

**SECTION 09652
RESILIENT SHEET FLOORING**

PART 1. GENERAL

1.01 SUMMARY

A. Section includes:

DELETE FROM LIST BELOW THOSE PRODUCTS NOT REQUIRED.

1. Inlaid Sheet Vinyl Flooring.
2. Homogeneous Sheet Vinyl Flooring.
3. Rotogravure Printed Sheet Vinyl Flooring

B. Related sections:

RETAIN APPLICABLE SECTIONS FOR THE SUBSTRATES IN THE PROJECT.

1. Section 03300 - Cast-In-Place Concrete, for concrete substrates.
2. Section 06100 - Rough Carpentry, for plywood substrates.

1.02 REFERENCES

A. Federal and Canadian Specifications:

1. Federal Specification LF-475A(3).
2. Federal Specification SS-T-312B (for performance criteria).
3. H.U.D/F.H.A. Minimum Property Standards, Single-Family, Multi-Family, and Care-Type Housing Units.
4. Government Building Material Regulations, CSA: A126.3 M1984.

IF ONLY HOMOGENEOUS SHEET VINYL FLOORING IS RETAINED UNDER ARTICLE 1.01, DELETE SUBPARAGRAPHS 3. AND 4. ABOVE.

B. American Society for Testing and Materials (ASTM):

1. ASTM E648 (National Fire Protection Association [NFPA] 253), Flooring Radiant Panel Test.
2. ASTM E84 (NFPA 255), Tunnel Test.
3. ASTM E662 (NFPA 258), NBS Smoke Density.

IF ONLY HOMOGENEOUS SHEET VINYL FLOORING IS RETAINED UNDER

ARTICLE 1.01, DELETE

SUBPARAGRAPH 3. ABOVE AND PARAGRAPH C. BELOW.

C. Other:

1. Steiner Tunnel Test, CAN/ULC-S102.2 M88.

1.03 SUBMITTALS

A. Product Data: Submit manufacturer's current product data and Technical Manual for each type of product specified.

B. Samples:

1. Submit manufacturer's standard samples in kits, showing full range of colors for each product specified.

IF COLORS ARE SPECIFIED IN PART 2., DELETE ABOVE AND RETAIN SUBPARAGRAPH 2. AND/OR 3. BELOW. IF COLORS ARE NOT SPECIFIED IN PART 2., RETAIN ABOVE AND DELETE SUBPARAGRAPHS 2. AND 3. BELOW.

2. For verification, submit two 3 inch by 6 inch samples of each Inlaid Sheet Vinyl Flooring color specified.

IF ONLY HOMOGENEOUS SHEET VINYL FLOORING IS RETAINED UNDER ARTICLE 1.01, DELETE SUBPARAGRAPH ABOVE.

3. For verification, submit two 3 inch by 6 inch samples of each Homogeneous Sheet Vinyl Flooring product and color specified.
4. Submit manufacturer's standard brochure showing full range of welding rod colors available.

IF ONLY INLAID SHEET VINYL FLOORING IS RETAINED UNDER ARTICLE 1.01, DELETE SUBPARAGRAPH 3. ABOVE.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Employ an installer with a minimum of three years experience specializing in work similar in type and scope to that required for this project. Ensure that installer is acceptable to the primary products manufacturer.

B. Materials:

1. Provide primary products that meet or exceed the requirements of the following fire tests:
 - a. ASTM E648 (NFPA 253), with test results of 0.45 watts per square centimeter or greater (Class I)
 - b. ASTM E84 (NFPA 255, having a flame spread rating of 75 or less (Class B)

IF ONLY HOMOGENEOUS SHEET VINYL FLOORING IS RETAINED UNDER ARTICLE 1.01, DELETE SUBPARAGRAPH BELOW.

2. Provide Inlaid Sheet Vinyl products that also meet or exceed the requirements of the following fire tests:
 - a. STM E662 (NFPA 258), having a smoke density of 450 or less
 - b. Steiner Tunnel Test, passes

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in manufacturer's originally wrapped, unopened, labeled rolls.
- B. Store materials indoors as follows:
 1. Store rolls upright, secured to prevent falling.
 2. Store at temperatures between 50 deg. F and 90 deg. F.
 3. Store opened materials rolled on a core, face out. Do not back roll.

