

SECTION 09 65 19
RESILIENT TILE FLOORING

PART 1 GENERAL

1.01 SUMMARY

- A. Section includes, but is not limited to, furnishing, delivering, and installing the following work:
 - 1. **T3™** Luxury Vinyl Tile, Commercial Resilient Tile Flooring with top set base.
 - 2. Accessories including, but not limited to:
 - a. Adhesive
 - b. Trowels
 - c. Transition strips
 - d. Divider strips
 - e. Concrete sealer
 - f. Primers and encapsulators
 - g. Cleaning products
- B. Related Requirements: Drawings and general provisions of the Contract, including General and Supplementary Conditions, Division 01 General Requirements, and the following Divisions 02 through 49 sections apply to this Section:
 - 1. Section 03 30 00, Cast-in-Place Concrete: For underslab vapor barrier.
 - 2. Section 03 54 16, Hydraulic Cement Underlayment: For leveling concrete slabs.
 - 3. Section 06 10 00, Rough Carpentry: For wood-based panel underlayment required for installation of resilient tile flooring.
 - 4. Section 07 92 00, Joint Sealers: For exposed movement joints.
 - 5. Section 07 95 13, Expansion Joint Cover Assemblies: For expansion joint assemblies at resilient tile flooring.
 - 6. Section 09 65 13, Resilient Base and Accessories: For wall base, and expansion joint trim between resilient tile flooring and other finish flooring.

1.02 REFERENCES

- A. Reference Standards in accordance with current editions from the following organizations:
 - 1. ASTM. ASTM International; www.astm.org
 - a. Practices:
 - 1). ASTM F710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
 - 2). ASTM F1482, Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring
 - 3). ASTM F1869, Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
 - 4). ASTM F2170, Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
 - b. Specifications:
 - 1). ASTM F1700-13a, Standard Specification for Solid Vinyl Floor Tile
 - 2. BAAQMD. Bay Area Air Quality Management District; www.baaqmd.gov

3. GS. Green Seal; www.greenseal.org
4. ISO. International Organization for Standardization; www.iso.org
5. RFCI. Resilient Floor Covering Institute; www.rfci.com
6. SCAQMD. South Coast Air Quality Management District; www.aqmd.gov
7. USGBC. United States Green Building Council; www.usgbc.org

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate work of Section 03 30 00 and Section 07 26 16 to ensure an approved underslab vapor barrier has been installed in accordance with requirements.
 - a. Ensure concrete trade does not create holes in membrane and immediately repair holes if and when they occur.
2. Coordinate work of Section 03 30 00 to ensure curing compounds are NOT used in areas to receive Resilient Tile Flooring.
3. Coordinate expansion joint system installation prior to installing resilient tile flooring. Refer to Section 07 95 13

B. Sequencing: Install resilient flooring and accessories only after painting and other finishing operations have been completed.

1.04 SUBMITTALS

A. Submit in accordance with Section 01 30 00.

1. Product Data: Submit manufacturer's technical data for each type of resilient flooring and accessory.
2. Shop Drawings: Submit details of joint methods, terminations and transitions with necessary reducers and/or caps.
3. Samples:
 - a. Initial for Selection: Submit manufacturer's sample chains of resilient tile flooring and accessories, showing full range of colors and patterns available.
 - b. Final Selection: Submit two (2) full size tiles and accessories of each different type, color and pattern selected for acceptance.
4. Manufacturers' Instructions: Submit two (2) copies of manufacturer's recommended maintenance practices for resilient tile flooring and accessories installed.
5. Site Quality Control Submittals:
 - a. Moisture Tests: Submit test reports to Flooring Distributor-Installer prior to delivery and installation of resilient tile flooring.
 - b. pH Tests: Submit test results to Flooring Distributor-Installer prior to delivery and installation of resilient tile flooring.

NOTE: Delete the following Article if LEED is not applicable; otherwise edit to meet project LEED requirements.

B. LEED Submittals: Submit required information or documentation for each LEED Credit being pursued applicable to materials, products, and assemblies specified under this section; Refer to Section 01 81 15, LEED Design Requirements.

