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- 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 F1516, Standard Practice for Sealing Seams of Resilient Floor Products by the Heat Weld Method.
- .3 ASTM F1869, Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- .4 ASTM F1913, Standard Specification for Vinyl Sheet Floor Covering Without Backing.
- .5 ASTM F 2170, Standard Test Method for Determining Relative Humidity in Concrete Slabs Using in-situ Probes.
- 1.3 **SUBMITTALS**
- .1 Product data:
- .1.1 Submit copies of manufacturer's Product data in accordance with Section 01 10 10 indicating:
- .1.1.1 Performance criteria, compliance with appropriate reference standard, characteristics, and limitations.
- .1.1.2 Product transportation, storage, handling and installation requirements.
- .2 Shop drawings: Submit shop drawings indicating seam layout and welding procedures in accordance with Section 01 10 10.
- .3 Samples:
- .1.1 Submit samples in accordance with Section 01 10 10:
- .1.1.1 Two 250 x 200 mm samples of each type of sheet material and colour.
- .1.1.2 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 10 10.

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 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: Resilient flooring; provide flooring manufacturer's warranty naming Owner as beneficiary, covering excessive wear for a period of 5 years from the date Work is certified as Substantially Performed.

1.6 **MAINTENANCE**

- .1 Submit extra 2% 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 Vinyl sheet flooring (VNL-3)
 - .1s Vinyl sheet flooring
 - .1 ASTM F1913, 2 mm thick, homogeneous vinyl sheet flooring, 'Johnsonite iQ Optima' by Tarkett North America or approved alternative.
 - .2 Colour as follows: Refer to Drawings for colour and size.
 - .3 Welding rod: type recommended by flooring manufacturer to complement flooring.
 - .4 Cove fillers and top edge caps: As recommended by flooring manufacturer.

- .5 Primers and adhesives: Low VOC, waterproof, of types recommended by flooring manufacturer for specific material on applicable substrate, above, on or below grade.
- .6 Reducing edge strips, thresholds: Nitrile rubber plasticized vinyl, 80-95 Shore A Durometer, adhesive as recommended by manufacturer.
- .7 Concrete skim coat compound: High-performance, rapid-setting cement based skim coating compound. 'Planiprep SC' by Mapei or approved alternative for filling minor voids and leveling existing substrate.
- .8 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.

3.2 PREPARATION

- .1 Prepare subfloors in accordance with manufacturer's written instructions and as specified herein.
- .2 Flooring shall be installed over subfloors conforming to ASTM F710 for concrete.
- .3 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.
- .4 Ensure that sub-floors have been provided as specified without holes, protrusions, cracks, depressions or other major defects. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.
- .5 Apply sub-floor filler to low spots and cracks to achieve floor level to a tolerance of 1:1000, allow to cure.
- .6 Ensure that control joints have been filled and levelled.

- .7 Clean and remove all deleterious materials from surfaces to receive this work in accordance with the adhesive manufacturer's recommendations.
- .8 Prime concrete to flooring manufacturer's printed instructions.
- .9 Defective work resulting from application to unsatisfactory surfaces will be considered the responsibility of those performing the work of this Section.

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 Integral base (IC-1): Provide 100 mm coved base at room perimeter and at built-in fitment locations complete with cove fillers and top caps as required. Form cove with 25 mm radius.
- .9 Install reducing edge strips at unprotected or exposed edges where flooring terminates or where there are two finishes of different thicknesses.

3.4 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.
- .2 Where recommended by flooring manufacturer, apply stain sealer and allow to dry. Apply number of coats of sealer as recommended by flooring manufacturer and polish thoroughly.

3.5 PROTECTION OF FINISHED WORK

- .1 Protect floors 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