

Product Guide Specification

Pliteq[®] GenieMat[®] FF70, GenieMat FF70LDM

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 13 48 23

FABRICATED SOUND AND VIBRATION CONTROL ASSEMBLIES

*Specifier Notes: This section covers **Pliteq Inc.** "GenieMat FF" installed 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

1.1.1: The work of this section includes:

- 1.1.1.1: Pre-engineered (OSB) (oriented strand board) subfloor panels complete with rubber isolators and mineral wool insulation.
- 1.1.1.2: Perimeter isolation strip used to decouple the floating floor (subfloor panels and [concrete] wearing surface) from sidewalls and penetrations such as [piers,] [columns,] [pipes,] [floor drain,] [electrical appurtenances,] and [_____].
- 1.1.1.3: Coordination of all mechanical and electrical requirements related to work of this section.

1.1.2: Related Sections: Section(s) related to this article include:

Specifier Notes: Edit the following list of related sections as required for the project. List other sections with work directly related to this section.

- 1.1.2.1: Concrete Substrate
- 1.1.2.2: Plywood Substrate
- 1.1.2.3: Tile
- 1.1.2.4: Carpeting
- 1.1.2.5: Noise Control and Vibration Isolation

1.2: Submittals

- 1.2.1: General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- 1.2.2: Product Data: Submit product data, including manufacturer's guide specifications product sheet, for specified products.
- 1.2.3: 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.
- 1.2.4: Samples: Submit selection and verification samples for finishes, colors, and textures.
- 1.2.5: Quality Assurance Submittals: Submit the following:
 - 1.2.5.1: Certificates: If required, certification of performance characteristics specified in this document shall be provided by the manufacturer.
 - 1.2.5.2: Manufacturer's Instructions: Manufacturer's installation instructions.
- 1.2.6: Closeout Submittals: Submit the following:
 - 1.2.6.1: Warranty: Warranty documents specified herein.

1.3: Quality Assurance

- 1.3.1: Qualifications
 - 1.3.1.1: Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
 - 1.3.1.1.1: Certificate: When requested, submit certificate indicating qualification.
 - 1.3.1.2: Manufacturers' Qualifications: Manufacturer capable of approving application method.
- 1.3.2: Regulatory Requirements: [specify applicable requirements of regulatory agencies].
- 1.3.3: 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.
 - 1.3.3.1: Mock-Up Size: As determined by acoustical consultant.
 - 1.3.3.2: Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
 - 1.3.3.3: Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.
- 1.3.4: 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.

1.3.5: Pre-installation Testing: Conduct pre-installation testing as follows: [specify substrate testing; consult with flooring manufacturer].

1.4: Delivery, Storage, and Handling

1.4.1: General: Comply with Division 1 Product Requirements Sections.

1.4.2: Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

1.4.3: Delivery: Deliver materials in manufacturer's original, unopened, and undamaged containers with identification labels intact.

1.4.4: Storage and Protection: Store materials at temperature and humidity conditions recommended by manufacturer and protect from exposure to harmful weather conditions.

1.5: Project Conditions

1.5.1: Temperature Requirements: Maintain air temperature in spaces where products will be installed for time period before, during, and after installation as recommended by manufacturer.

1.5.2: 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.

1.6: Warranty

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

1.6.1.1: 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.

1.6.1.2: **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 Impact Sound Insulation products against defects in material and workmanship and that **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 goods.

1.7: Maintenance

1.7.1: 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.

1.7.1.1: Quantity: Furnish quantity of modular floating floor panel units as requested on purchase order.

1.7.1.2: 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.**

2.1.1: Address: 131 Royal Group Crescent, Vaughan, ON L4H 1X9; Telephone: (416) 449-0049; Fax: (416) 849-0415; Email: info@pliteq.com

2.2: Proprietary Product(s)

2.2.1: **Pliteq GenieMat** Modular Floating Floor Systems manufactured by **Pliteq Inc.**

2.2.1.1: **Pliteq GenieMat FF70, GenieMat FF70LDM** Modular Floating Floor System

2.2.1.2: **Pliteq GenieMat PMIo5R, GenieMat PMI10R** Re-bonded Recycled Rubber Perimeter Isolation Strip

2.2.1.3: **Pliteq GenieMat PMIo6PF, GenieMat PMI12PF** Polyethylene Foam Perimeter Isolation Strip

2.3: **Pliteq GenieMat FF** Modular Floating Floor System

2.3.1: Product Name: The pre-fabricated modular floating floor system furnished under this specification shall be **Pliteq GenieMat FF** Modular Floating Floor System.

2.3.2: Isolators:

- **GenieMat FF70:** 2" [nom. 50 mm] thick, dimpled underside; 2 5/8" x 2 5/8" (nom. 67 mm x 67 mm) wide, diamond shape – Re-bonded recycled rubber made with 94% recycled rubber content.
- **GenieMat FF70LDM:** 2" [nom. 50 mm] thick; 2 5/8" x 2 5/8" (nom. 67 mm x 67 mm) wide, diamond shape – Low Dynamic Modulus Mixed-Cell Polyurethane.

