

1 General

1.1 **SECTION INCLUDES**

- .1 Labour, Products, equipment and services necessary for resilient sheet flooring work in accordance with the Contract Documents.

1.2 **REFERENCES**

- .1 ASTM F710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
- .2 ASTM F1344, Standard Specification for Rubber Floor Tile.
- .3 ASTM F1516, Standard Practice for Sealing Seams of Resilient Floor Products by the Heat Weld Method.
- .4 ASTM F1869, Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- .5 ASTM F2170, Standard Test Method for Determining Relative Humidity in Concrete Slabs Using in-situ Probes.

1.3 **SUBMITTALS**

- .1 Product data:
 - .1 Submit copies of manufacturer's Product data in accordance with Section 01 33 00 indicating:
 - .1 Performance criteria, compliance with appropriate reference standard, characteristics, and limitations.
 - .2 Product transportation, storage, handling and installation requirements.
- .2 Shop drawings: Submit shop drawings indicating seam layout and welding procedures in accordance with Section 01 33 00.
- .3 Samples:
 - .1 Submit samples in accordance with Section 01 33 00:
 - .1 Two 250 x 200 mm samples of each type of sheet material and colour.
 - .2 Two 250 mm long samples of each accessory and colour.
- .4 Extended warranties: Submit extended warranties signed and registered by the manufacturer providing the warranties in the name of the Owner for the timeframe and coverage specified in this Section.
- .5 Closeout submittals: Submit maintenance and cleaning data for incorporating into Operations and Maintenance Manuals in accordance with Section 01 78 00.

1.4 **SITE CONDITIONS**

- .1 Maintain air temperature and structural base temperature at flooring installation area above 20°C for 48 hr before, during and 48 hr after installation.
- .2 Store materials for two (2) days prior to installation in area of Work to achieve temperature stability.
- .3 Do not lay flooring in conditions of high humidity or where exposed to cold drafts. In hot weather, protect from direct sunlight.
- .4 Provide adequate ventilation during installation.

1.5 **EXTENDED WARRANTY**

- .1 Manufacturer's warranty:
 - .1 Resilient flooring: Provide flooring manufacturer's warranty naming Owner as beneficiary, covering excessive wear for a period of five (5) years from the date Work is certified as Substantially Performed.

1.6 **MAINTENANCE**

- .1 Submit extra 5% or to nearest full roll of each colour, pattern and type of flooring material required for maintenance use. Identify each roll. Store where directed. Submit maintenance material in one piece and of same production run as installed materials.

2 Products

2.1 **MATERIALS**

- .1 All materials under work of this Section, including but not limited to, primers and adhesives are to have low VOC content limits.
- .2 **Resilient** Sheet vinyl flooring (~~SV-1~~**RSF.1**): ASTM F1344; Type 1, Grade 1, Class B Backing, Thickness: 3.5 mm. Finish: To be selected by the Consultant. 'Norament Arago Series' by Nora Systems.
- .3 **Resilient** Sheet vinyl flooring (~~SV-2~~**RSF.2**): ASTM F1344; Type 1, Grade 1, Class B Backing, Thickness: 3.5 mm. Finish: To be selected by the Consultant. 'Norament Satura Series' by Nora Systems.
- .4 **Tactile attention indicator tiles and strips (stair nosing):**
 - .1 **Conforming to ASTM F1344 and ULC S102.2, rubber tactile tiles with 3.2 mm base thickness, size as indicated on Drawings, incorporating truncated domes with domes measuring 4 mm high.**
 - .2 **Colour: to be selected by consultant (2 standard colours).**

.3 Acceptable Product: 'Johnsonite Tactile Walking Surface' as manufactured by Tarkett North America or approved alternative.

- .5 Base and accessories: In accordance with Section 09 65 19.
- .6 Welding rod: type recommended by flooring manufacturer to complement flooring.
- .7 Primers and adhesives: Low VOC, waterproof, of types recommended by flooring manufacturer for specific material on applicable substrate, above, on or below grade.
- .8 Reducing edge strips, thresholds: Nitrile rubber plasticized vinyl, 80-95 Shore A Durometer, adhesive as recommended by manufacturer.
- .9 Concrete skim coat compound: High-performance, rapid-setting cement based skim coating compound. 'Ultra SkimCoat' by Mapei or approved equivalent for filling minor voids and leveling existing substrate.
- .10 Stain sealer and polish: Type recommended by flooring manufacturer.

