufactured and

installed to maintain performance criteria stated by manufacturer without defects, damage, or failure.

## 1.4 Submittals

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. LEED: Provide documentation of how the requirements for credit will be met.
  - 1. List of proposed materials with recycled content. Indicate pre-consumer and post-consumer content.
  - 2. Product data and certification letter indicating percentage of recycled content for both pre-consumer and post-consumer content.
  - 3. Recycled content is defined in accordance with the International Organization for Standardization document, ISO 14021 Environmental labels and declarations.
    - a. Post-consumer material - waste materials diverted from the waste stream after consumer or commercial use.
    - b. Pre-consumer material - materials diverted from the waste stream during the manufacturing process. Excluded are regrind, rework, and scrap.
- C. Product Data: Submit product data, including manufacturer's guide specifications product sheet, for specified products.
- D. Shop Drawings: Manufacturer's specifications, catalog cuts, and other items needed to demonstrate compliance with the specified requirements. Also the manufacturer's recommended installation procedures, which, when approved by the architect, will become the basis for accepting or rejecting actual installation procedures used on the work.
- E. Samples: Submit selection and verification samples for finishes, colors, and textures.
- F. Quality Assurance Submittals: Submit the following:
  - 1. Certificates: If required, certification of performance characteristics specified in this document shall be provided by the manufacturer.
  - 2. Manufacturer's Instructions: Manufacturer's installation instructions.
- G. Closeout Submittals: Submit the following:
  - 1. Warranty: Warranty documents specified herein.

## 1.5 Quality Assurance

- A. Qualifications
  - 1. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

- a. Certificate: When requested, submit certificate indicating qualification.
- 2. Manufacturers' Qualifications: Manufacturer capable of approving application method.
- B. Regulatory Requirements: [specify applicable requirements of regulatory agencies].
- C. Mock-Ups: Install at project site a job mock-up using acceptable products and manufacturer-approved installation methods. Comply with workmanship standard. Comply with Division 1 Quality Control (Mock-Up Requirements) Section.
  - 1. Mock-Up Size: As determined by acoustical consultant.
  - 2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
  - 3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.
- D. Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's instructions, and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.
- E. Pre-installation Testing: Conduct pre-installation testing as follows: [specify substrate testing; consult with flooring manufacturer].

## 1.6 Delivery, Storage, and Handling

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original, unopened, and undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials at temperature and humidity conditions recommended by manufacturer and protect from exposure to harmful weather conditions.

## 1.7 Project Conditions

- A. Temperature Requirements: Maintain air temperature in spaces where products will be installed for time period before, during, and after installation as recommended by manufacturer.
- B. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

## 1.8 Warranty

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

1. 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.
2. 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 Sound Control Underlayment products against defects in material and workmanship and that 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 goods.

## 1.9 Maintenance

- A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals (Maintenance Materials) Section.
  1. Quantity: Furnish quantity of re-bonded recycled rubber Sound Control Underlayment units as requested on purchase order.
  2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage, and protection of extra materials.

## Part 2.0 - Proprietary Manufacturer/Products

### 2.1 Manufacturer: Pliteq Inc.

- A. Address: 1370 Don Mills Road, Toronto, ON M3B 3N7; Telephone: (416) 449-0049; Fax: (416) 849-0415; Email: llim@pliteq.com

### 2.2 Proprietary Product(s)

- A. Pliteq GenieMat Re-bonded Recycled Rubber Sound Control Underlayment and Adhesives manufactured by Pliteq Inc.
  1. Pliteq GenieMat RST-02, RST-05, RST-10, RST-12, RST-15 Re-bonded Recycled Rubber Sound Control Underlayment
  2. Pliteq GenieMat Re-bonded Recycled Rubber Perimeter Isolation Strip
  3. Pliteq GenieMat Polyethylene Foam Perimeter Isolation Strip

