

**SECTION 09 65 16**  
**RESILIENT SHEET FLOORING**

CSI 3-PART **SHORT-FORM** GUIDE SPECIFICATION USE FOR OUTLINE OR DD SPECIFICATION  
ISSUES.  
EDIT TO SUIT PROJECT

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Work of this Section consists of inlaid patterned resilient sheet vinyl flooring and accessories including, but not limited to:
  - 1. TAKIRON **PATHWAYS Indoor Outdoor** Sheet Vinyl Flooring
  - 2. Indoor Adhesives
  - 3. Outdoor Adhesives
  - 4. Accessories
    - a. Weld rod (weld thread)
    - b. Concrete Moisture Sealer
    - c. Cutback and Adhesive Residue Encapsulator
    - d. Edge Sealer (outdoors & wet area)
- B. Related Documents and Sections: Examine Contract Documents for requirements that directly affect or are affected by Work of this Section. A list of those Documents and Sections include, but is not limited to the following:

**1.2 SUBMITTALS**

- A. Product Data per DIVISION 01: Submit manufacturer's printed descriptions for each specified product.
- B. Shop Drawings per DIVISION 01: Submit keyed location plans, plans indicating resilient sheet flooring type, layout, pattern direction, edge transitions, columns, doorways, enclosing partitions, built-in furniture, cabinets, cutouts, expansion and control joints, and attachment requirements.
- C. Samples per DIVISION 01: Submit printed color charts or material chain for Initial Selection; and two (2) cut 24 x 24 inch (610mm x 610mm) square samples for Final Selection.
- D. Quality Assurance Submittals per DIVISION 01: Test and Evaluation Reports, and Qualification Statements.

**NOTE: Edit LEED Requirements below to suit project.**

- E. Sustainable Design (USGBC [LEED®](#)) Submittals: Submit the following in accordance with the LEED requirements in DIVISION 01:
  - 1. LEED Credit MR, Materials & Resources. Submit completed LEED 2009-NC v.3 Submittal Templates, and other required paperwork as follows:
    - a. MR Credit 2: Recycled Construction Waste Management
      - 1). 1 Point: 50% Recycled or salvaged construction waste diverted from landfill
      - 2). 2 Points: 75% Recycled or salvaged construction waste diverted from landfill.
      - 3). Submit construction waste management plan to achieve these goals.

2. LEED Credit IEQ, Indoor Environmental Quality. Submit completed LEED 2009-NC v.3 Submittal Templates and required paperwork as follows:
  - a. IEQ Credit 4 - Low-Emitting Materials: Adhesive, Flooring, and Floor Coating Finish
    - 1). IEQ Credit 4.1 - Adhesives and Sealants: Adhesive to comply with California's *South Coast Air Quality Management District* (SCAQMD) [Rule 1168](#) ( $\leq 50$  g/l); and aerosol adhesive to comply with Green Seal [GS-36](#) (web spray =  $\leq 55\%$  VOCs by weight).
    - 2). IEQ Credit 4.3 - Resilient Flooring Systems: [FloorScore®](#) certified; OR test data indicating that flooring does NOT exceed chemical VOC and HAP chronic inhalation reference exposure levels (REL's) according to the *Standard Practice For The Testing Of Volatile Organic Emissions From Various Sources Using Small-Scale Environmental Chambers*, including 2004 addenda prepared by the California Dept. of Health Services Section 01350.
- F. Closeout Submittals per DIVISION 01: Operation & Maintenance Data, Executed Warranty Documentation, and Record Documents.

**NOTE: Edit LEED Requirements below to suit project.**

1. Sustainable Design Closeout Documentation: Submit completed USGBC LEED® Submittal [Worksheet Templates](#) for the following credits:
  - a. MR Credit 2
  - b. IEQ Credit 4.1, IEQ Credit 4.3

**NOTE: Edit percentage below to suit scope of project.**

- G. Maintenance Material Submittals - Extra Materials: Submit no less than five (5) percent additional full and unopened rolls of each type and pattern of sheet good used.
- 1.3 QUALITY ASSURANCE
- A. Regulatory Requirements: Class I Critical Radiant Flux Classification per ASTM E648 or NFPA 253.
  - B. Qualifications:
    1. ISO Certified Manufacturer
    2. Installer with a minimum five (5) years of successful in-service performance and experience with installation of similar size and scope. Provide 3 recent project references
    3. Testing Agency meeting ISO/IEC Standard 17025 or ASTM E699 and ASTM E329.
  - C. Source Limitations: Obtain primary resilient tile flooring materials through one source from a single manufacturer, and secondary materials from source recommended by manufacturer of primary materials.

**NOTE: Edit sustainability standards and certifications below to suit project.**

- D. Sustainability Standards and Certifications:
  1. Adhesive and Sealant VOC Limits: According to South Coast Air Quality Management District [Rule 1168](#) and [GS-36](#) for aerosols.
  2. VOC Limits: As tested using U.S. EPA Reference Test Method 24 and in accordance with (per) SCAQMD [Rule 1113](#), SCAQMD [Rule 1168](#), BAAQMD [Regulation 8, Rule 51](#), and California Air Resources Board (CARB).
- E. Field Samples per DIVISION 01: Provide field samples, dry laid, to demonstrate aesthetic effects of materials in situ, assisting the Architect and Owner in making final selections.