3 Execution

3.1 EXAMINATION

- .1 Verify condition and dimensions of previously installed Work upon which this Section depends. Report defects to Consultant. Commencement of work of this Section means acceptance of existing conditions.
- .2 Ensure concrete floors meet the following minimum requirements and requirements of the flooring manufacturer. If there is a conflict between these requirements and those of the flooring manufacturer, the more stringent shall apply.
 - .1 Internal Relative Humidity Test: Perform internal relative humidity testing in accordance with ASTM F2170. Results shall not exceed 80% RH.
 - .2 Moisture Test: Moisture emissions from concrete subfloors (cured for a minimum of 28 days) must not exceed 3 lbs per 1000sf per 24 hours (1.4 kg H₂O/24 hr/93 m²) for acrylic adhesive and 5lbs for polyurethane adhesive via the Calcium Chloride Test Method (ASTM F1869).
 - .3 The pH level of the subfloor surface shall not be higher than 9.9. If higher, subfloor must be neutralized.
- .3 Ensure that sub-floors have been provided as specified without holes, protrusions, cracks, depressions or other major defects.
- .4 Ensure that control joints have been filled and levelled.
- .5 Defective work resulting from application to unsatisfactory surfaces will be considered the responsibility of those performing the work of this Section.

3.2 SUBFLOOR TREATMENT

- .1 Flooring shall be installed over subfloors conforming to ASTM F710 for concrete.

- .2 Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.
- .3 Apply sub-floor filler to low spots and cracks to achieve floor level to a tolerance of 1:1000, allow to cure.
- .4 Meet ASTM F710 Standard for Concrete or other monolithic floors.
- .5 Clean and remove all deleterious materials from surfaces to receive this work in accordance with the adhesive manufacturer's recommendations.
- .6 Prime concrete to flooring manufacturer's printed instructions.

3.3 **RESILIENT SHEET FLOORING APPLICATION**

- .1 Install resilient sheet flooring in accordance with manufacturer's written instructions.
- .2 Apply adhesive uniformly using recommended trowel in accordance with flooring manufacturers instructions. Do not spread more adhesive that can be covered by flooring before initial set takes place.
- .3 Run sheets in direction of traffic. Double cut sheet joints and continuously seal according to manufacturer's printed instructions. Remove adhesive seepage of seams or surface while adhesive is still wet.
- .4 Heat weld seams in accordance with ASTM F1516 and manufacturer's printed instructions.
- .5 As installation progresses and after installation, roll flooring with minimum 45 kg roller to ensure full adhesion.
- .6 Cut flooring neatly around fixed objects.
- .7 Terminate flooring at centreline of door in openings where adjacent floor finish or colour is dissimilar.
- .8 Install reducing edge strips at unprotected or exposed edges where flooring terminates or where there are two finishes of different thicknesses.

3.4 **RUBBER STAIR NOSING**

- .1 ***Prepare adhesive and install materials in accordance with manufacturer's written instructions.***
- .2 ***Pre-cut and fit nosing prior to spreading adhesive. Fill back side of stair nose with a caulking bead. Allow to become tacky to touch before installing. Nosings shall be fully bonded to substrate, butted tight against stair. Roll with hand roller after installation.***

- .3 ***Remove adhesive seepage at seams or surface while adhesive is still wet, in accordance with manufacturer's recommendations.***

3.5 **RESILIENT BASE APPLICATION**

- .1 Resilient base: In accordance with Section 09 65 19. Coordinate with noted Section as required for installation of resilient base with resilient sheet flooring.

3.6 **CLEANING AND SEALING**

- .1 Forty-eight hours after installation, clean sheet flooring surfaces with a mild soap solution approved by finish manufacturer. Rinse clean and allow to dry.

3.7 **PROTECTION OF FINISHED WORK**

- .1 Protect floors and bases from time of final set of adhesive until accepted by Consultant.
- .2 Prohibit traffic on floor for 48 hours after installation.
- .3 Cover cleaned surfaces with fibre reinforced, clean, non-staining clean, kraft paper. Secure in position with gummed tape to prevent drifting. Remove covering when directed by Consultant.

END OF SECTION