

**SECTION 09652
SHEET FLOOR COVERINGS**

PART I - GENERAL

1.01 DESCRIPTION

- A. Scope: Work of this Section includes all materials and installation necessary to provide Sheet floor coverings as shown and detailed on the Drawings and specified herein.
- B. Related Sections include the following:
 - 1. Division 9, Section 09653 – RESILIENT FLOORING ACCESSORIES
 - 2. Division 7, Section 07264 – WATER VAPOR EMISSION CONTROL BARRIER

1.02 SUBMITTALS

- A. Product Data: For each type of product specified.
- B. Shop Drawings: Show location of seams and edges. Indicate location of columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutout locations.
- C. Samples for Verification: In manufacturer's standard size, but not less than 6" x 9" sections of each different color and pattern of sheet floor covering specified, showing the full range of variations expected in these characteristics.
 - 1. For heat-welding bead, manufacturer's standard-size samples, but not less than 9" (230 mm) long, of each color specified.
- D. Product Certificates: Signed by manufacturers of sheet floor coverings certifying that each product furnished complies with requirements.
- E. Installer Certificates: Signed by manufacturer certifying that installers comply with specified requirements.
- F. Maintenance Data: For sheet floor coverings to include in the maintenance manuals specified in Division 1.

1.03 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an installer who is certified by floor covering manufacturer in the technique required by manufacturer for heat-welding seams.
 - 1. Engage installers who are certified by floor covering manufacturer for heat-welded seam installation.
- B. Source Limitations: Obtain each type, color, and pattern of sheet floor covering specified from one source and one (1) dye lot per room with resources to provide products of consistent quality in appearance and physical properties without delaying the Work.

- C. Fire-Test-Response Characteristics: Provide products with the following fire-test-response characteristics as determined by testing identical products per test method indicated below by a testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Critical Radiant Flux: 0.45 W/sq. cm or greater when tested per ASTM E 648.
 - 2. Smoke Density: Maximum specific optical density of 450 or less when tested per ASTM E 662.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sheet vinyl floor coverings and installation accessories to Project site in manufacturer's original protective wrap, (omit text) each bearing names of product and manufacturer, Project identification, and shipping and handling instructions.
- B. Store products in dry spaces protected from the weather, with ambient temperatures maintained between 50° and 90°F.
- C. Store rolls upright or as instructed by the manufacturer.
- D. Move floor coverings and installation accessories into spaces where they will be installed at least 48 hours before installation, unless longer conditioning periods are recommended in writing by manufacturer.

1.05 PROJECT CONDITIONS

- A. Maintain a temperature of not less than 70°F or more than 95°F in spaces to receive sheet floor coverings for at least 48 hours before installation, during installation, and for at least 48 hours after installation, unless manufacturer's written recommendations specify longer time periods. After postinstallation period, maintain a temperature of not less than 55°F or more than 95°F.
- B. Do not install sheet floor coverings until they are at the same temperature as the space where they are to be installed.
- C. Close spaces to traffic during sheet floor covering installation and for time period after installation recommended in writing by manufacturer.
- D. Install sheet floor coverings and accessories after other finishing operations, including painting, have been completed.
- E. Where demountable partitions and other items are indicated for installation on top of sheet floor coverings, install floor coverings before these items are installed.
- F. Examine existing substrates, do not install flooring until concrete slabs have cured and are sufficiently dry to bond with adhesives. See 3.01 Examination and comply with all the requirements.
- G. Do not proceed with installation until unsatisfactory conditions have been corrected including but not limited to excessive moisture mitigation – refer to section 07264 Water Vapor Emission Control Barrier.

1.06 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with labels describing contents.
 - 1. Furnish not less than 10 linear feet in roll form for each 500 linear feet or fraction thereof, of each different composition, wearing surface, color, and pattern of sheet vinyl floor covering installed.
 - 2. Deliver extra materials to University.

PART II - PRODUCTS

2.01 MANUFACTURERS

- A. Products: Nora System Rubber Flooring, Armstrong Sheet Vinyl, Mannington Sheet Vinyl or approved equal.

2.02 SHEET VINYL FLOOR COVERINGS

- A. Rubber Flooring; Products complying with ASTM F1859, Type I, Class 1
- B. Sheet Vinyl Floor Coverings: Products complying with ASTM F 1303, Type II, Class 1, Grade A or equal.

2.03 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, Portland-cement-based formulation provided or approved by floor covering manufacturer for applications indicated.
- B. Adhesives: Non-flammable water-resistant type recommended by manufacturer to suit sheet vinyl floor covering and substrate conditions indicated.
 - 1. Quick Set Adhesives are acceptable if approved by flooring manufacturer
- C. Heat-Welding Bead: Solid-strand product of floor covering manufacturer for heat-welding seams.
 - 1. Color: Match color of sheet floor material.
- D. Cove Strip: 1" radius support for integral flash cove base provided or approved by floor covering manufacturer.
- E. Cove-Base Cap Strip: Square metal, vinyl, or rubber cap for integral flash cove base provided or approved by floor covering manufacturer.
- F. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edge of sheet vinyl floor coverings, and in maximum available lengths to minimize running joints.

