

Part 1 General

1.1 REFERENCE STANDARDS

- .1 ASTM International
 - .1 ASTM D2047, Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces.
 - .2 ASTM D2240, Test Method for Rubber Property – Durometer Hardness.
 - .3 ASTM D3389, Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform Abrader).
 - .4 ASTM E492, Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies.
 - .5 ASTM E648/NFPA 253, Standard Test Method for Critical Radiant Flux of Floor-Covering Systems.
 - .6 ASTM E662/NFPA 258, Standard Test Method for Specific Optical Density of Smoke.
 - .7 ASTM F970, Test Method for Static Load Limit.
 - .8 ASTM F1303-04(2014), Standard Specification for Sheet Vinyl Floor Covering with Backing.
 - .9 ASTM F1514, Test Method for Measuring Heat Stability of Resilient Flooring by Color Change.
 - .10 ASTM F1700, Standard Specification for Solid Vinyl Floor Tile.
 - .11 ASTM F1344, Standard Specification for Rubber Floor Tile.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00- Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for resilient sheet flooring and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Samples:
 - .1 Submit duplicate 300 x 300 mm sample pieces of sheet material, 300 mm long base, edge strips.
- .4 Sustainable Design Submittals:
 - .1 Low-Emitting Materials:
 - .1 Submit listing of adhesives and sealants used in building, showing compliance with VOC and chemical component limits or restriction requirements.

1.3 MAINTENANCE MATERIAL SUBMITTALS

- .1 Extra Materials:
 - .1 Provide extra materials of resilient sheet flooring and adhesives in accordance with general conditions.
 - .2 Extra materials one piece and from same production run as installed materials.
 - .3 Identify each roll of sheet flooring and each container of adhesive.
 - .4 Deliver to Client, upon completion of the work of this section.
 - .5 Store where directed by Client.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with general requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials indoors off ground and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect specified materials from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

1.5 SITE CONDITIONS

- .1 Ambient Conditions:
 - .1 Maintain air temperature and structural base temperature at flooring installation area above 20 degrees for 48 hours before, during and 48 hours after installation.

Part 2 Products

2.1 MATERIALS

- .1 Sheet vinyl with backing (**LVT-1 & LVT-2**): to ASTM F1303, commercial.
 - .1 Classification: ASTM F1700, Class III, Type B
 - .2 Total Thickness: .120" (3.0mm)
 - .3 Wear Layer Thickness: 30 mil
 - .4 Edge Treatment: Square Edge (SE)
 - .5 Emboss: Standard
 - .6 Urethane: Factory Applied
 - .7 Dimensions : 18" x 18'
 - .8 Wet Spread: Backing specific by resilient flooring manufacturer
 - .9 Total Recycled Content: 71.5% (29.1% Pre-Consumer; 42.4% Post-Consumer)
 - .10 Colour: Two (2) colours will be selected by Departmental Representative from the manufacturer's standard products.
- .2 Resilient Rubber Tile Flooring:
 - .1 TEXTURED SURFACE Rubber Tile specify – Resilient Rubber Tile Flooring with the following physical characteristics:
 - .1 Complies with requirements for ASTM F1344, Type 1-A and 1-B.
 - .2 Manufactured from a homogeneous composition of 100% synthetic rubber.
 - .3 Overall thickness: 125" (3.17 mm).
 - .4 Tile Size: 24" x 24" (61 cm x 61 cm) for Solid Color Tile.
 - .5 Tile Textures: Hammered.
 - .6 Durometer Hardness: ASTM D2240, 65 Shore A.
 - .7 Color Heat Stability: ASTM F1514, $\leq 8 \Delta E$.
 - .8 Abrasion Resistance: ASTM D3389, < 1.00 -gram weight loss.
 - .9 Slip Resistance: ASTM D2047, Meets or Exceeds a static coefficient of friction of 0.8.
 - .10 Static Load Limit: ASTM F970 – 250 PSI.
 - .11 Acoustical: ASTM E492 Impact Insulation Class – 40 IIC (Test performed with 1/8" thick tiles).

- .12 Fire Resistance:
 - .1 ASTM E 648/NFPA 253 (Critical Radiant Flux), Class 1.
 - .2 ASTM E 662/NFPA 258 (Smoke Density), less than 450.
- .13 Colour: one (1) colour will be selected by Departmental Representative from the manufacturer's standard products.
- .3 Primers and adhesives: of types recommended by resilient flooring manufacturer for specific material on applicable substrate, above, on or below grade.
 - .1 Floor adhesives:
 - .1 Adhesive: maximum VOC limit 60g/L.
- .4 Sub-floor filler and leveller: as recommended by flooring manufacturer for use with their product.
- .5 Edging to floor penetrations: stainless steel type recommended by flooring manufacturer.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for resilient sheet flooring installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

3.2 SITE VERIFICATION OF CONDITIONS

- .1 Ensure concrete floors are clean and dry by using test methods recommended by flooring manufacturer.

3.3 PREPARATION

- .1 Remove existing flooring.
- .2 Remove or treat old adhesives to prevent residual, old flooring adhesives from bleeding through to new flooring and/or interfering with the bonding of new adhesives.
- .3 Clean floor and apply filler; trowel and float to leave smooth, flat hard surface. Prohibit traffic until filler cured and dry.
- .4 Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.

3.4 APPLICATION: FLOORING

- .1 Follow manufacturer's written instructions for application.
- .2 Provide high ventilation rate, with maximum outside air, during installation, and for 48 hours after installation. If possible, vent directly to outside. Do not let contaminated air recirculate through district or whole building air distribution system. Maintain extra ventilation for at least 1 month following building occupation.

- .3 Apply adhesive uniformly using recommended trowel. Do not spread more adhesive than can be covered by flooring before initial set takes place.
- .4 Lay flooring to produce a minimum number of seams. Border widths minimum 1/3 width of full material.
- .5 As installation progresses, and after installation roll flooring with 45kg minimum roller to ensure full adhesion.
- .6 Cut flooring around fixed objects.
- .7 Install feature strips and floor markings where indicated. Fit joints tightly.
- .8 Install flooring in pan type floor access covers. Maintain floor pattern.
- .9 Continue flooring over areas which will be under built-in furniture.
- .10 Terminate flooring at centreline of door in openings where adjacent floor finish or colour is dissimilar.
- .11 Install metal edge strips at unprotected or exposed edges where flooring terminates.

3.5 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11- Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11- Cleaning.
 - .1 Clean flooring surfaces to flooring manufacturer's printed instructions.

3.6 PROTECTION

- .1 Protect new floors from time of final set of adhesives until final inspection.
- .2 Prohibit traffic on floor for 48 hours after installation.

END OF SECTION