

SECTION 09 65 16.23
RESILIENT TILE FLOORING

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

PART 1 - GENERAL

1.1 SUMMARY

- A. Work of this Section consists of resilient solid luxury vinyl printed pattern tile flooring and accessories including, but not limited to:
 - 1. Asento floors **Woods** Luxury Vinyl Tile (LVT)
 - 2. Asento floors **Stones** Luxury Vinyl Tile (LVT)
 - 3. Adhesive
 - 4. Floor Finish Options
 - 5. Accessories: Transition strips, expansion joint covers, tools, equipment, and all other items necessary for a complete installation.
- B. Related Documents and Sections: Examine Contract Documents for requirements that directly affect or are affected by Work of this Section including GENERAL AND SUPPLEMENTARY CONDITIONS, DIVISION 01 - GENERAL REQUIREMENTS sections, and affected technical sections.

NOTE: Underlined blue text in the WORD.doc file is [hyperlinked](#) to a resource webpage. Click to open.

1.2 SUBMITTALS

- A. Product Data in accordance with DIVISION 01: Submit manufacturer's printed descriptions of materials, components and systems, performance criteria, use limitations, recommendations, installation information, and the following:
- B. Shop Drawings in accordance with DIVISION 01: Submit keyed location plans, plans indicating tile type, layout, pattern direction, edge transitions, columns, doorways, enclosing partitions, built-in furniture, cabinets, cutouts, expansion and control joints, and attachment requirements.
- C. Samples in accordance with DIVISION 01: Submit printed color charts or material chain for Initial Selection; and three (3) full size tile samples for Final Selection.
- D. Quality Assurance Submittals in accordance with 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 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.
 - b. MR Credit 4 - Recycled Content: Floor covering 100% postconsumer recycled content + 50% of preconsumer content, listed separately.
 - 1). 1 Point: 10% Recycled Content
 - 2). 2 Points: 20% or more Recycled Content
 - 3). Submit product data indicating percentage by weight of recycled content with a statement indicating costs for each.

2. LEED Credit IEQ, Indoor Environmental Quality. Submit completed LEED Submittal Templates and required paperwork as follows:
 - a. IEQ Credit 4 - Low-Emitting Materials:
 - 1). IEQ Credit 4 Group 1 - Adhesives and Sealants: Adhesive to comply with California's *South Coast Air Quality Management District* (SCAQMD) [Rule 1168](#) (≤ 50 g/l); and aerosol adhesive to comply with Green Seal [GS-36](#) (web spray = $\leq 55\%$ VOCs by weight).
 - 2). IEQ Credit 4 Group 2 - Paints and Coatings: Floor coatings to comply with SCAQMD [Rule 1113](#) requirements.
 - 3). IEQ Credit 4 Group 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 in accordance with 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, MR Credit 4
 - b. IEQ Credit 4 Group 1, Group 2 and Group 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 cartons of each type and pattern of tile used.
- 1.3 QUALITY ASSURANCE
- A. Regulatory Requirements: Class I Critical Radiant Flux Classification in accordance with ASTM E648 or NFPA 253; and 450 or less Smoke Density in accordance with ASTM E662 or NFPA 258.
 - B. Qualifications:
 1. ISO Certified Manufacturer
 2. Installer: Minimum five (5) years of successful in-service performance and experience with installations of similar size and scope. Provide 3 recent project references.
 3. Testing Agency: Meets requirements of ISO/IEC Standard 17025, or ASTM E699 and ASTM E329.
 - C. Source Limitations: Obtain primary resilient flooring system 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 in accordance with DIVISION 01: Provide field samples, dry laid, to demonstrate aesthetic effects of materials in situ, assisting the Architect and Owner in making final selections.
- F. Mock-Up in accordance with DIVISION 01: Construct flooring mock-up as indicated by the Drawings utilizing final specified and approved submittal materials demonstrating the anticipated

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range of materials, workmanship and finish expected. Mock-up may be incorporated into final installation.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Delivery, Storage and Handling in accordance with recommended 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. Floor Covering Material Warranty:
1. Asento 20 Mil Wear Layer: Provide manufacturer's non-prorated **ten (10)** year limited warranty to be free from defects in material and workmanship, under normal use and service, to repair or replace all defective tile flooring including reasonable labor, beginning on the date of invoice.
 2. Asento 8 Mil Wear Layer: Provide manufacturer's 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 tile flooring, beginning on the date of invoice.
 - a. Year One – Includes 100% of reasonable labor.
 - b. Year Two – Includes 50% of reasonable labor.
 - c. Years Three to Five – No Labor costs are covered.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Floor Covering Manufacturer List: Subject to compliance with requirements, provide products by the following:
- a. Halo Floors, a Division of CBC AMERICA LLC, 2000 Regency Parkway, Cary, NC 27518; Telephone: 919.230.8700; E-mail: technical@cbcflooring.com website: www.cbcflooring.com