1. **LEED 2009** (v3) Credits being pursued:

a. Materials and Resources (MR) Credits:

- 1). MRc2 - Construction Waste Management: Divert 50% or 75% from disposal calculated by weight or by volume.
- 2). MRc4 - Recycled Content: Submit documentation indicating percentages by weight of postconsumer and pre-consumer recycled content.
 - a). Submit recycled content information as defined by ISO 14021 Environmental labels and declarations.

- i. Post-consumer material - waste materials diverted from the waste stream after consumer or commercial use.
 - ii. Pre-consumer material - materials diverted from the waste stream during the manufacturing process. Excluded are regrind, rework, and scrap.
 - b. Indoor Environmental Quality (EQ) Credits:
 - 1). IEQc4 - Low-Emitting Materials:
 - a). IEQc4.1 - Adhesives and Sealants
 - i. Submit manufacturers' product data for construction adhesives and sealants, including printed statement of VOC content and MSDS Sheets.
 - ii. Submit manufacturer's certification that products meet the requirements of *SCAQMD Rule 1168* in areas where exposure to freeze/thaw conditions and direct exposure to moisture will not occur. Aerosol adhesives to meet requirements of *Green Seal GS-36*.
 - b). IEQc4.3 - Flooring Systems: Submit documentation that resilient flooring is RFCI *FloorScore®* certified; or meets testing requirements of *CA Dept. of Health Services Standard Practice for the Testing of Organic Emission from Various Sources Using Small Scale Environmental Chambers*, including 2004 Addenda.
- 2. **LEED v4** Credits being pursued:
 - a. Materials and Resources (MR) Credits:
 - 1). MR Credit 2 (MRc2): Building Product Disclosure and Optimization - Environmental Product Declarations (EPD)
 - a). Option 1: Submit a third-party certified Industry-wide (generic) EPD (counts 50%) or Product Specific Type III EPD (counts 100%)

NOTE: The Resilient Floor Covering Institute (RFCI; www.rfci.com) provides Industry-wide type EPDs for Vinyl Tile, an Industry-wide (generic) EPD, that counts 50%.
A minimum 24 different product EPDs are required to attain LEED credit.

- 2). MR Credit 3 (MRc3): Building Product Disclosure and Optimization - Sourcing of Raw Materials
 - a). Option 1: Submit documentation that products meet responsible extraction criteria of incorporating reused materials, or recycled content.
 - 3). MR Credit 4 (MRc4): Building Product Disclosure and Optimization - Material Ingredients
 - a). Option 2: Submit a certified report benchmarking chemical ingredients inventoried to 100 ppm using either *GreenScreen v1.2*, *Cradle to Cradle*, *REACH Optimization*, or another USGBC approved program meeting the material ingredient reporting criteria.
 - b). Indoor Environmental Quality (EQ) Credits:
 - 4). EQ Credit 2 (EQc2): Low-Emitting Materials
 - a). Option 1: Submit a General Emissions Evaluation using *CDPH Standard Method v1.1*.
 - b). Option 2: Submit certification documentation that product is *FloorScore®* or *NSF/ANSI 332* certified to meet CDPH Standard Method v1.1.
 - c.) USGBC LEED Closeout Documentation:

NOTE: Edit below to meet project LEED requirements.

- 3. **LEED 2009 (v3)**. Submit completed LEED™ submittal Worksheet Templates for the following credits:
 - a. MRc2, MRc4
 - b. EQc4.1, EQc4.3
- 4. **LEED v4**. Submit information and documentation to complete LEED™ Worksheet Templates for the following credits:
 - a. MRc2, MRc3, MRc4
 - b. EQc2

1.05 MAINTENANCE MATERIAL SUBMITTALS

- A. Extra Stock Materials: Furnish a minimum one percent (1%) extra resilient tile flooring and accessory materials in full and unopened cartons for each color and pattern installed.