1.06 PROJECT CONDITIONS

- A. Substrates shall comply in all respects with the requirements in the manufacturer's Technical Manual for the specified products.
 1. Substrates shall be dry and approximately the same temperature as the ambient room temperature.
- B. Do not install resilient sheet flooring over existing resilient flooring. Remove any existing flooring and adhesive in strict accordance with the provisions and cautions in the manufacturer's Technical Manual.
- C. Condition resilient sheet flooring and installation materials at temperatures of between 65 deg. F and 85 deg. F for 24 hours before installation.
 1. Maintain relative humidity of between 65 percent and 80 percent in the space by providing adequate ventilation, heating, or cooling.
- D. Maintain temperatures of between 65 deg. F and 85 deg. F in areas of installation at least 48 hours after resilient sheet flooring has been installed.

1.07 WARRANTY

- A. Furnish installer's written warranty that the resilient sheet flooring installation shall be free from defects in materials and workmanship for a period of one year from substantial completion.
 1. Warranty excludes damage resulting from misuse.

2. Owner shall notify the Contractor in writing of any defects.
 3. Owner shall be responsible for using proper floor protection devices for all furniture and equipment as recommended by the Resilient Floor Covering Institute.
 4. Owner shall be responsible for removal and replacement of all furniture, fixtures, and equipment attached to the surface upon which the corrective work is to be executed.
- B. In addition to installer's warranty, provide manufacturer's written Limited 5-Year Warranty against manufacturing defects in primary materials.

1.08 MAINTENANCE STOCK

- A. Furnish additional resilient sheet flooring materials as follows:
1. For each type, color, or pattern specified for the project, furnish 2 percent extra material, in full width rolls.
 2. Package and clearly label each quantity of extra material.
 3. Deliver extra material to Owner's designated on-site storage area.

PART 2 PRODUCTS

PART 2.01 MANUFACTURER

- A. Provide products offered by Mannington Commercial, Division of Mannington Mills, Inc.

PART 2.02 RESILIENT SHEET FLOORING PRODUCTS

- A. Inlaid Sheet Vinyl Flooring:

1. Provide products that meet or exceed the requirements of the following:
 - a. Federal Specification LF-475A(3), Type II, Grade A
 - b. Government Building Material Regulations, CSA: A126.3-M1984, Type 2, Grade 1
 - c. H.U.D./F.H.A. Minimum Property Standards, Single-Family, Multi-Family, and Care-Type Housing Units
2. Provide products indicated in the Resilient Sheet Flooring Schedule at the end of this section.

- B. Homogeneous Sheet Vinyl Flooring:

1. Provide products that meet or exceed the following:
 - a. Federal Specification LF-475A(3), Type II, Grade A

- b. Federal Specification SS-T-312B (for performance criteria)
2. Provide products indicated in the Resilient Sheet Flooring Schedule at the end of this section.

2.03 ACCESSORY PRODUCTS

- A. Provide adhesives, underlayment compounds, seam sealer and/or welding rods, and maintenance products marketed by Mannington Mills, Inc.
- B. Select accessory products in accordance with the manufacturer's recommendations and instructions outlined in its Technical Manual.

PART 3. EXECUTION

3.01 EXAMINATION

- A. Examine spaces to receive resilient sheet flooring, and determine that conditions are suitable for installation. Do not proceed with work until unsatisfactory conditions have been corrected.
 - 1. Ensure that substrates comply with flooring product manufacturer's recommendations for:
 - a. strength
 - b. dryness
 - c. surface flatness
 - d. stiffness

DELETE SUBPARAGRAPHS e. AND f. BELOW IF THERE ARE NO CONCRETE SUBSTRATES IN THE PROJECT.

- e. absence of curing compounds and sealers on concrete
- f. absence of surface alkalis on concrete

DELETE SUBPARAGRAPH g. BELOW IF THERE ARE NO PLYWOOD SUBSTRATES IN THE PROJECT.

- g. acceptable types of wood substrates
- h. absence of paint, grease, wax, oil, etc.
- i. removal of existing incompatible flooring and adhesives
- j. other conditions outlined in the manufacturer's Technical Manual

DELETE SUBPARAGRAPHS 1. AND 2. BELOW IF THERE ARE NO CONCRETE SUBSTRATES IN THE PROJECT.

- 2. Test new or existing concrete substrates to ensure that moisture does not exceed 3 pounds per 1,000 square feet per 24-hour period. Perform one bond test on each 2,000 square feet of concrete substrate to receive resilient sheet flooring.

3.02 PREPARATION

- A. Remove curing compounds, sealers, existing flooring adhesive, and other substances

incompatible with installation products, by methods recommended by manufacturer of substance.

- B. Fill all nonexpansion joints, cracks, depressions, grooves, and pot holes with Mannington Latex Underlayment compounds, to produce a flat, level substrate.
- C. Ensure that expansion joint covers, stair nosings, cleanout covers, and other similar items that resilient sheet flooring will abut are securely in place and properly cleaned and prepared for flooring installation.