PART III - EXECUTION

3.01 EXAMINATION

- A. Examine existing substrates, areas, and conditions where installation of resilient products will occur, with Installer present, for compliance with manufacturer's requirements. Verify the substrates and conditions are free of defects and fully comply with manufacturer's specified requirements for resilient product installation. Determine adhesion, moisture and PH levels by conducting the following tests conducted by Independent Testing Agencies certified by ICRI (International Concrete Repair Institute). Provide test results to the University's Representative prior to the flooring installation. (Consultant to omit if all new concrete substrates – or reduce text if PH and Insitu probe test is not required by University's Representative)
1. Refer to Section 07264 – Water Vapor Control Barrier, Submittals – 1.04, D Testing and comply with all requirements.
 2. ASTM D 7234 - Standard Adhesion Strength test
 3. ASTM F 2170 – Standard test to measure relative humidity using Insitu Probes manufactured by Wagner Electronics.
 4. ASTM F 710 – Standard test to measure Alkalinity levels conducted with an electronic PH Meter manufactured by Wagner Electronics.
- B. New Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:
- C. Do not install sheet floor coverings over “new” concrete slabs until they have fully cured, free of defects and are sufficiently dry to bond with the adhesives. Verify the substrates and conditions fully comply with manufacturer's specified requirements for resilient product installation. Determine adhesion, moisture and PH levels by conducting the following tests conducted by Independent Testing Agencies certified by ICRI (International Concrete Repair Institute). Provide the test results to the University's Representative prior to any floor installation. (Consultant to omit if all new existing substrates).
1. Refer to Section 07264 – Water Vapor Control Barrier, Submittals – 1.04, D Testing and comply with all requirements.
 2. ASTM D 7234 - Standard Adhesion Strength test
 3. ASTM F 2170 – Standard test method for relative humidity using Insitu Probes manufactured by Wagner Electronics.
 4. ASTM F 710 – Standard test to measure Alkalinity levels conducted with an electronic PH Meter manufactured by Wagner Electronics.
 5. Subfloor finishes comply with requirements specified in Division 3 Section "Cast-in-Place Concrete" for slabs receiving resilient flooring.
 6. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.

- D. For wood subfloors, verify the following:
 - 1. Underlayment over subfloor complies with requirements specified in Division 6 Section "Rough Carpentry."
 - 2. Underlayment surface is free of irregularities and substances that may interfere with adhesive bond, show through surface, or stain sheet vinyl floor coverings.
- E. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. General: Comply with sheet vinyl floor covering manufacturer's written installation instructions for preparing substrates indicated to receive sheet vinyl floor coverings.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.
- C. Remove coatings, including curing compounds, and other substances that are incompatible with flooring adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
- D. Broom and vacuum clean substrates to be covered immediately before installing sheet vinyl floor coverings. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.03 INSTALLATION

- A. General: Comply with sheet vinyl floor covering manufacturer's written installation instructions.
- B. Unroll sheet vinyl floor coverings and allow them to stabilize before cutting and fitting, if recommended in writing by manufacturer.
- C. Lay out sheet vinyl floor coverings to comply with the following requirements:
 - 1. Maintain uniformity of sheet vinyl floor covering direction.
 - 2. Arrange for a minimum number of seams and place them in inconspicuous and low-traffic areas, and not less than 6" away from parallel joints in flooring substrates.
 - 3. Match edges of sheet vinyl floor coverings for color shading and pattern at seams according to manufacturer's written recommendations.
 - 4. Avoid cross seams.
 - 5. No cross seams at doorways.
- D. Scribe, cut, and fit sheet vinyl floor coverings to butt neatly and tightly to vertical surfaces and permanent fixtures, including built-in furniture, cabinets, pipes, outlets, edgings, doorframes, thresholds, and nosings.

- E. Integral Flash Cove Base: Where indicated, cut sheet vinyl floor coverings to form integral base of height indicated at vertical surfaces.
- F. Extend sheet floor coverings into toe spaces, door reveals, closets, and similar openings.
- G. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use chalk or other nonpermanent, nonstaining marking device.
- H. Install sheet floor coverings on covers for telephone and electrical ducts, and similar items in finished floor areas. Maintain overall continuity of color and pattern with pieces of flooring installed on covers. Tightly adhere edges to perimeter of floor around covers and to covers.
- I. Adhere sheet floor coverings to flooring substrates to comply with floor covering manufacturer's written instructions, including those for trowel notching, adhesive mixing, and adhesive open and working times.
 - 1. Produce completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.
 - 2. Form integral flash cove base by flashing floor covering up vertical surfaces. Support floor covering at horizontal and vertical junction with cove strip. Butt floor covering at top of base against cap strip.
- J. Heat-Welded Seams: Rout joints and heat weld with welding bead, permanently fusing sections into a seamless floor covering. Prepare, weld, and finish seams according to manufacturer's written instructions and ASTM F 1516 to produce surfaces flush with adjoining floor covering surfaces.
- K. Hand roll sheet floor coverings in both directions from center out to embed floor coverings in adhesive and eliminate trapped air. At walls, door casings, and other locations where access by roller is impractical, press floor coverings firmly in place with flat-bladed instrument.

