

SECTION 09652

VINYL COMPOSITION TILE

NOTE TO ARCHITECT: IT IS REQUIRED AT THE TIME OF BID TO SHOW ON THE DRAWINGS WHEN PATTERNED LAYOUTS AND/OR MULTIPLE COLORS ARE SPECIFIED, THEREFORE PREPARE THE BIDDING DOCUMENTS ACCORDINGLY.

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of Division 01 apply to this section.
- B. Section Includes:
 - 1. Vinyl composition tile flooring as indicated.
- C. Related Sections:
 - 1. Section 03300: Cast-in-Place Concrete.
 - 2. Section 09651: Rubber Flooring and Stair Covering.
 - 3. Section 09654: Resilient Sheet Flooring.
 - 4. Section 09658: 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 directions. 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, and cleaning of vinyl composition tile.
- C. Samples: Submit Samples of vinyl composition 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 of adhesive.
- D. Maintenance Materials: Before Substantial Completion, deliver one unopened container of each color and pattern of vinyl composition 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. All materials shall be ADA compliant.
 - 2. ASTM E 84: Class A Flame Spread Rating of 25 or less.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Materials shall be delivered to the 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. Armstrong Contract Interiors, Lancaster PA 17604.
- B. Azrock, Domco Inc., USA.
- C. Or equal.

2.02 MATERIALS

- A. Vinyl Composition Tile: Conform to ASTM F 1066, Composition 1, asbestos free, Class 2 (through pattern), 12 inch by 12 inch by minimum 1/8 inch thick, as colors and patterns as indicated on Drawings.
- B. 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.
- C. Concrete Primer: Non-staining type recommended by manufacturer of vinyl composition tile.
- D. Adhesive: Water based, low odor type formulated specially for installation with vinyl composition tile, and manufactured or recommended by manufacturer of vinyl composition tile.
- E. Reducer Strips: Tapered rubber not less than one inch wide, and thickness to match tile.
- F. 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:
 - 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.
- G. Underlayment: One of the following, grades stamped on panels as indicated.
 - 1. Underlayment A-C Exterior, Sanded Face.
 - 2. Underlayment B-C Exterior, Sanded Face.
 - 3. C-C Plugged Exterior, Sanded Face.
 - 4. Underlayment C-C. Plugged Exterior, Sanded Face.
- H. Floor Finish: One, or combinations of the following:
 - 1. Super Polymer 85, manufactured by Maintex, City of Industry, CA.
 - 2. Butcher's Mainstay Floor Finish, manufactured by Waxie Stationary Supply, San Diego, CA.
 - 3. Polymer L. A. manufactured by Alkot Industries, Tarzana, CA.
 - 4. Armstrong S-485 Floor Sealer.
 - 5. Armstrong S-495 Floor Sealer with solids of 16 percent or better.

6. Armstrong S-480 Floor Finish with a minimum of 18 percent solids.

PART 3 - EXECUTION

3.01 COORDINATION

- A. Coordinate with related Work to assure level, smooth, and clean finish surfaces to receive vinyl composition floor tile.

3.02 EXAMINATION

- A. Field verify all dimensions and other conditions affecting this Work before commencing the Work of this section.
- B. Before the Work of this section is commenced, examine surfaces to receive vinyl composition tile and correct deficiencies before commencing the 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.
4. Cracks or Depressions: Fill voids with cementitious leveling compound of the type recommended by flooring manufacturer for the specific Work conditions.
5. 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 according to flooring manufacturer's recommendations, or perform remedial measures as recommended by flooring materials manufacturer.

B. Wood Sub-floors:

- 1. Install plywood underlayment on wood sub-floors, except where sub-floor is acceptable to flooring manufacturer. Install underlayment with smooth side up, leaving 1/16 inch at panel edges and ends. Leave a 1/8" inch gap between the underlayment and adjoining vertical surfaces. Edge gaps shall be filled with sealant before the finish floor is installed. Offset underlayment edges and sub floor edges 4 inches minimum and stagger panel corners. Joints in plywood shall not be located at doorways or within 12 inches of center of doorway.
- 2. Install 14 gage annular nails of length sufficient to penetrate into sub-flooring, to fasten underlayment. Locate nails 3/8 inch to 3/4 inch from panel edges, spaced one inch on center, staggered. Nail at 8 inches each way in the field. Nails in plywood shall not be over driven. Staples are not permitted.
- 3. Sweep floors. Vacuum sanding dust.

3.04 INSTALLATION OF TILE

- A. Color and pattern: Install tiles in the pattern indicated on Drawings. If no pattern is indicated, then tiles shall be installed in a rectangular pattern, in one color.
- B. Special designs: Floor with special designs shall be installed as indicated on Drawings or as required by the Architect.
- C. Install vinyl composition floor tile 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 all safety precaution 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 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 vinyl composition 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 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 produce 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 CLEANING, WAXING, AND COMPLETION

- A. Keep all flooring surfaces clean as installation progresses.
- B. Clean flooring when sufficiently seated and remove foreign substances.
- C. Finish vinyl composition tile with 2 coats of sealer, and 4 coats of wax applied in accordance with manufacturer's instruction. Coats shall dry for a period of time recommended by the manufacturer. The last coat of floor wax shall be burnished in accordance with manufacturer's written instructions.
- D. Clean adjacent surfaces of adhesive or other materials. Replace damaged or defective Work to the specified condition.

3.06 CLEAN UP

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

3.07 PROTECTION

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

END OF SECTION