1.06 QUALITY ASSURANCE

- A. Installer: Installer to be a certified **T3™** Luxury Vinyl Tile installer. Contact the Flooring Distributor for certification requirements.
- B. Source Limitations: Obtain primary Resilient Tile Flooring materials through one source from a single manufacturer.
 - 1. Provide secondary materials, including primers, adhesives, sealants, patching, leveling, fill and repair materials, of types and from sources recommended by primary resilient tile flooring material manufacturer.
- C. Field Samples: Provide field samples, dry laid, to demonstrate aesthetic effects of materials in situ, to assist the Architect and Owner in making final selections.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Comply with manufacturer's instructions and recommendations, Section 01 60 00 requirements, and as follows:
 - 1. Delivery and Acceptance Requirements: Deliver materials to project site in manufacturer's original, unopened containers with labels indicating brand names, colors and patterns, and quality designations legible and intact.
 - 2. Storage and Handling Requirements: Store and protect materials in accordance with manufacturer's recommendations and as follows:
 - a. Store cartons flat and squarely on top of one another.
 - b. Do NOT lay cartons on their sides or edges.
 - c. Store resilient flooring materials in spaces where they will be installed for at least 72 hours before beginning installation.

1.08 SITE CONDITIONS

- A. Ambient Conditions:
 - 1. Areas to receive resilient tile flooring to be maintained at temperatures and relative humidities (RH) in accordance with ANSI/ASHRAE 55 and Resilient Tile Flooring and adhesive manufacturer requirements.
 - a. Set and operate permanent HVAC at 65°F (18°C) for a minimum of 72 hours before, during and after installation.
 - 1). Maintain HVAC at a minimum temperature of 55°F (13°C) thereafter as per the adhesive manufacturer's recommendations.
 - 2). Space heaters NOT acceptable
 - b. Maintain substrate surface temperatures between 65°F and 85°F (18°C and 29.40°C) during installation. Do NOT install Resilient Tile Flooring if substrate temperatures fail to meet requirements.
- B. Existing Conditions:
 - 1. Do NOT install resilient flooring over new concrete slabs until they are cured and sufficiently dry to achieve bond with adhesive as determined by resilient flooring manufacturer's recommended bond, pH and moisture tests.

1.09 WARRANTY

- A. Manufacturer Warranty: Prepare and submit in accordance with Division 01 requirements.
 - 1. Resilient Tile Flooring: Submit manufacturer's limited warranty stating Resilient Tile Flooring is guaranteed to be free from wear-through due to normal use in commercial applications.
 - a. Warranty Period: Fifteen (15) year limited warranty commencing on date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. **T3™** Luxury Vinyl Tile - Manufacturer List. Subject to compliance with requirements, provide products by one of the following:

1. **TEKNOFLOR** 29 Oakwood Avenue, Norwalk, CT 06850
2. Website: www.hmtxcommercial.com; Toll Free: **800-522-9166**
3. Substitutions: Not permitted.

2.02 DESCRIPTION

- A. **T3™** Luxury Vinyl Tile: Printed film vinyl tile with an embossed scuff resistant surface and antimicrobial nano-silver in accordance with ASTM F1700-13a.

NOTE: **T3™ Luxury Vinyl Tile** flooring is manufactured to include TekDefend™ germ killing technology designed to make facilities safer from bacteria such as Staph and E.coli, viruses like rhinovirus and molds.

B. Sustainability Characteristics:

1. Sustainable Properties of **T3™** Luxury Vinyl Tile Flooring:
 - a. *FloorScore®* certified to meet requirements of CDPH Standard Method v1.1.
 - b. Plasticizer used is DOTP (*Dioctyl terephthalate*), a non-toxic and phthalate-free additive.
 - c. Stabilizer used is CaZn (*Calcium-Zinc*), a non-toxic and heavy metal-free additive.
 - d. No fire retardant additives used.

