# SECTION 09 65 16 - RESILIENT SHEET FLOORING

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Vinyl sheet floor covering, with backing.
2. Rubber sheet floor covering, with backing.

### 1.2 SUBMITTALS

A. Product Data: For each type of product indicated.

B. LEED Submittals:

1. Product Data for Credit EQ 4.1: For adhesives, including printed statement of VOC content and chemical components.

C. Shop Drawings: For each type of floor covering. Include floor covering layouts, locations of seams, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.

D. Samples: In manufacturer's standard size, but not less than 6-by-9-inch sections of each different color and pattern of floor covering required.

E. Maintenance data.

### 1.3 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: As determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

### 1.4 PROJECT CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer in spaces to receive floor coverings.

B. Until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer.

C. Close spaces to traffic during floor covering installation.

D. Close spaces to traffic for 48 hours after floor covering installation.

E. Install floor coverings after other finishing operations, including painting, have been completed.

## PART 2 - PRODUCTS

### 2.1 VINYL SHEET FLOOR COVERING

A. Products: Subject to compliance with requirements, provide the following:

1. Altro Group;
2. Armstrong World Industries, Inc.
3. Congoleum Corporation;
4. Forbo Flooring, Inc.;
5. Tarkett, Inc.;
6. Mannington International;
7. or approved equal.

B. Vinyl Sheet Floor Covering with Backing: ASTM F 1303.

1. Type (Binder Content): Type I, minimum binder content of 90 percent.
2. Wear-Layer Thickness: Grade 1.
3. Overall Thickness: 1/8$^{th}$ inch.
4. Interlayer Material: None.
5. Backing Class: Class B (nonfoamed plastic).

C. Vinyl sheet floor without backing: ASTM F1913
1. Type: Type I
2. Wear layer: .080”
3. Weight: 5.67 lbs/sq. yd.

D. Wearing Surface: Smooth.

E. Sheet Width: As standard with manufacturer.

F. Colors and Patterns: As indicated by manufacturer's designations.

G. Slip resistance: greater than .5 coefficient of friction

### 2.2 RUBBER SHEET FLOOR COVERING

A. Products: Subject to compliance with requirements, provide the following:
1. Flexco; <**Insert product name or designation**>.
2. Johnsonite; <**Insert product name or designation**>.
3. Mondo Rubber International, Inc.; <**Insert product name or designation**>.
4. Nora Rubber Flooring, Freudenberg Building Systems, Inc.; <**Insert product name or designation**>.
5. or approved equal.

B. Unbacked Rubber Sheet Floor Covering: ASTM F 1859.

1. Type: Type I (homogeneous rubber sheet).
2. Thickness: As standard with manufacturer.

C. Hardness: Manufacturer's standard hardness, measured using Shore, Type A durometer per ASTM D 2240.

D. Wearing Surface: Textured.

E. Sheet Width: As standard with manufacturer.

F. Colors and Patterns: As indicated by manufacturer's designations.

## 2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation as provided by Ardex Engineered Cements or approved equal.

B. Adhesives: Water-resistant type recommended by manufacturer to suit floor covering and substrate conditions indicated.

1. Use adhesives that have a VOC content of not more than 50 g/L when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

C. Integral-Flash-Cove-Base Accessories:

1. Cove Strip: 1-inch radius provided or approved by manufacturer.
2. Cap Strip: Square metal, vinyl, or rubber cap provided or approved by manufacturer.
3. Corners: Metal inside and outside corners and end stops provided or approved by manufacturer.

D. Floor Polish: Provide protective liquid floor polish products as recommended by manufacturer.

# PART 3 - EXECUTION

## 3.1 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of floor coverings.

B. Concrete Substrates: Prepare according to ASTM F 710.

1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.

3. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
4. Moisture Testing: Perform tests recommended by manufacturer and as follows. Proceed with installation only after substrates pass testing.

    a. Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
    b. Perform relative humidity test using in situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.

C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.

D. Do not install floor coverings until they are same temperature as space where they are to be installed.

1. Move floor coverings and installation materials into spaces where they will be installed at least 48 hours in advance of installation.

E. Sweep and vacuum clean substrates to be covered by floor coverings immediately before installation.

## 3.2 FLOOR COVERING INSTALLATION

A. Comply with manufacturer's written instructions for installing floor coverings.

B. Unroll floor coverings and allow them to stabilize before cutting and fitting.

C. Lay out floor coverings as follows:

1. Maintain uniformity of floor covering direction.
2. Minimize number of seams; place seams in inconspicuous and low-traffic areas, at least 6 inches away from parallel joints in floor covering substrates.
3. Match edges of floor coverings for color shading at seams.
4. Avoid cross seams.

D. Scribe and cut floor coverings to butt neatly and tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, and door frames.

E. Extend floor coverings into toe spaces, door reveals, closets, and similar openings.

F. Maintain reference markers, holes, or openings that are in place or marked for future cutting by repeating on floor coverings as marked on substrates. Use chalk or other nonpermanent marking device.

G. Adhere floor coverings to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

H. Integral-Flash-Cove Base: Cove floor coverings 6 inches up vertical surfaces. Support floor coverings at horizontal and vertical junction by cove strip. Butt at top against cap strip.

1. Install metal corners at inside and outside corners.

3.3 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protection of floor covering.

B. Floor Polish: Remove soil, visible adhesive, and surface blemishes from floor covering before applying liquid floor polish.

1. Apply two coat(s).

C. Cover floor coverings until Substantial Completion.

**END OF SECTION 09 65 16**