**PART 1 - GENERAL**

**1.01 SUMMARY**

A. Provisions of Division 01 apply to this section.

B. Section Includes:

1. Rubber tile flooring as indicated.

C. Related Sections:

1. Section 03 30 00: Cast-in-Place Concrete.

2. Section 09 65 19: Vinyl Composition Tile.

3. Section 09 65 00: Resilient Sheet Flooring.

4. Section 09 65 30: Rubber Base.

**1.02 DEFINITIONS**

A. Pop-up: A pop-up is defined as any surface deviation or looseness of substrate that is equal to or greater than 1/64 (0.015625) inch above the concrete floor level, regardless of the size.

**1.03 SUBMITTALS**

A. Product Data: Submit manufacturer’s published technical data describing materials, construction, and recommended installation procedures Submit technical data and installation instructions for each adhesive material. Submit list and Product Data of recommended finish materials.

B. Maintenance Instructions: Submit manufacturer’s recommendations for maintenance, care, cleaning of rubber tile.

C. Samples: Submit Samples of rubber tile in each available color and pattern. Following color selections, submit full size Samples of each selected color and pattern. Submit pint cans of each type adhesive.

D. Maintenance Materials: Before Substantial Completion, deliver one unopened container of each color and pattern of rubber tile in each color and pattern installed. Label each container indicating locations installed. Include unopened cans of adhesives adequate to install the maintenance materials.

E. Installer’s Experience Qualifications: Submit list of not less than 5 projects, extending over period of not less than 5 years, indicating installer’s experience record. Submit letter from manufacturer indicating manufacturer's approval for installer of the products.

**1.04 QUALITY ASSURANCE**

A. Qualifications of Installer: Minimum 5 years experience in successfully installing the same or similar flooring materials.

B. Comply with the following as a minimum requirement:

1. ASTM E 84: Class A Flame Spread Rating of 25 or less.

C. CHPS Low-Emitting Materials Table: Materials submitted for rubber FLOORING assemblies must be listed as low emitting on the CHPS website, [www.CHPS.net](http://www.CHPS.net), or must be tested by an independent laboratory to meet CHPS Section 01350. All components of an assembly must meet Section 01350 individually or in an assembly. Rubber assemblies include tile and adhesive.

D. All chemically based products such as sealers, primers, fillers, adhesives, etc. must be approved by Owner’s Office of Environmental Health and Safety (OEHS).

**1.05 DELIVERY, STORAGE AND HANDLING**

A. Materials shall be delivered to Project site in original unopened manufacturer’s packaging clearly labeled with manufacturer’s name. Materials shall be stored at not less than 70 degrees F for not less than 48 hours before installation.

**1.06 PROJECT CONDITIONS**

A. Ventilation and Temperature: Verify areas that are to receive new flooring are ventilated to remove fumes from installation materials, and areas are within temperature range recommended by the various material manufactures for Project site installation conditions.

**1.07 WARRANTY**

A. Manufacturer shall provide a 2 year material warranty.

B. Installer shall provide a 2 year labor warranty.

**PART 2 - PRODUCTS**

**2.01 ACCEPTABLE MANUFACTURERS**

A. Nora Rubber Flooring.

B. Johnsonite.

C. Flexco Corporation.

D. Roppe Corporation.

**2.02 MATERIALS**

A. Rubber Tile: ASTM F 1344, Standard Specification for Rubber Floor Tile, Class I B, homogeneous rubber tile, through mottled pattern, 1/8 inch thick, conforming to ADA requirements for non-slip materials.

B. Stair Covering:

1. Treads: ASTM F2169, Standard Specification for Resilient Stair Treads. Extruded rubber with 2 inch wide minimum flush integral contrasting color abrasive strips, designed for installation on stairs of configuration indicated, colors and patterns as selected.

2. Risers and Skirting: 1/8 inch thick rubber or vinyl in selected colors, with exposed edges factory radius molded.

C. Crack Filler and Leveling Compound: Cementitious type, shall be Durabond's Webcrete # 95, Ardex SD-F, Armstrong S-194 or as recommended by flooring manufacturer.

D. Concrete Primer: Non-staining type recommended by manufacturer of rubber tile.

E. Adhesive: Water based, low odor type formulated specially for use with rubber tile, and manufactured or recommended by manufacturer of rubber tile.

F. Reducer Strips: Tapered rubber not less than one inch wide, and thickness to match tile.

G. Moisture Detection Equipment: Calcium chloride testing system, consisting of pre-packaged anhydrous calcium chloride crystal test kits, and an electronic gram weight scale measurable in 1/10 grams. Equipment shall be manufactured by one of the following, or equal:

1. Sealflex Industries, Inc., 2925 College Avenue, Suite B-4, Costa Mesa, CA 92626.

2. Vaprecision Professional Emission Testing Systems, 2941 West Mac Arthur Blvd., Suite 138, Santa Ana, CA 92704.

|  |
| --- |
| **NOTE TO PROJECT ARCHITECT:** Use paragraph H below for wood construction. Delete when not used. |

H. Underlayment: One of the following, grade stamped on panels as indicated.

1. Halex (9 mm) flooring underlayment.

2. Matrixx (9 mm) by Traxx Corporation.

I. Floor Finish: Polymer type recommended by manufacturer for rubber flooring, UL rated non-slip.

**PART 3 - EXECUTION**

**3.01 COORDINATION**

A. Coordinate with related Work to assure level, smooth, and clean finish surfaces to receive rubber floor tile and stair covering.

**3.02 EXAMINATION**

A. Field verify dimensions and other conditions affecting the Work of this section.

B. Before Work is commenced, examine surfaces that are to receive rubber tile and stair covering. Repair and/or replace defective Work before starting Work of this section.