DELETE PARAGRAPH BELOW IF THERE ARE NO PLYWOOD SUBSTRATES IN THE PROJECT.

- D. Prime wood substrates in accordance with manufacturer's instructions.
- E. Maintain substrate and space at temperatures of between 65 deg. F and 85 deg. F at least 24 hours before and 48 hours after installation of flooring, as well as during installation.
- F. Vacuum substrate immediately before sheet flooring installation.

3.03 INSTALLATION

- A. Install resilient sheet flooring in accordance with the manufacturer's Technical Manual.
- B. Lay out resilient flooring sheets to minimize seams.
 - 1. Position seams no closer than 6 inches to underlayment joints in plywood subfloors.

DELETE SUBPARAGRAPH ABOVE IF NO PLYWOOD SUBSTRATES ON PROJECT.

- 2. Reverse each adjoining sheet of Inlaid Sheet Vinyl Flooring 180 deg. for proper shade control.

DELETE SUBPARAGRAPH ABOVE IF ONLY HOMOGENEOUS SHEET VINYL FLOORING IS SPECIFIED FOR THE PROJECT.

- 3. Install sheets in sequence number order for best color match.

- C. Install resilient sheet flooring in pattern(s) as indicated on drawings.

DELETE PARAGRAPH ABOVE IF NO PATTERNS IN PROJECT OR IF NONE ARE INDICATED ON DRAWINGS.

- D. Provide full coverage of floor area with resilient sheet flooring.
 - 1. Extend flooring into recesses, door openings, toe spaces, closets, and similar areas.
 - 2. Cut flooring to fit net to walls, columns, casework, fixtures, door frames, thresholds, and other similar items that it abuts.

RETAIN SUBPARAGRAPH 2. ABOVE FOR INSTALLATIONS WITHOUT INTEGRAL

FLASH COVE BASE. RETAIN SUBPARAGRAPH 3. BELOW FOR INSTALLATION WITH INTEGRAL FLASH COVE BASE. DELETE EITHER SUBPARAGRAPH IF NOT REQUIRED.

3. Cut flooring to provide integral flash cove base of height indicated at walls, columns, casework, fixtures, and other vertical surfaces it abuts.
4. Refer to manufacturer's Installation Guide for specialized procedures for integral flash cove base.
5. Apply flooring adhesive in compliance with manufacturer's instructions, taking precautions to ensure adhesive is kept out of seams.
6. Roll flooring carefully into adhesive.

E. Do not entrap air beneath sheet.

F. Do not wrinkle or kink backing material.

DELETE SUBPARAGRAPH 2. ABOVE IF ONLY HOMOGENEOUS SHEET VINYL FLOORING IS USED IN PROJECT.

G. Remove excess adhesive from face of flooring while adhesive is still wet.

H. Roll flooring with 100-pound three-section roller as recommended by manufacturer and within the adhesive open time. Do not use roller within 3 inches of seams.

I. Form integral cove base where indicated by flashing resilient sheet flooring over cove fillet strip and up vertical surfaces.

1. Refer to manufacturer's Installation Guide for specialized procedures for integral flash cove base.

DELETE PARAGRAPH I. AND ASSOCIATED SUBPARAGRAPH ABOVE IF NO INTEGRAL COVE BASE IN PROJECT.

J. Seaming Inlaid Vinyl Flooring Sheets:

1. Overlap edges of sheets at least 3/4-inch. Double-cut seam through both layers of flooring simultaneously. Do not underscribe.
2. Use double-face tape seaming method as recommended in the manufacturer's Installation Guide.
3. Hand-roll seams.
4. Seal seams as soon as possible after installation of flooring.
 - a. Chemically seal seams with Mannington Seam Sealer in accordance with the manufacturer's instructions.

RETAIN PARAGRAPH G. AND ASSOCIATED SUBPARAGRAPHS ABOVE FOR INLAID SHEET VINYL FLOORING, AND PARAGRAPH H. AND ASSOCIATED SUBPARAGRAPHS BELOW FOR HOMOGENEOUS SHEET VINYL FLOORING. DELETE EITHER PARAGRAPH IF NOT APPLICABLE TO PRODUCTS SPECIFIED.

K. Seaming Homogeneous Vinyl Flooring Sheets:

1. Net butt each sheet's factory pre-cut edges to adjoining sheets.
 - a. If factory pre-cut edges are not acceptable for seaming, re-cut edges in accordance with procedures outlined in manufacturer's Installation Guide.
2. Hand-roll seams.
3. Seal seams as soon as possible after installation of flooring, but not until adhesive is fully set.
 - a. Heat weld seams of Homogeneous Sheet Vinyl Flooring with welding rods in accordance with the manufacturer's instructions.
 - b. Chemically seal seams with Mannington Seam Sealer in accordance with the manufacturer's instructions.