2.3.3: Isolator Mechanical Fasteners: 1 1/2" (38 mm) staples

2.3.4: Insulation Layer: Mineral wool

- 2.3.5: Subfloor Panels: 23 1/4" x 23 1/4" (nom. 590 mm x 590 mm) OSB (oriented strand board); 3/4" thickness; T&G edges.
- 2.3.6: Product Dimension: **GenieMat** modular floating floor systems will have an overall nominal thickness of 2 3/4" [nom. 70 mm] standard in 23 1/4" x 23 1/4" [nom. 590 mm x 590 mm] panel size.
- 2.3.7: Product Weight: Approximately 12.8 lb (5.8 kg) for **GenieMat FF70**, 10.3 lb (4.67 kg) for **GenieMat FF70LDM**.

2.4: **Pliteq GenieMat PMI05R, GenieMat PMI10R** Re-Bonded Recycled Rubber Perimeter Isolation Strip

- 2.4.1: Product Name: The non-laminated, single-ply re-bonded rubber perimeter isolation strip under this specification shall be **Pliteq GenieMat** Re-bonded Recycled Rubber Perimeter Isolation Strip.
- 2.4.2: Material: Made from 94% recycled rubber content, **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.
- 2.4.3: Sheet Dimension: **GenieMat** rolled perimeter isolation strip will have an overall nominal thickness of _____ (specify: 1/4" [nom. 5 mm] in 3" by 30' [nom. 76 mm by 9.1 m] roll size for **GenieMat PMI05R**, or 3/8" [nom. 10 mm] in 3" by 15' [nom. 76 mm by 4.6 m] roll size for **GenieMat PMI10R**).
- 2.4.4: Sheet Weight: **GenieMat** rolled perimeter isolation strip will have an overall weight of _____ (specify: 1.0 lb/ft² [4.88 kg/m²] for **GenieMat PMI05R**, or 2.0 lb/ft² [9.6 kg/m²] for **GenieMat PMI10R**).

2.5: **Pliteq GenieMat PMI06PF, GenieMat PMI12PF** Polyethylene Foam Perimeter Isolation Strip

- 1.1.1: Product Name: The single-ply white polyethylene foam perimeter isolation strip under this specification shall be **Pliteq GenieMat** Polyethylene Foam Perimeter Isolation Strip.
- 1.1.2: Material: Made from white polyethylene foam, **GenieMat** Polyethylene Foam 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).
- 1.1.3: Sheet Dimension: **GenieMat** rolled polyethylene foam perimeter isolation strip will have an overall nominal thickness of _____ (specify: 1/4" [nom. 6 mm] in 3" by 15' [nom. 76 mm by 4.6 m] roll size for **GenieMat PMI06PF**, or 1/2" [nom. 12 mm] in 6" by 15' [nom. 152 mm by 4.6 m] roll size for **GenieMat PMI12PF**).
- 1.1.4: Sheet Weight: **GenieMat** rolled polyethylene foam perimeter isolation strip will have an overall weight of _____ (specify: 0.035 lb/ft² [0.171 kg/m²] for **GenieMat PMI06PF**, or 0.07 lb/ft² [0.34 kg/m²] for **GenieMat PMI12PF**).

Specifier Notes: The following materials are not furnished by Pliteq Inc.

2.6: Floating Floor Drains

2.6.1: Shall be of type and size suitable for project and floating slab construction, isolated so as to have no rigid connection between the floating floor and building structure

2.7: Polyethylene Sheeting

2.7.1: Minimum 6 mil thickness

2.8: Product Substitutions

2.8.1: Substitutions: No substitutions permitted

2.9: Related Materials

2.9.1: Related Materials: Refer to other sections listed in Related Sections paragraph herein for related materials

2.10: Source Quality

2.10.1: Source Quality: Obtain modular floating floor system materials from a single manufacturer

2.11: Design Criteria

2.11.1: Provide acoustical isolation to prevent transmission of sound and vibration generated by [mechanical and electrical equipment] [or] [_____] to adjacent building areas. This requirement includes isolation of all items passing through the floating floor.

2.11.2: Pliteq GenieMat FF70: Acoustically isolated floor to provide predictable system natural frequency for common concrete wearing surface of _____ (specify: 12.7 Hz for 4" [nom. 100 mm], or 11.4 Hz for 6" [nom. 150 mm], or 10.3 Hz for 8" [nom. 200 mm]) thick floating slab.

2.11.2.1: 50 Shore A Durometer.

2.11.2.2: Maximum strain at failure of 40%.

2.11.2.3: Maximum deflection of 0.35" (nom. 8.8 mm) under maximum recommended load of 149 lb (65 kg).

