**DIVISION 09 - FINISHES  
SECTION 09 65 00 - RESILIENT FLOORING**

This document is provided to assist in the preparation of a Project or Master Specification and has been formatted in accordance with the Construction Specifications Institute (CSI)’s MasterFormat®.

1. **GENERAL**
   * + 1. **GENERAL PROVISIONS**
          1. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.
       2. **DESCRIPTION OF WORK**
          1. **Work Included:** Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:

Solid Vinyl Tile Flooring

Substrate preparation.

* + - * 1. **Related Work:** The following items are not included in this Section and are specified under the designated Sections:

Section 03 30 00 CAST-IN-PLACE CONCRETE for concrete substrate; slab surface tolerances;

Section 06 10 00 ROUGH CARPENTRY for plywood substrate and surface tolerances.

Section 09 69 00 ACCESS FLOORING for resilient floor covering for access panels.

* + - * 1. **References (Industry Standards):**

ASTM International (ASTM):

ASTM D2047 Standard Test Method for Static Coefficient of Friction as Measured by the James Machine

ASTM E648 Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source

ASTM E662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials

ASTM F137 Standard Test Method for Flexibility of Resilient Floor Covering with Cylinder Mandrel Apparatus

ASTM F386 Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces

ASTM F710 Standard Practice for Preparing Concrete to Receive Resilient Flooring

ASTM F925 Standard Test Method for Resistance to Chemicals of Resilient Flooring.

ASTM F970 Standard and Modified Test Method for Static Load Limit.

ASTM F1482 Standard Guide to Wood Underlayments products Available for Use Under Resilient Flooring

ASTM F1514 Standard Test Method for Measuring Heat Stability of Resilient Flooring by Color Change

ASTM F1515 Standard Test Method for Measuring Light Stability of Resilient Flooring by Color Change

ASTM F1700 Standard Specification for Solid Vinyl Floor Tile

ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emissions Rate of Concrete Subfloor using Anhydrous Calcium Chloride.

ASTM F1914 Standard Test Method for Short-Term Indentation and Residual Indentation or Resilient Floor Covering

ASTM F2055 Standard Test Method for Size and Squareness of Resilient Floor Tile by Dial Gauge Method

ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs using in situ Probes

ASTM F2199 Standard Test Method for Determining Dimensional Stability of Resilient Floor Tile After Exposure to Heat

National Fire Protection Association (NFPA):

NFPA 253 Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Energy Source

NFPA 258 Test Method for Specific Density of Smoke Generated by Solid Materials

* + - * 1. **General**: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures.
        2. **Product Data:** Submit manufacturer's technical data sheet, care & maintenance document, submittal and/or warranty for each material and accessory proposed for use (available at www.flexcofloors.com).
        3. **Samples:** Submit representative samples of each product specified for verification.
      1. **QUALITY ASSURANCE**
         1. **Manufacturer Qualifications:** Provide resilient flooring materials manufactured in the United States of America by a firm with a minimum of 10 years’ experience with resilient flooring materials of type equivalent to those specified.

Provide resilient flooring products, including wall base, accessories and subfloor preparation products from one manufacturer to ensure color matching and compatibility.

Manufacturer shall be capable of providing technical training and technical field service representation.

* + - * 1. **Installer Qualifications:** Installer must be professional, licensed, insured and acceptable to manufacturer of resilient flooring materials. Project Managers or Field Supervisors must be INSTALL (International Standards & Training Alliance) certified, CFI (Certified Floorcovering Installers) Certified and/or an FCICA (The Flooring Contractors Association) CIM (Certified Installation Manager) for the requirements of the project.
        2. **Sustainable Design Requirements:**

Manufacturer must have ISO 14001:2015 Environmental Management System certification.

Vinyl flooring and accessories that are easily cleaned and do not require coatings and stripping, or use chemicals that may be hazardous to human health.

Supply all required products that are CA 01350 compliant.

Vinyl flooring that is free of materials known to be teratogenic, mutagenic or carcinogenic.

Vinyl flooring that does not contain any halogens.

Vinyl flooring that contains no asbestos.