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1.4 DELIVERY, STORAGE, AND HANDLING

- A. Delivery, Storage and Handling per industry guidelines, product manufacturer guidelines, and DIVISION 01 requirements.

1.5 FIELD CONDITIONS

- A. Conditions and Measurements: Visit jobsite to verify installation conditions and measurements.
1. Environmental Conditions shall be in accordance with manufacturer's recommendations for each system component, and DIVISION 01 requirements.

1.6 WARRANTY

- A. Manufacturer Warranty. Provide manufacturer's non-prorated **five (5)** year limited warranty to be free from defects in material and workmanship, under normal use and service, to repair or replace all defective sheet flooring including reasonable labor.

PART 2 – PRODUCTS

2.1 MANUFACTURER

- A. Manufacturer List: Subject to compliance with requirements, provide products by the following:
1. TAKIRON, a Flooring Brand of CBC AMERICAS Corp., 2000 Regency Parkway, Cary, NC 27518; Telephone: 919.230.8700; E-mail: [technical@cbcflooring.com](mailto:technical@cbcflooring.com); website: [www.cbcflooring.com](http://www.cbcflooring.com)

**NOTE: Equals or equivalents may not be required and desired, edit paragraph to suit project.**

2. Substitution Limitations: Manufacturers of equivalent products beyond those listed above shall be considered when submitted per DIVISION 01, using CSI Substitution Request Form 1.5C (During the Bidding Phase) or Form 13.1 (After the Bidding Phase.) [link](#)

B. Product Options

1. Flooring Type: TAKIRON [PATHWAYS Indoor Outdoor Sheet Flooring Collection](#)
  - a. TAKIRON **PATHWAYS** Sheet: Class I per NFPA 101
  - b. Size: 6 x 65' 6" feet by 0.10 inches (1.82m x 20m x 2.5mm)
  - c. Color and Pattern: [The Collection](#)
2. Indoor Adhesives
  - a. CBC 5001 High Performance Resilient Flooring Adhesive
  - b. CBC EcoSpray U Universal Spray Adhesive
3. Outdoor & Wet Area Adhesives
  - a. CBC 951 2-Part Reactive Adhesive
4. Indoor Accessories
  - a. TOLI Transition Strip
  - b. Underlayment leveling compound per SECTION 035416
  - c. Expansion joints per SECTIONS 079200 and 079513
  - d. Cleaning products
5. Outdoor & Wet Area Accessories
  - a. Edge Sealer Henkel Terostat MS939 sealant for Indoor wet area and Outdoor Installations

## 2.2 DESCRIPTION

- A. TAKIRON **PATHWAYS Sheet Flooring** have a Type II, Grade 1, inlaid commercial wear layer with embossed, through pattern, flexible PVC design with a Class B fused PVC backing layer.
- B. Sustainability Characteristics

NOTE: Coordinate and edit below to the correct [LEED](#) Version and [Rating](#) selected.

- 1. [USGBC](#) LEED Rating: Comply with project requirements intended to achieve a [LEED 2009-NC v.3](#) Rating, as measured and documented according to the USGBC LEED® Green Building [Rating System](#).
- 2. Applicable LEED® Credits: Performance requirements of the following LEED® Categories and Credits apply to this Section and are met as follows:
  - a. Materials & Resources (MR):
    - 1). MR Credit 2: Recycled Construction Waste Management
      - a). **CBC 5001** adhesive comes packaged in a recyclable PET Pail.
      - b). **EcoSpray** adhesives come packaged in a recyclable cardboard carton and in recyclable aluminum cans.
  - b. Indoor Environmental Quality (EQ):
    - 1). IEQ Credit 4.1, Low-Emitting Materials: Adhesives and Sealants
      - a). Acrylic Adhesive - **CBC 5001** VOC: **0 g/L**
      - b). Acrylic Spray Adhesive - **CBC EcoSpray U** VOC: **0 g/L**
      - c). Epoxy Adhesive – **CBC 951** VOC: **0g/L**
    - 2). IEQ Credit 4.3, Low-Emitting Materials: Carpet and Resilient Flooring Systems
      - a). Takiron **PATHWAYS Sheet Flooring** MAS Project 1001197: MAS Laboratory Certified Green® in accordance with California DHS Section 01350. Passes.

## 2.3 MATERIALS

- A. TAKIRON **PATHWAYS** Sheet per ASTM F1303: Type II, Grade 1, inlaid embossed wearlayer sheet vinyl.
  - 1. Composition: Sheet vinyl formed under heat and pressure from a PVC layer formulated from polyvinyl esters and inorganic filler materials, with a fused PVC backing layer.
  - 2. Roll Size: 6 x 65.5 feet (1.82m x 20m) by 0.100 inches (2.5mm) thick

NOTE: Select 3 and or 4 deleting item not chosen.

- 3. Color and Pattern - TAKIRON **PATHWAYS** Sheet: As selected by Architect from [Manufacturer's standard Collection](#).