2.03 PERFORMANCE / DESIGN CRITERIA

A. Design Criteria for **T3™** Luxury Vinyl Tile:

1. Size: 18 x 18 inch (45 x 45 cm) [; 18 x 36 inch (45 x 90 cm)]
1. Thickness: 1/8 inch (3 mm)
2. Wear Layer:
 - a. Thickness: 23 mil (0.58 mm)
 - b. Characteristics: Class III, Type B
3. Colors and Patterns: 36 sku (18 x 18); 3 sku (18 x 36)

B. Performance Capacities for **T3™** Luxury Vinyl Tile:

- | | | |
|---|-----------------------------|------|
| 1. Taber Abrasion at 1,000 cycles (ASTM D3884): | 0.045% loss | Pass |
| 2. Critical Radiant Flux (ASTM E648): | Class 1 | Pass |
| 3. Smoke Density (ASTM E662/ NFPA 258): | < 450 | Pass |
| 4. Short Term Indentation (ASTM F1914): | 2.4% | Pass |
| 5. Static Load 1,500 psi (ASTM F970): | 0.0005 inch | Pass |
| 6. Flexibility (ASTM F137): | | Pass |
| 7. Static Coefficient of Friction (SCOF): | Meets ADA requirements | |
| 8. Lightfastness at 300 hrs. (ASTM F1515): | 0.84 ΔE | Pass |
| 9. Rolling Chair (Phillips Test): | | Pass |
| 10. Chemical Resistance (ASTM F925): | | Pass |
| 11. Heat Stability (ASTM F1514): | 0.55 ΔE | Pass |
| 12. Electrical Resistance (ASNI ESD 57.1): | > 50 x 10 ⁹ ohms | - |
| 13. Electrostatic Propensity (AATCC 134): | 2.75 kv | Pass |

2.04 ACCESSORIES

- A. Adhesives: Use type recommended by flooring manufacturer to suit materials and substrate conditions meeting project requirements.
 - 1. Adhesive Type 1: Transitional pressure sensitive (TPS) type; solvent free and non-flammable.
 - a. Acceptable TPS Adhesive Product: TUF STIK™ 9000
 - 2. Adhesive Type 2: One-component 100% solids cross-linking polymer-based type; solvent free, water free, isocyanate free, and non-flammable.
 - a. Acceptable Polymer Adhesive Product: TUF STIK™ SPX
- B. Concrete Slab Primer: Non-staining type as recommended by flooring manufacturer and meeting project requirements.
 - 1. Contamination Encapsulator Primers: Type recommended to cover identified substrate contamination while providing a bondable surface for adhesives.
 - a. Acceptable Encapsulator Products: Mapei Plan/Patch Plus, Ardex 15, or an Architect acceptable equivalent product meeting requirements.
- C. Patching, Leveling, Underlayment: Use only non-shrinking, water-resistant Portland cementitious compounds.
- D. Welding Rods: Manufacturer's standard or an Architect acceptable equivalent product meeting requirements; color as selected by Architect.
- E. Chemical Weld: Manufacturer's standard or an Architect acceptable equivalent product meeting requirements.
- F. Terminating Reducers: Manufacturer's standard; color as selected.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examination and Acceptance of Conditions in accordance with Division 01, and as follows:
 - 1. Verification of Conditions in accordance with ASTM F710 and as follows:
 - a. Examine subfloor surfaces to determine that they are rigid, smooth, flat, fully adhered, level and permanently dry, clean and free of all foreign materials, including, but not limited to, dust, paint, wax, grease, oils, solvents, cutting/parting compounds, curing compounds, sealers, and residue from old cutback adhesive.
 - b. Verify that concrete flooring substrate is flat to within 1/8 inch in 10 feet (3 mm in 3 m) and within the equivalent of 1/32 inch in 12 inches (0.8 mm in 30 cm).
 - c. Wood Substrates: To be dry, clean, structurally sound, and flat to within 3/16 inch in 10 ft (4.8 mm in 3 m) or the equivalent of 1/32 inch in 12 inches (0.8 mm in 30 cm), well nailed and/or glued, free of voids and with joints that do not exceed 1/16 inch (1.6 mm).
 - d. Hazardous Materials: If existing asbestos or other hazardous containing materials are known or suspected, review and comply with all applicable regulations of AHJ and requirements of Division 01 upon discovery, prior to, and during removal.
 - 2. Pre-installation Testing: Perform bond and moisture tests on concrete subfloors to determine if surfaces are sufficiently cured and dry, and to ascertain presence of curing compound.