3.04 CLEANING AND PROTECTING

- A. Perform the following operations immediately after installing Sheet Vinyl floor coverings:
 - 1. Remove adhesive and other surface blemishes using non-flammable cleaner recommended by floor covering manufacturer.
 - 2. Sweep or vacuum floor thoroughly.
 - 3. Do not wash floor covering until after time period recommended by floor covering manufacturer.
 - 4. Damp-mop floor to remove marks and soil.
- B. Perform the following operations immediately after installing sheet Rubber floor coverings: Initial Cleaning – minimum 72 hours after installation.
 - 1. Remove adhesive and other surface blemishes using non-flammable cleaner recommended by floor covering manufacturer.

2. Sweep or vacuum floor thoroughly.
 3. Wet mop the floor using a diluted initial maintenance product and allow the solution minimum dwell time of 10 minutes.
 4. Scrub the floor thoroughly with a floor scrubber using a 3M #5100 (red) cleaning pad for all Noraplan surfaces and a 3M #5300 (blue) cleaning pad and a high PH cleaner/degreaser for all rubber surfaces.
 5. Wet vacuum the soiled solution, rinse the floor with clean water and allow to dry.
- C. Protect flooring against mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by floor covering manufacturer.
1. Cover sheet vinyl floor coverings with undyed, untreated building paper until inspection for Substantial Completion.
 2. Do not move heavy and sharp objects directly over sheet floor coverings. Place plywood or hardboard panels over floor coverings and under objects while they are being moved. Slide or roll objects over panels without moving panels.
- D. Clean sheet floor coverings not more than 4 days before dates scheduled for inspections intended to establish date of Substantial Completion in each area of Project. Clean floor coverings according to manufacturer's written recommendations.

3.05 SHEET VINYL FLOOR COVERING SCHEDULE (Consultant to modify)

- A. Products: Noraplan Degree Rubber Sheet flooring, Armstrong Medintech Homogeneous Sheet Flooring, or Inlaid Medintech Tandem, Mannington Inlaid Fine Fields, Resilient Floors, or equal. (Consultant to modify)
- B. Noraplan Rubber Sheet Flooring; Degree is a solid rubber sheet flooring
1. Color; Selected by Architect
 2. Overall thickness; 0.012"
 3. Sheet width: 4' wide
 4. Fire Test Data: Class 1
 5. Installation method: Use adhesives recommended by the manufacturer
 6. Finish: After initial cleaning to increase shine, dry buff floor the floor with a 3M #1400 (white) pad as recommended by the manufacturer.
- C. Armstrong Medintech Homogeneous flooring materials are a nonbacked, nonlayered, polyurethane-coated vinyl with a through pattern construction with UV cured polyurethane finish.
1. Color: Freesia Pearl #88488 or approved equal
 2. Overall Thickness: 0.080"

3. Sheet Width: 6' wide
 4. Fire Test Data: Class I.
 5. Installation Method: Use Adhesive as recommended by the flooring manufacture. Or approved Quick Set adhesives
 6. Finish: No Polish Dry Buff, Spray Buff, Polish Optional Consultant to modify
- D. Armstrong Medintech Inlaid Sheet Products have a wear layer composed of polyvinyl chloride resin, stabilizers, fillers, and pigments on a backing suitable for use on approved subfloors on all grade levels.
1. Color; Freesia Pearl #88487 or approved equal
 2. Overall Thickness: 0.080"
 3. Wearing Surface: 0.060"
 4. Sheet Width: 6' wide
 5. Fire Test Data: Class I.
 6. Installation Method: use adhesive as recommended by the manufacturer.
 7. No Polish Dry Buff, Spray Buff, Polish Optional
- E. Mannington Inlaid Fine Fields, a urethane wear layer composed of polyvinyl chloride resin, stabilizers, fillers, and pigments on a backing suitable for use on approved subfloors on all grade levels.
1. Color; Sandrift #10303 or approved equal
 2. Overall Thickness: 0.080"
 3. Wearlayer Surface: 0.066"
 4. Sheet Width: 6' wide
 5. Fire Test Data: Class I.
 6. Installation Method: Use adhesive and recommended by manufacturer. Detailed instruction may be found in the "Mannington Professional Installation Guide.
 7. No polish, No buffing.

END OF SECTION 09652