4. Pliteq GenieMat FAS High Solid Acrylic-Urethane Adhesive
5. Pliteq GenieClip ACS Acoustical Sealant

### 2.3.1 Pliteq GenieMat RST-02, RST-05, RST-10, RST-12, RST-15 Re-Bonded Recycled Rubber Sound Control Underlayment

- A. Product Name: The non-laminated, single-ply re-bonded rubber underlayment furnished under this specification shall be Pliteq GenieMat Recycled Rubber Sound Control Underlayment.
- B. Material: Made from 94% recycled rubber content. GenieMat is a flat, resilient underlayment that is used directly under a variety of floor finishes in wood, steel, and concrete construction, yielding exceptional results for impact sound insulation and protecting ceramic, porcelain, and stone from substrate cracks.
- C. US PATENT No.: 6,920,723, RE:41,945
- D. Sheet Dimension: GenieMat rolled rubber underlayment will have an overall thickness of \_\_\_\_\_ (specify: 1/8" [**2 mm**] standard in 4' by 75' [1.2 m by 22.9 m] roll size for RST-02, or 1/4" [**5 mm**] standard in 4' by 30' [1.2 m by 9.1 m] roll size for RST-05, or 3/8" [**10 mm**] standard in 4' by 15' [1.2 m by 4.6 m] roll size for RST-10, or 1/2" [**12 mm**] standard in 4' by 15' [1.2 m by 4.6 m] roll size for RST-12, or 5/8" [**15 mm**] standard in 4' by 15' [1.2 m by 4.6 m] roll size for RST-15).
- E. Sheet Weight: GenieMat rolled rubber underlayment will have an overall weight of \_\_\_\_\_ (specify: [**0.38 lb/ft<sup>2</sup>**] [1.9 kg/m<sup>2</sup>] standard for RST-02, or [**0.74 lb/ft<sup>2</sup>**] [3.6 kg/m<sup>2</sup>] standard for RST-05, or [**1.50 lb/ft<sup>2</sup>**] [7.2 kg/m<sup>2</sup>] standard for RST-10, or [**1.80 lb/ft<sup>2</sup>**] [8.7 kg/m<sup>2</sup>] standard for RST-12, or [**2.2 lb/ft<sup>2</sup>**] [11 kg/m<sup>2</sup>] standard for RST-15).
- F. Sheet Standard Tolerances: Roll width: + 3/4" - 0", Roll length: +1% - 0", Thickness: ± 1.5 mm.
- G. Reduction of Impact Sound Pressure Level ( $\Delta L_w$ ) (BN ES ISO 140-8): 14 dB (RST-02), 19 dB (RST-05), 21 dB (RST-10), 22 dB (RST-12).
- H. Impact Insulation Class Laboratory (ASTM E492): Specified floor-ceiling assembly must be tested in a NVLAP certified laboratory and comply with ASTM standards. 5mm thickness shall be tested over 8" concrete slab with tile, resilient clip supported ceiling to an IIC rating of 55 or greater. 2mm shall be tested over an open-web truss assembly with tile, resilient clip supported ceiling to an IIC rating of 55 or greater.
- I. Impact Insulation Class Field (ASTM E1007): Floor-ceiling assembly must meet requirement as stated by building code and/or acoustical consultant.
- J. Reduced Impact Sound Transmission (ASTM E2179): Specified floor-ceiling assembly must be tested in a NVLAP certified laboratory and comply with ASTM standards.
- K. VOC Washington State IAQ Test (ASTM D5116): pass

### 2.3.2 Pliteq GenieMat PMI-05, PMI-10 Type R Rebonded Recycled Rubber Perimeter Isolation Strip

- A. Product Name: The non-laminated, single-ply re-bonded rubber perimeter isolation strip under this

The information provided is accurate to the best of our knowledge at the time of issue. However, we reserve the right to make changes when necessary without further notification. Suggested applications may need to be modified to conform with local building codes and conditions. We cannot accept responsibility for products that are not used, or installed, to our specifications.



specification shall be Pliteq GenieMat Re-bonded Recycled Rubber Perimeter Isolation Strip.

- B. Material: Made from 94% recycled rubber content, Pliteq Perimeter Isolation Strip is a flat, resilient strip that is used to build a tub around the floor so that no hard surface (floor covering) touches any hard vertical surface protrusion or wall.
- C. Sheet Dimension: GenieMat rolled perimeter isolation strip will have an overall thickness of 1/4" [5 mm] in 3" by 30' [76 mm by 9.1 m] roll size or 3/8" [10 mm] in 3" by 15' [76 mm by 4.6 m] roll size.
- D. Sheet Weight: 0.74 lb/ft<sup>2</sup> [3.6 kg/m<sup>2</sup>] or 1.50 lb/ft<sup>2</sup> [7.2 kg/m<sup>2</sup>].

### **2.3.3 Pliteq GenieMat PMI-06, PMI-12 Type PF Polyethylene Foam Perimeter Isolation Strip**

- A. Product Name: The single-ply white polyethylene foam perimeter isolation strip under this specification shall be Pliteq Polyethylene Foam Perimeter Isolation Strip.
- B. Material: Made from white polyethylene foam, GenieMat Perimeter Isolation Strip is a flat, resilient strip that is used to build a tub around the floor so that no hard surface (floor covering) touches any hard vertical surface (protrusion or wall).
- C. Sheet Dimension: Pliteq rolled perimeter isolation strip will have an overall thickness of 1/4" [6 mm] in 3" by 15' [76 mm by 4.6 m] roll size or 1/2" [12 mm] in 6" by 15' [152 mm by 4.6 m] roll size.
- D. Sheet Weight: 0.035 lb/ft<sup>2</sup> [0.171 kg/m<sup>2</sup>] or 0.07 lb/ft<sup>2</sup> [0.34 kg/m<sup>2</sup>].