WARNING: Do NOT use curing compounds on concrete subfloors scheduled for installation of resilient tile flooring.

- a. Moisture Testing - Concrete: For concrete substrates, perform testing to ensure installation requirements of both Resilient Tile Flooring and adhesive manufacturers are met.

NOTE: If a concrete sealer was used, break bond past sealer for accurate reading.

- 1). Perform relative humidity (RH) tests using in situ probes in accordance with ASTM F2170.

NOTE: TUF STIK 9000 and TUF STIK SPX adhesives may be installed in conditions up to a maximum 90% RH.

- 2). Perform anhydrous calcium chloride tests in accordance with ASTM F1869.

NOTE: TUF STIK 9000 adhesive requires moisture levels at or below 8 psf over 24 hours.

TUF STIK SPX adhesive requires moisture levels at or below 10 psf over 24 hours.

- b. pH Test: For concrete substrates, perform alkalinity testing to verify pH levels meet requirements of flooring adhesive manufacturer and ASTM F710.

NOTE: TUF STIK 9000 adhesive requires pH levels of between 5 and 9.

TUF STIK SPX adhesive is unaffected by slab alkalinity.

- c. Perform bond tests periodically throughout project in accordance with ASTM F710 to determine adhesive compatibility to flooring substrate.
 - d. Moisture Testing - Wood: For wood substrates, perform pin meter readings to verify maximum 14 percent moisture content with all readings to be within 2 percent of each other.
3. Evaluation and Assessment:
 - a. Submit moisture and concrete pH tests to Flooring Distributor / Installer prior to ordering flooring product.
 - b. Proceed with installation only after unsatisfactory conditions have been corrected.
 - 1). Do NOT allow Resilient Tile Flooring work to proceed until subfloor substrate surfaces meet manufacturer requirements for each product to be installed; and are acceptable to the Architect and Flooring Distributor-Installer.
 - 2). Indicate each adverse condition and test result in writing to Architect and Flooring Distributor-Installer.
 - 3). If test results exceed limitation, flooring installation shall not proceed until corrective action has been completed and new tests indicate requirements have been met.

3.02 PREPARATION

- A. Preparation in accordance with manufacturers printed instructions, ASTM F710, Division 01 requirements, and as follows:
 1. Protection of In-Place Conditions:
 - a. Close areas to traffic and to other work until flooring is firmly set.
 - 1). When using acrylic or epoxy adhesives, do NOT allow flooring to have foot traffic for 24 hours. Do NOT allow use of heavy fixtures or rolling carts on the floor for 72 hours.
 - a). If traffic is necessary, cover floor with approved plywood protection.
 - b. Where solvent based adhesives are used, provide safety type spark-proof fans when natural ventilation is not adequate.
 - 1). Do NOT install floor covering over expansion joints.
 - 2). Do NOT install floor covering over existing tile flooring without using an approved underlayment to cover tile seams.
 2. Surface Preparation:
 - a. Acceptable Subfloor Substrates: APA grade underlayment plywood, association grade particleboard, OSB, cork underlayment, existing well-bonded resilient flooring, terrazzo, cementitious and anhydrite screeds, concrete, and radiant heated subfloors where surface temperatures do NOT exceed 85°F (29.40°C).
 - 1). Provide minimum BC grade plywood or other panel type underlayment acceptable to flooring and adhesive manufacturers in accordance with ASTM F1482.

WARNING: When adhering panel underlayment, avoid using urea-formaldehyde based interior glues to help reduce indoor air pollution.