DELETE EITHER SUBPARAGRAPH a. OR b. ABOVE IF NOT APPLICABLE TO SEAMING METHOD SPECIFIED

PART 3.04 CLEANING AND PROTECTION

A. Do not disturb chemically welded seams for at least three hours after sealing.

DELETE PARAGRAPH ABOVE IF NO CHEMICALLY WELDED SEAMS IN PROJECT.

- B. Prevent furniture movement or other heavy traffic on flooring for at least 48 hours after installation.
- C. Begin initial cleaning of Inlaid Sheet Vinyl Flooring only after adhesive has been allowed to dry fully, at least 48 hours.
 1. Wash floor with neutral floor cleaner, following manufacturer's instructions.
 2. Apply three to five coats of a high-quality metal cross-linked acrylic floor finish, in accordance with manufacturer's instructions.

RETAIN PARAGRAPH C. AND ASSOCIATED SUBPARAGRAPHS ABOVE FOR INLAID SHEET VINYL FLOORING, AND PARAGRAPH BELOW FOR HOMOGENEOUS SHEET VINYL FLOORING. DELETE EITHER PARAGRAPH IF NOT APPLICABLE TO PRODUCTS SPECIFIED.

D. Provide initial maintenance of Homogeneous Sheet Vinyl Flooring as recommended for flooring type and location in manufacturer's Installation Guide.

- E. Protect resilient sheet flooring from soil and damage resulting from construction operations.
Remove protection at substantial completion.

SCHEDULE FOLLOWS

3.05 RESILIENT SHEET FLOORING SCHEDULE

SELECT TYPES (INLAID AND/OR HOMOGENEOUS) AND PRODUCTS REQUIRED FOR PROJECT; DELETE THOSE NOT REQUIRED. COORDINATE WITH ARTICLE 1.01. IF MORE THAN ONE PRODUCT IS RETAINED, INSERT DESIGNATION (E.G., "SF #1") WHERE INDICATED. IF ONLY ONE PRODUCT IS REQUIRED, DELETE "DESIGNATION."

UNDER EACH PRODUCT RETAINED, (1) INSERT COLOR(S) TO BE PROVIDED; DELETE NEXT PARAGRAPH, OR (2) DELETE THE SUBPARAGRAPH WHERE COLOR(S) WOULD BE INSERTED; RETAIN NEXT SUBPARAGRAPH. IF MORE THAN ONE COLOR IS SPECIFIED, IDENTIFY LOCATIONS OF EACH, IN SCHEDULES OR ON DRAWINGS.

A. Inlaid Sheet Vinyl Flooring

1. (insert designation) Provide Fields (Random Fields, Fine Fields, and /or Inspired Fields).
Inlaid Commercial Vinyl Flooring having the following characteristics:
 - a. Construction: Inlaid composition with through-chip construction on felt backing.
 - b. Static Load Limit: 125 p.s.i.
 - c. Nominal Thickness: 0.082 inch
 - d. Wear Layer Thickness: 0.068 inch
 - e. Roll Width: 6 feet
 - f. Pattern: Random
 - g. Color: (insert)
 - h. Color: As selected by Architect from Mannington Commercial's 45 colors

B. Sheet Vinyl Flooring

1. (Insert Designation) Provide CustomSpec II Sheet Vinyl flooring with the following characteristics:
 - a. Construction: Rotogravure printed sheet vinyl with PVC wearlayer and Aqualoc® moisture protection.
 - b. Static load limit: 100 p.s.i.
 - c. Nominal thickness: 0.085 inches
 - d. Wearlayer thickness: 0.025 inches
 - e. Roll width: 12 feet
 - f. Pattern: (insert) As selected by architect from Mannington Commercial's 5 Patterns.
 - g. Color: (insert) As selected by Architect from Mannington Commercial's 26 colors

C. Homogeneous Sheet Vinyl Flooring

1. Provide BioSpec Homogeneous Sheet Vinyl Flooring with the following characteristics:

- a. Construction: Non-layered, homogeneous polyvinyl chloride (PVC), with color distributed throughout thickness
- b. Static Load Limit: 125 p.s.i.
- c. Nominal Thickness: 0.080 inch
- d. Roll Width: 6 feet
- e. Pattern: Random
- f. Color: (insert) As selected by Architect from Mannington Commercial's 30 colors