* + - 1. **DELIVERY, STORAGE, AND HANDLING**
         1. Deliver materials in labeled packages. Store and handle in strict compliance with manufacturer's recommendations. Protect from damage due to weather, excessive temperatures, and construction operations.
         2. Deliver materials sufficiently in advance of installation to condition materials to the required temperature for 48-hours prior to installation.
      2. **PROJECT CONDITIONS**
         1. Maintain temperature and humidity at service levels or the ambient temperature must remain steady (± 10° F) and be between 65° F and 85° F for at least 48-hours prior to, during and after installation. The ambient relative humidity is recommended to be between 40% and 65% RH; avoid dew point conditions.
      3. **WARRANTY**
         1. Provide manufacturer’s standard limited commercial warranty to cover manufacturing defects.

1. **PRODUCTS**

*Note To specifier: remove and ammend sections as neccesary.*

* + - 1. **MANUFACTURER**
         1. **Basis-of-Design:** Flexco Floors 1401 E. 6th St, Tuscumbia, AL 35674. 1-800-633-3151
         2. **Substitutions:** No substitutions permitted.
      2. **RESILIENT solid vinyl tile Flooring**
         1. **Delane/Geodesy Solid Vinyl Tiles:**

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| --- | --- | --- |
|  | Material Specification:  ASTM F1700 | Class 1  Type A |
|  | Slip Resistance:  ASTM D2047 | >0.6 |
|  | Flammability/Critical Radiant Flux:  ASTM E648 / NFPA 253 | Class 1, > 0.45 W/cm2 |
|  | Smoke Density:  ASTM E662/NFPA 258 | Passes <450 |
|  | Flexibility  ASTM F137 | Passes; 1” Mandrel |
|  | Material Thickness:  ASTM F386 | Passes |
|  | Material Sizes: Nominal Dimensions | 0.080” and 1/8” (0.125”) All Sizes  12” x 12 ” (304.8mm x 304.8mm)  12” x 24” (304.8mm x 609.6mm)  24” x 24” (609.6mm x 609.6mm) Optional: Pre-Groove for Weld  36” x 36” (914.4mm x 914.4mm) Optional: Pre-Groove for Weld |
|  | Weight per Tile | 12” x 12” (0.76lbs - 0.080”, 1.2lbs - 1/8”)  12” x 24” (1.44lbs - 0.080”, 2.25lbs - 1/8”)  24” x 24” (3.1lbs - 0.080”, 4.78lbs - 1/8”)  36” x 36” (6.8lbs - 0.080”, 10.8lbs - 1/8”) |
|  | Quantity per Carton | 12” x 12” (70 tiles - 0.080”, 45 tiles - 1/8”)  12” x 24” (26 tiles - 0.080”, 16 tiles - 1/8”)  24” x 24” (20 tiles - 0.080”, 14 tiles - 1/8”)  36” x 36” (10 tiles - 0.080”, 6 tiles - 1/8”) |
|  | Available Colors | Geodesy, 14 Colors  Delane, 20 Colors |
|  | Finish | Smooth |
|  | Chemical Resistance:  ASTM F925 | Excellent, List of Chemical Available |
|  | Static Load Limit:  ASTM F970 | Passes, 250 PSI  Modified, Max. Weight 2500 PSI |
|  | Heat Stability:  ASTM F1514 | Passes |
|  | Light Stability:  ASTM F1515 | Passes |
|  | Short Term and Residual Indentation:  ASTM F1914 | Passes <8% |
|  | Size and Squareness:  ASTM F2055 | Passes |
|  | Dimensional Stability:  ASTM F2199 | Passes, 0.020” maximum |
|  | LEED v2009 IEQ Credit 4.1 | Qualifies |
|  | LEED v2009 IEQ Credit 4.3 | Qualifies |
|  | FloorScore | Qualifies |