- a). Luan wood boards and panels are NOT acceptable.
- 2). Required Concrete Subfloor Substrate Properties:
 - a). Minimum Compressive Strength: 3,000 psi (20.7 MPa)
 - b). Concrete Mix Water/Cement Ratio: < 0.45
 - c). Minimum Density: 115 pcf (1,842 kg/m³)
 - d). Lightweight concrete NOT acceptable when less than 115 pcf (1,842 kg/m³)
 - i. Place a minimum 1 inch (25 mm) topping of ≥ 140 pcf (2,243 kg/m³) normal weight concrete, or an Architect and Flooring Distributor / Installer acceptable panel type underlayment. Coordinate with Architect.
 - e). Slab-on-Grade Permeance: ≤ 0.1 perm
 - i. Provide a minimum 0.010 inch (10 mil or 254 micron) thick moisture vapor retarder.
- b. Where leveling is required, apply latex type underlayment in two or more applications. Apply compound in accordance with manufacturer's printed instructions.

WARNING: Self-leveling underlayments can have very high moisture content and require up to 10 days curing time.

Do NOT fill expansion and isolation joints with patching compound or cover with resilient flooring. Use an expansion joint covering system.

- 1). Use only non-shrinking, water-resistant Portland cementitious patching compounds.
- 2). Gypsum-based patches and compounds are NOT acceptable as resilient flooring underlayment.
3. Demolition / Removal: Remove all debris, sand, and other foreign materials or substances that might prevent adhesive bond or otherwise cause flooring installation failure.

WARNING: The presence of foreign materials or substances on the subfloor substrate can result in flooring failure from lack of adhesion, telegraphing or bleed through.

- a. Mechanically sand, scarify, abrade, cut, or grind subfloors to remove exceptionally porous, soft or dusty concrete, mortar, rust, paint, wax, and other non-bonding type surface irregularities or contamination, or to achieve required substrate flatness in accordance with ASTM D4259.
- b. When floor substrate contamination is not removable, cover with an acceptable encapsulating primer product prior to beginning floorcovering installation.

WARNING: The use of solvent-based adhesive removers is NOT recommended.

3.03 INSTALLATION - RESILIENT TILE FLOORING

NOTE: Contact Shannon Specialty Floors at **800-522-9166** for complete installation instructions.

- A. Install **T3™** Luxury Vinyl Tile flooring and accessories in accordance with manufacturer's current printed instructions, Division 01, and the following:
 1. Lay out floor tile as indicated by the Drawings or, if not indicated, starting from center-of-the-floor and marking vertical and horizontal lines across the floors at the center of the walls. Measure the squareness of the marked lines, and then begin to work from the center outwards, leaving a 0.12 inch (3 mm) expansion gap along the perimeter between the flooring and walls.
 - a. Ensure lines are square.
 - b. Field of tiles to be installed with directional marking on back all aligned in the same direction or in a quarter-turned fashion.
 - c. Linear patterns may not align exactly.
 - d. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.

- e. Adjust as necessary to accommodate door openings.
- f. Locate joints in tile surfaces directly above joints in concrete substrates.
- 2. Match floor tile for color and pattern by selecting tile from cartons in the same sequence as manufactured and packaged, if so numbered.
 - a. When installing multiple dye lots, 'shuffle' the tiles to mix the dye lots, creating a random look, or use the different lots in different areas.
 - b. Collect, store, and recycle broken, cracked, chipped, or deformed tile.
- 3. Scribe, cut and fit resilient tile flooring to butt neatly and tightly to vertical surfaces and permanent fixtures including permanent fixtures, built-in furniture and cabinets, pipes, outlets and permanent columns, walls and partitions. Make floor tile tight to door bucks.
- 4. Extend floor tile into toe spaces, door reveals, closets, and similar openings.
 - a. Extend floor tile to center of door openings.
- 5. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tile as marked on substrates.
 - a. Use chalk or other nonpermanent, non-staining marking device.

WARNING: Do NOT use or lay over magic markers or similar instruments. Shannon Specialty Floors will not be responsible for claims related to transferable markers.

- 6. Expansion Joints: Locate expansion joints and other movement joints, including control, contraction, and isolation joints, where indicated prior to installation of adhesive and tile.
 - a. Do NOT fill movement joints with patching compound or cover with resilient flooring.
 - b. Install movement joint systems in accordance with manufacturers' instructions and Division 07.
- 7. Adhesive: Apply adhesive with recommended trowel and lay tile as recommended, tightly cementing tile to sub-base without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, or other surface imperfections.
- 8. Roll installed resilient flooring with 75-100 lb. (34 to 45 kg) rollers as recommended by resilient tile flooring and adhesive manufacturers.