## 2.4 ACCESSORIES

- A. Leveling and Patching Compound: Trowelable or pourable (self-leveling) latex-modified, Portland cement based formulation approved by floor covering / adhesive manufacturer for applications indicated. Provided under DIVISION 03.
- B. Expansion Joints: Refer to SECTION 079200 and SECTION 079500 or 079513.

NOTE: Select one of the following adhesive types, deleting that not chosen.

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- C. Indoor Adhesive - Acrylic: CBC 5001, high performance, solvent-free, low odor, acrylic based, high tack type adhesive acceptable to resilient sheet flooring manufacturer to suit flooring product and substrate conditions indicated.
- D. Indoor Adhesive - Acrylic: CBC EcoSpray U universal, solvent-free, low odor, zero-VOC acrylic emulsion spray adhesive with immediate shear after rolling, recommended by floor covering manufacturer for bonding flooring installations over porous and non-porous substrates under heavy static loads (hospital beds).
- E. Indoor – Outdoor Adhesive – CBC 951 Epoxy: 2-part reactive zero-VOC, low odor, heavy-duty epoxy adhesive for bonding indoor (wet area) & outdoor (exterior) flooring installations over porous and non-porous substrates recommended for flooring installations under heavy static loads, areas that are subject to top down water and areas exposed to extremes of temperature.

**RED NOTE: Use of Non-recommended adhesives with TAKIRON MT sheet vinyl products will void TAKIRON Warranty adhesion claims.**

- F. Seam Sealing:
  - 1. Heat Weld Rod: TAKIRON Welding Thread, 4 mm diameter weld rod as recommended by the sheet-flooring manufacturer for the product(s) specified with color as selected by Architect.
  - 2. Cold Weld: TOLI Cold Weld. DO NOT Cold Weld with 2-Part reactive adhesives.

### PART 3 – EXECUTION

#### 3.1 FIELD CONDITIONS

- A. Conditions and Measurements: Visit jobsite to verify installation conditions and floor measurements.
  - 1. Environmental Conditions per manufacturer’s recommendations and DIVISION 01.

**WARNING: Use of portable heaters may cause failure.**

#### 3.2 EXAMINATION, PREPARATION AND INSTALLATION

- A. Proceed with installation only after unsatisfactory conditions have been corrected.
  - 1. Verify conditions and test substrates as recommended to meet requirements.
- B. Prepare substrates to ensure proper adhesion of resilient flooring system per adhesive manufacturer’s written instructions.
- C. Install resilient flooring per manufacturer’s current [Installation Guide](#).
- D. Expansion Joints: Locate movement joints where indicated prior to installation of adhesive and resilient flooring and use appropriate expansion joint cover.
- E. Protect flooring from foot traffic for time specified for adhesive before and after installation per adhesive manufacturer’s instructions to allow proper set up time.
- F. Protect flooring from heavy traffic, point or rolling loads for a minimum of 48 hours or longer depending on conditions, after installation, when installed using CBC 5001 or CBC 951 Epoxy adhesive.
- G. Wait 48 hours before wet cleaning.

#### 3.3 FIELD QUALITY CONTROL

- A. Site Tests and Inspections in accordance with DIVISION 01: Inspect floor installation for non-conforming work including lack of adequate adhesion, adhesive overspray, and indications of improper substrate preparation.

### 3.4 CLEANING, MAINTENANCE AND PROTECTION

- A. Provide Progress Cleaning, Final Cleaning and Initial Maintenance in accordance with manufacturer's [Maintenance Guide](#), DIVISION 01 requirements, and the following:
1. Protect newly installed flooring from traffic for specified time on adhesive label.
  2. Protect new installed flooring from rolling traffic and point loads for a minimum of 48 hours or longer based on ambient conditions and adhesive cure time.
  3. Provide surface protection for installed product and use plywood or rigid panels to roll or move all heavy objects across the flooring before and after owner's acceptance.
  4. Provide waste management and disposal in accordance with DIVISION 01 requirements.
    - a. Collect and recycle all flooring and adhesive cardboard cartons and each **CBC EcoSpray U** spray adhesive 100% recyclable aluminum canister.
  5. Permit only light damp mopping with well wrung mop during the first 3-4 days after installation.

**RED NOTE: Do NOT wet mop until adhesive has set.**

### 3.5 CLOSEOUT ACTIVITIES

- A. Substantial Completion Requirements per DIVISION 01 requirements: Closeout procedures, demonstration and training, and sustainable design closeout documentation.

END OF  
SECTION

**NOTE: Be sure to obtain the latest version of this Guide Specification.  
This Guide Specification is not a completed document ready for use. It must be edited, deleting,  
adding, or modifying text, as required to suit project requirements.**

**The professional stamping and the contracting parties of the Contract Documents are responsible for  
the accuracy of issued project specifications, including any use of this TAKIRON sheet flooring  
TAKIRON AND CBC AMERICAS CORP SHALL NOT BE LIABLE FOR DAMAGES ARISING OUT  
OF THE USE OF THIS GUIDE SPECIFICATION.**