* + - 1. **INSTALLATION PRODUCTS:**
         1. **Adhesives and Accessories**

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|  | Product Name:  Product Description:  Product Usage: | **Excelsior AW-510**  Acrylic Wet-Set Adhesive  For installations over porous substrates only. Excellent sheer strength, harder set adhesive adding to dimensionally stable products, great under rolling loads.  90% RH, 6lbs MVER / 7-10 pH |
|  | Product Name:  Product Description:  Product Usage: | **Excelsior MS-700**  Modified Silane Wet-Set Adhesive  For installations over porous and non-porous substrates. Excellent green grab, sheer strength, bond strength and great under rolling loads. Good for interior and exterior applications. No water, solvents or VOC’s.  95% RH, 10lbs MVER / no pH limit. |
|  | Product Name:  Product Description:  Product Usage: | **Excelsior EW-710**  Epoxy Wet-Set Adhesive  For installation or porous and non-porous substrates. Excellent green grab, sheer strength. Superior bond strength and under heavy rolling loads. Good for interior and exterior applications. No-flammable and Low VOC’s.  90% RH, 6lbs MVER / 7-10 p |
|  | Product Name:  Product Description:  Product Usage: | **Vinyl Weld Bead**  Vinyl weld bead, 4mm (0.160”) in diameter. Coordinating colors to match tile.  Weld seams between tiles for a seamless floor. |

* + - 1. **MAINTENANCE PRODUCTS:**
         1. **Cleaners**

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|  | Product Name:  Product Description:  Product Usage | **Excelsior NC-900**  All-Purpose pH Neutral Cleaner  For initial, daily or routine maintenance and spot cleaning. |

* + - * 1. **Finishes**

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|  | Product Name:  Product Description:  Product Usage | **Excelsior MF-940**  Acrylic Matte Floor Finish  A durable scuff resistant Acrylic floor finish developed for rubber and vinyl floorings to add a long lasting Matte finish. |
|  | Product Name:  Product Description:  Product Usage: | **Excelsior GF-950**  Acrylic Gloss Floor Finish  A durable scuff resistant Acrylic floor finish developed for rubber and vinyl floorings to add a long lasting Gloss finish. |

* + - * 1. **Finish Removers**

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|  | Product Name:  Product Description:  Product Usage | **Excelsior FR-920**  All-Purpose Finish Remover  Highly concentrated finish remover developed to remove topically applied floor finishes from vinyl resilient flooring. |

1. **EXECUTION**
   * + 1. **General**
          1. **General Contractor Responsibilities:**

Supply a safe, climate controlled building and subfloor as detailed in Flexco Technical Data Sheets.

Ensure substrate meets the requirements of ASTM F710, Flexco Technical Data Sheets and Excelsior Technical Data Sheets.

Provide a secure storage area that is maintained permanently or temporarily at normal operating temperature and humidity conditions between 65° F and 85° F and between 40% and 65% relative humidity, for at least 48-hours prior to and during the application of the flooring, so the flooring contractor can acclimate the flooring materials per manufacturer’s instructions.

Provide an installation area that is weather tight and maintained either permanently or temporarily at ambient service temperature and humidity. Normal operating temperature and humidity conditions are between 65° F and 85° F and between 40% and 65% relative humidity, for at least 48-hours prior to and during the application of the flooring per the manufacturer’s instructions.

Ensure areas with direct prolonged exposure to sunlight are protected with protective UVA/UVB restrictive coatings or films.

Areas of the flooring that are subject to direct sunlight through doors or windows should have them covered using blinds, curtains, cardboard or similar for the time of the installation and 72-hours after the installation to allow the adhesive to cure. Note: These areas should be installed using wet adhesives only.

Conduct initial maintenance prior to final usage per the Flexco Care & Maintenance Documents. Do not conduct initial maintenance until adhesive has cured per the adhesive technical data.

* + - * 1. **Flooring Contractor Responsibilities:**

Provide trained installers that are professional, licensed, insured and acceptable to manufacturer of resilient flooring materials.

Ensure installers or installation teams meet one of the following requirements:

Have completed INSTALL (International Standards & Training Alliance) or CFI (Certified Floorcovering Installers) training programs and/or are certified by INSTALL or CFI.