### **2.3.4 Pliteq GenieMat FAS High Solid Acrylic-Urethane Adhesive**

- A. Product Name: The high solid acrylic-urethane adhesive under this specification shall be Pliteq GenieMat FAS high solid acrylic-urethane adhesive.
- B. Material: GenieMat FAS is a high solid acrylic-urethane moisture-cured, non-sag, permanently elastic adhesive that has excellent adhesion to elastomers, concrete, and wood and is engineered for indoor and outdoor applications.
- C. Adhesive Type: High solid acrylic-urethane
- D. Adhesive Cure System: Moisture-cured
- E. Weight: 4 gallon pail – 48lbs
- F. Color: Yellowish-beige
- G. VOC Content: 25g/L (calculated)
- H. Freeze/Thaw: Stable to 10°F
- I. Application Temperature: 65°F – 85°F
- J. Relative Humidity Test (ASTM F2170): Maximum 75%

- K. Calcium Chloride Test (ASTM F1869): Maximum 3 lbs/1,000 ft<sup>2</sup> in 24 hrs.
- L. Flashpoint: >200°F
- M. Shelf Life: 12 months
- N. Working Time: 45 – 60 minutes
- O. Trowel: 1/16” square notched trowel (1)
- P. Coverage Rate: 95 ft<sup>2</sup>/gallon (1/16” square notched trowel)
- Q. SCAQMD Rule # 1168: 25g/L (calculated)
- R. CHPS/CA 01350 (ASTM D5116): pass
  - 1. For indoor installation on concrete or plywood subfloors only. See GenieMat Installation Manual for instructions.

### **2.3.5 Pliteq GenieClip ACS Acoustical Sealant**

- A. Product Name: The flexible, non-hardening acoustical sealant shall be Pliteq GenieClip ACS.
- B. Material: GenieClip ACS is a single-component, non-skinning, non-hardening synthetic rubber sealant that was developed for acoustical sealing of drywall partitions, corridors and party walls. It is also used as a lap joint and perimeter sealant for polyethylene vapor barriers over fiberglass batt or other insulations. May be used in contact with polystyrene.
- C. Conforms to Canadian CAN/CGSB 19.21 M87 (QPL #60963-H), which includes:
  - 1. Viscosity, Brookfield: 1,000,000 cps
  - 2. Low Temperature Flexibility, CGSB 11.1: Passes -10°C
  - 3. Cracking/Blistering, CGSB 19.2: Passes
  - 4. Shear Modulus, using G<sub>R</sub> component: 45,000 N/m<sup>2</sup>

## **2.4 Product Substitutions**

- A. Substitutions: No substitutions permitted.

## **2.5 Related Materials**

- A. Related Materials: Refer to other sections listed in Related Sections paragraph herein for related materials.

## **2.6 Source Quality**



- A. Source Quality: Obtain re-bonded recycled rubber impact sound insulation materials from a single manufacturer.

## **Part 3.0 - Execution**

### **3.1 Manufacturers' Instructions**

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions, and product carton instructions for installation.

### **3.2 Examination**

- A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

### **3.3 Preparation**

- A. Surface Preparation: Surfaces shall be prepared in accordance with ANSI standards.

### **3.4 Erection/Installation/Application/Construction**

- A. Re-bonded Recycled Rubber Sound Control Underlayment: Comply with the Pliteq GenieMat Technical Installation Manual for procedures and techniques for re-bonded recycled rubber Sound Control Underlayment installation.
- B. Related Products Installation: Refer to other sections listed in Related Sections paragraph herein for related products installation.
- C. Installation should not begin until all other trades are finished in the area.
- D. Areas to receive the re-bonded recycled rubber Sound Control Underlayment should be weather tight and maintained at a minimum uniform temperature of 65°F (18°C) for 48 hours before, during, and after the installation.

### **3.5 Field Quality Requirements**

- A. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations in accordance with manufacturer's instructions.
- B. Field Tests should be performed by an independent acoustical laboratory accredited by the U.S. Department of Commerce, National Institute of Standards and Technology under the National Voluntary Laboratory Accreditation Program for the specified test procedure.
- C. The cost for all field acoustical testing, corrective work associated with the installation of the re-bonded recycled rubber Sound Control Underlayment and flooring to meet the minimum requirements, shall be borne by the flooring contractor(s).

### **3.6 Cleaning**

- 
- A. Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.

### **3.7 Protection**

- A. Protection: Protect installed product and finish surfaces from damage during construction.

### **3.8 Schedules**

- A. Schedules: [Specify reference to applicable schedules].

**END OF SECTION**