NOTE: TUF STIK™ SPX adhesive is recommended by the Flooring Distributor for use under hospital beds or border pieces.

NOTE: Edit to use ACRYLIC adhesive verbiage above or EPOXY adhesive language below, deleting the one not chosen.

3.04 FIELD QUALITY CONTROL

- A. Site Tests and Inspections: In accordance with Division 01, and as follows:
 - 1. Inspect floor installation for non-conforming work including, but not limited to, the following:
 - a. Improper substrate preparation as indicated by:
 - 1). Buckling or telegraphing
 - 2). Air blisters, buckles, and dirt or debris under the resilient flooring
 - b. Lack of adequate adhesion
 - 1). Loose edges or seams
 - 2). Edge curling
 - c. Adhesive on top of the flooring
 - d. Wide or too tight joints
 - e. Damaged tile flooring as indicated by dents, splits, cuts, cracks, punctures, melting, or burn marks.

3.05 CLEANING

- A. Perform the following initial cleaning operations immediately upon completion of resilient flooring.
 - 1. Sweep or vacuum floor thoroughly to remove any loose dirt, dust and other foreign materials.

2. Scrub floor surface using a buffing machine with a 450 or less RPM maximum speed along with a solution of lukewarm water and mild stripper (pH 9 maximum).
 - a. After scrubbing is complete, wet-vac surface with heavy-duty commercial wet vacuum.
 - b. Rinse floor thoroughly with clean lukewarm water and again wet-vac surface to remove all excess water.
3. Do NOT scrub floor with steel wool pads, wire brushes, aggressive floor cleaners or cleansers, which can cause severe scratching and damage to the floor surface.

WARNING: Vinyl floors are known to develop yellow/orange stains from asphalt roadways, pine oil, iodine, high alkaline detergents with a pH over 12, and quaternary and phenolic detergent disinfectants that are cationic surface active when left on floors over a period of time.

- B. Provide Final Cleaning immediately prior to Substantial Completion inspection in accordance with Division 01 requirements.

3.06 CLOSEOUT ACTIVITIES

- A. Substantial Completion Requirements in accordance with Division 01 requirements:
 1. Perform demonstration and training of maintenance procedures with Owner's designated personnel.
 2. Complete and submit required sustainable design closeout documentation.

3.07 PROTECTION

- A. Comply with Division 01 and manufacturer's instructions to protect resilient tile flooring against damage during construction period until date of Final Completion or Owner occupancy, whichever occurs first.
 1. Restrict light foot traffic and heavy rolling loads as recommended by resilient tile flooring and adhesive manufacturers.
 2. Protect floor from traffic before and after installation in accordance with resilient tile flooring and adhesive manufacturers' instructions.
 - a. Remove installed protection immediately prior to Substantial Completion inspection.
 - b. Replace protection after inspection and remove just prior to Final Completion or Owner Occupancy, whichever is first.

3.08 MAINTENANCE

- A. Initial Maintenance in accordance with flooring manufacturer's written instructions and as follows:
 1. Begin initial maintenance only after the adhered resilient tile flooring has been properly cured and bonded to the subfloor.
 2. When floor adhesive is fully cured, sweep and lightly damp mop with well wrung mop.
 3. Wait 72 hours before performing regular maintenance cleaning.

NOTE: Be sure to obtain the latest version of this Guide Specification.

This Guide Specification is not a complete document ready for use but must be edited by a professional specifier or A/E to modify it to meet specific project requirements.

The A/E professional stamping and the contracting parties of the Contract Documents are responsible for the accuracy of specification sections issued in the Project Manual, including any use of this resilient flooring guide specification.

TEKNOFLOR SHALL NOT BE LIABLE FOR DAMAGES ARISING OUT OF THE USE OF THIS GUIDE SPECIFICATION.