Are being supervised by Project Managers or Field Supervisors that are INSTALL (International Standards & Training Alliance) certified, CFI (Certified Floorcovering Installers) Certified and/or an FCICA (The Flooring Contractors Association) CIM (Certified Installation Manager).

Follow all requirements in the appropriate Flexco and/or Excelsior Technical Data Sheets, Care & Maintenance Documents, Warranties and other technical documents or instructions.

* + - 1. **EXAMINATION**
         1. **General:** Follow guidelines laid out in Division 01, Section 01 71 00 – Examination and Preparation, as well as Section 01 43 00 – Quality Assurance.
         2. **Verification of Conditions:** Inspect all substrates to ensure they are clean, smooth, permanently dry, flat, and structurally sound. Confirm all areas are properly sealed and acclimated per manufacturer’s requirements.
         3. **Verification of Products:** In accordance with manufacturer’s installation requirements, visually inspect material for size, color or visual defects prior to installing. Any material that is incorrect or visually defective shall not be installed.
      2. **SUBSTRATE PREPARATION**
         1. **General:** Follow guidelines laid out in Division 01, Section 01 71 00 – Examination and preparation. All work required ensuring substrate or subfloor meets manufacturers’ guidelines are the responsibility of the general contractor.
         2. **Preparation:** Ensure substrate meets the requirements of ASTM F710 for concrete substrates and ASTM F1482 for wood substrates. Refer to Flexco Technical Data Sheets and Excelsior Technical Data Sheets. Substrates must be free of visible water or moisture, dust, sealers, paint, sweeping compounds, curing compounds, residual adhesives and adhesive removers, concrete hardeners or densifiers, solvents, wax, oil, grease, asphalt, visible alkaline salts or excessive efflorescence, mold, mildew and any other extraneous coating, film, material or foreign matter.
      3. **INSTALLATION**
         1. **General:** Follow all relevant guidelines detailed in Division 01.
         2. **Details:** For detailed installation instruction please refer to Flexco product specific data sheets that refer to, substrate, prep, product limitations, installation patterns/layouts and jobsite requirements. Also refer to Excelsior for all adhesive requirements, conditions, product limitations and trowel sizes. Additional information is available at [www.excelsiorproducts.net](http://www.excelsiorproducts.net).
         3. **Interface with Other Work:** If caulking or sealing is required after installation, please contact the manufacturer for a suitable, matching caulk.
      4. **CLEANING & MAINTENANCE**
         1. **General**: Clean up installation area and sweep, dust or wipe material to remove any dirt, dust or debris.
         2. **Initial Maintenance:** Conduct initial maintenance per the manufacturer’s recommended procedures stated in the Maintenance Documents. All documentation is available upon request or from the [www.flexcofloors.com](http://www.flexcofloors.com) website. Excelsior Cleaning products are the recommended products for use. All can be found linked to the product on the [www.flexcofloors.com](http://www.flexcofloors.com) website or at [www.excelsiorproducts.net](http://www.excelsiorproducts.net) website.
         3. **Regular Maintenance:** Conduct maintenance on regular intervals as needed. Insufficient cleaning will reduce the wear life of the flooring. The amount of maintenance depends directly upon the amount of dirt and particulates the floor is subjected to.
         4. **Protection:** Make sure all table and chair legs have the proper protection to avoid premature wear and excessive scratching. All rolling chairs should be fitted with the proper wheels or chair protectors to avoid premature wear. Always keep table/chair pads and wheels clean and free from debris as a buildup of rocks, sandexcessive dirt can also cause premature wear.
      5. **Closeout Activities**
         1. **General:** Follow all federal, state and local requirements and Division 01 Section 01 76 00 – Protecting Installed Construction and Section 01 78 00 – Closeout Submittal requirements for these activities.
         2. **Protection:** Protect newly installed material with construction grade paper or protective boards, such as Masonite or Ram Board, to protect material from damage by other trades. Be sure all construction debris is swept up and removed prior to the protective material being installed and does not get trapped underneath. Limit usage and foot traffic according to the adhesive's requirements. When moving appliances or heavy furniture, protect wall base from scuffing and tearing using temporary floor protection.

**END OF SECTION**