2.11.3: Pliteq GenieMat FF70LDM: Acoustically isolated floor to provide predictable system natural frequency for common concrete wearing surface of _____ (specify: 5.9 Hz for 4" [nom. 100 mm], or 6.35 Hz for 6" [nom. 150 mm], or 7.4 Hz for 8" [nom. 200 mm]) thick floating slab.

2.11.3.1: Maximum strain at failure of 400%.

2.11.3.2: 13 Shore A Durometer.

- 2.11.3.3: Maximum deflection of 0.55" (nom. 14 mm) under maximum recommended load of 149 lb (65 kg).
- 2.11.4: Normal design load calculations for rubber isolators and layout to be based on the weight of the floating floor slab, plus the weight of equipment, machines, fixtures, and constructions supported by the floating floor, plus 20% of the specified live load.
- 2.11.5: Maximum design load calculations for rubber isolators and layout to be based on the weight of the floating slab, plus the weight of the walls and fixtures supported by the floating floor, plus 100% of the specified live load.
- 2.11.6: Durability of rubber isolators to be 50-year minimum without significant degradation of performance.

Part 3.0 – Execution

3.1: Manufacturers' Instructions

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

3.2: Examination

- 3.2.1: 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

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

3.4: Erection/Installation/Application/Construction

3.4.1: General

- 3.4.1.1: Coordinate work with related work to avoid rigid contact with the building.

3.4.2: Perimeter Isolation Strip

- 3.4.2.1: Install perimeter isolation strip at sidewalls and around penetrations such as [piers,] [columns,] [pipes,] [drains,] [electrical items,] [and] [_____].
- 3.4.2.2: Ensure height of perimeter isolation strip exceeds height from concrete structural substrate to top of concrete wearing surface by at least 2" (nom. 50 mm).
- 3.4.2.3: Adhere perimeter isolation strip using a single bead of **GenieMat FAS** high solid acrylic-urethane adhesive located at approximately the middle of the strip. Press strip firmly to wall and tape vertical joints, including corner joints, and horizontally around

modular floating floor panel/perimeter isolation strip interface. Use construction sheathing tape or duct tape for isolation strip joints at these locations and at penetrations.

3.4.3: Modular Floating Floor Panels

- 3.4.3.1: Following acoustic subfloor manufacturer's written instructions, install pre-engineered and pre-fabricated subfloor panels according to layout drawing[s]. If necessary, layout drawings may include specific locations in the system where certain tagged or labeled panels must be placed. These panels will be pre-fitted or allocated to be site-fitted with extra 'pick-up' isolators for pre-determined placement of heavy equipment or other point loads.
- 3.4.3.2: Using a rubber mallet and/or spare piece of wood, tap panels into alignment, taking care not to damage panel edges. Make sure panels stay square and tight to adjacent panels.
- 3.4.3.3: Once panel is aligned, place 4 staples at each panel joint to help prevent panel misalignment using an air stapler to ensure staples are well seated and flush to surface of panels.
- 3.4.3.4: As the work progresses, ensure all factory installed point load rubber isolators are in place. If additional site installed 'pick-up' isolators are required, staple isolators to panel bottom. Cut away insulation to expose underside of panel prior to fastening isolator.
- 3.4.3.5: After panels are in place, install 1/8" (3 mm) thick acoustical sealant at any location where subfloor panels are not in direct contact with perimeter isolation strip. Finish by sealing seams with construction sheathing tape.
- 3.4.3.6: Cover OSB subfloor panels with minimum 6 mm polyethylene sheeting. Lap sheet edges minimum 3" (nom. 75 mm) and tape watertight while ensuring application is free of wrinkles and fishmouths.
- 3.4.3.7: Place concrete wearing surface and reinforcement, including curing and finishing agents as specified in Division 3 of the specifications. Do not allow concrete [and] [rebar] to touch structure or base building.
- 3.4.3.8: When placing concrete, ensure concrete does not build up in one spot and overload subfloor panels. Spread each load over a dozen or so panels. Do not roll concrete carts directly over acoustic subfloor panels. Use temporary wood planking for heavy wheeled or concentrated loads.
- 3.4.3.9: After concrete has cured, use utility knife to cut excess perimeter isolation strip at wall edges and penetrations.
- 3.4.3.10: If required by local codes, caulk top of perimeter isolation strip.
- 3.4.3.11: Sound isolate drains.

3.5: Field Quality Requirements

3.5.1: Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations in accordance with manufacturer's instructions.

3.5.2: 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.

3.5.3: The cost for all field acoustical testing, corrective work associated with the installation of the re-bonded recycled rubber Floating Floor Underlayment and flooring to meet the minimum requirements, shall be borne by the flooring contractor(s).

3.6: Cleaning

3.6.1: 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

3.7.1: Protection: Protect installed product and finish surfaces from damage during construction

3.8: Schedules

3.8.1: Schedules: [Specify reference to applicable schedules].

END OF SECTION