**3.03 PREPARATION**

A. Concrete Slabs:

1. Do not start preparation until adjacent concrete floor slabs are at least 90 days old.

2. Leveling: Check sub-floors for true to level and plane within a tolerance of 1/8 inch in 10-feet. Test floor areas both ways with a 10-foot straightedge and repair high and low areas exceeding allowable tolerance. Pop ups shall be hammered out and floor filled with a cementitious leveling compound. Remove high areas by power sanding, stone rubbing or grinding, chipping off and filling with leveling compound, or equivalent method. Fill low areas with leveling compound. Repair and level the surfaces having abrupt changes in plane, such as trowel marks or ridges, whether or not within the allowable tolerance. Clean areas where repairs are performed.

3. Cleaning: After leveling, clean substrates of all deleterious substances and foreign matter. Fill cracks or depressions with cementitious leveling compound of the type recommended by flooring manufacturer for the specific Work conditions.

4. Moisture Testing: Test new and old concrete slabs for adequate dryness. Testing shall conform to ASTM F 1869 and the following; minimum testing requirements are 3 calcium chloride tests for the first 1,000 square feet of floor area and one for each additional 1,000 square feet or fraction thereof. Unless more stringent requirements are recommended by flooring manufacturer, maximum allowable moisture release at time of flooring installation shall be 3 pounds per 24 hours per 1,000 square feet. Provide report of test as specified above. For each test, perform the following steps:

a. Weigh the sealed dish of crystals immediately prior to exposure. Record starting weight, date, and time.

b. Open kit and set crystal dish on clean concrete surface. Immediately install plastic dome over the dish. Confirm the dome is gasketed to the concrete and is airtight.

c. Leave test to absorb moisture for 60 to 72 hours. Maintain room temperature above 55 degrees F. for duration of test.

d. After exposure, remove and discard housing. Replace dish lid and tape shut. Weigh the sample within one hour of removal from floor.

e. Compute the vapor emission in pounds, indicate location of test and vapor emission on report.

f. Delay application of flooring until sub-floors are sufficiently dry, or perform remedial measures as recommended by flooring materials manufacturer.

5. Priming: Prime concrete floor slabs on grade; prime other slabs if recommended by flooring manufacturer.

|  |
| --- |
| **NOTE TO PROJECT ARCHITECT:** Use paragraph B below for wood construction. Delete when not used. |

B. Wood Sub-floors:

1. Install underlayment according to manufacturer’s instructions.

2. Sweep floors. Vacuum sanding dust.

**3.04 INSTALLATION OF TILE**

A. Color and pattern: Install tiles in a rectangular pattern, in one color without border in all rooms or spaces, unless otherwise indicated.

B. Special designs: Floor with special designs shall be installed as indicated on Drawings or as required by Architect.

C. Install rubber floor tile and stair covering when ambient temperature is 70 degrees F. or higher.

D. Install the tile adhesive in a thin film evenly with a notched trowel. Trowel notches shall be as recommended by flooring manufacturer.

1. Mix adhesive in accordance with manufacturer’s instructions. Provide safety precautions during mixing.

2. Install adhesive only in the area that can be covered by flooring material within the adhesive manufacture’s recommended working time.

3. Remove any adhesive that has dried or filmed over.

4. Adhesive application rate shall be as required to avoid telegraphing trowel lines to the surface after maintenance coatings are applied. Adjust tile runoff during installation if necessary.

E. Provide reducer where floor covering edges are exposed, such as at center of the door or where floor coverings terminate.

F. Install rubber tile in accordance with manufacturer’s recommendations. Tiles shall fit snugly at wall. Closely trim to pipes, jambs, outlets, and similar conditions.

G. Install tiles symmetrically about centerlines of areas while progressing toward walls. Adjust border tiles as required. Tiles shall be straight and joints close. Tile shall be cut to fit snugly at doorframes and walls.

H. Mechanically cut flooring material to provide square true edges.

I. As floor tile is installed, the floor shall be rolled with a clean, 150-pound roller in both directions.

3.05 INSTALLATION OF STAIR TREADS, RISERS AND SKIRTING

A. Stair Treads: Install in one-piece size on each tread, tightly jointed to walls and risers. Install full width landing treads unless otherwise indicated.

B. Clean or sand back of stair tread skirts for proper adhesion.

C. Fit the nose of the tread tightly against face of stair nosing.

D. Secure area to allow stair tread adhesive to dry completely before allowing foot traffic.

E. Fully bed treads in manufacturer's recommended adhesive.

F. Cement skirting and risers in place with tight lapped and double cut joints.

G. Cut contrasting strips to fit, and install at top, bottom and intermediate risers as indicated or as required by regulatory authorities.

H. Thoroughly roll tread and riser while adhesive is fresh allowing transfer of adhesive to the material for a firm bond.

**3.06 CLEANING, WAXING, AND COMPLETION**

A. Maintain all flooring and stair tread surfaces clean as installation progresses.

B. Clean flooring and treads when sufficiently seated and remove foreign substances.

C. Before Substantial Completion, install at least two coats of floor finish on rubber tile flooring, in accordance with manufacturer's instructions. Do not buff polymeric floor finish unless specifically recommended by finish manufacturer.

D. Clean adjacent surfaces of adhesive or other deleterious conditions.

**3.07 CLEAN UP**

A. Remove rubbish, debris and waste material and legally dispose of off the Project site.

**3.08 PROTECTION**

A. Protect the Work of this section until Substantial Completion.

**3.09 INSTRUCTION**

A. After Work of this section is complete, flooring manufacture’s technical representative shall provide a 4 hour instruction period to Owner staff in maintenance of flooring.

**END OF SECTION**