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

2. Substitution Limitations: Manufacturers of equivalent products beyond those listed above shall be considered when submitted in accordance with 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:
 - a. Asento by Halo **Wood** Plank: Interior Floor Finish Class I per NFPA 101
 - b. Asento by Halo **Stone** Tile: Interior Floor Finish Class I per NFPA 101
2. Adhesive:
 - a. Trowel Applied Acrylic: CBC 5001 High Performance Resilient Flooring Adhesive - 85% RH and 10 pH limit
 - b. Spray Acrylic: CBC EcoSpray U Universal Spray Adhesive - 90% RH and 11 pH limit
3. Floor Finish and Maintenance System:
 - a. Cleaner / Maintainer maintenance system
 - b. Conventional acrylic finish maintenance system
4. Flooring Accessories
 - a. Halo Divider Strips – 3/16 in x 36 in (5 mm x 914 mm)
 - b. Halo Grout – 3/16 in x 36 in (5 mm x 914 mm)

5. Installation Accessories
 - a. Underlayment leveling compound per SECTION 035416
 - b. Expansion joints per SECTIONS 079200 and 079513

2.2 DESCRIPTION

- A. Asento **Woods** and **Stones** are Class III, solid luxury vinyl tile (LVT) made from polyvinyl esters and inorganic fillers materials formed under heat and pressure, printed with a pattern, and cut to create resilient plank or tile flooring in a variety of colors and patterns.
- 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 Platinum 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 U** adhesive come packaged in a recyclable cardboard carton and in recyclable aluminum cans.
 - 2). MR Credit 4: Recycled Content
 - a). Asento by HALO **Woods** LVT Flooring contains 50% post-consumer + 1/2 15% pre-consumer, for a **57.5%** calculated recycled content.
 - b). Asento by HALO **Stones** LVT Flooring contains 50% post-consumer + 1/2 15% pre-consumer, for a **57.5%** calculated recycled content.
 - b. Indoor Environmental Quality (EQ):
 - 1). IEQ Credit 4 Low Emitting Materials - Group 1: Adhesives and Sealants
 - a). Acrylic Trowel Adhesive - **CBC 5001** VOC: **0 g/L**
 - b). Acrylic Spray Adhesive - **CBC EcoSpray U** VOC: **0 g/L**
 - c). Epoxy Adhesive: **CBC 951** VOC: **0 g/L**
 - 2). IEQ Credit 4 Low-Emitting Materials – Group 2: Paints and Coatings
 - a). High Definition & Performance Polyurethane Flooring Finish - **Dr. Schutz** VOC: **<100 g/L**; Meets **GEV-EMICODE® EC1** German “very low emission” Ecolabel
 - 3). IEQ Credit 4 Low-Emitting Materials – Group 3: Resilient Flooring Systems
 - a). Asento by Halo **Woods** LVT Flooring: MAS Green Certified under certificate MAS-1200196 MAS-1200196.
 - b). Asento by Halo **Stones** LVT Flooring: MAS Green Certified under certificate MAS-1200196 MAS-1200196..
 - c). **CBC EcoSpray U** is Green Label Plus Certified.

2.3 MATERIALS

- A. Asento by Halo Woods LVT Plank Tile in accordance with ASTM F1700: Class: III, printed film vinyl tile
 1. Composition: Vinyl tile formulated from solid PVC with printed film pattern construction

NOTE: Select surface required for project and delete item not chosen.

2. Surface: Type B, Embossed
3. Thickness: 0.1 inch (2.5mm)

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4. Wear Layer Thickness:
 - a. 20 mils or 0.020 inch (0.5mm) Standard
 - b. 8 mils or 0.008 inch (0.2mm) Special Order
5. Edge: Unbeveled

NOTE: Select size required for project and delete item not chosen.

6. Size: 4 x 36 x 0.1 inches (102mm x 914mm x 2.5mm)
Size: 7 x 48 x 0.1 inches (178mm x 1220mm x 2.5mm)
 7. Color and Pattern: As selected by Architect from [Manufacturer's standard collection](#).
- B. Asento by Halo [Stones](#) LVT Tile in accordance with ASTM F1700: Class: III, printed film vinyl tile
1. Composition: Vinyl tile formulated from solid PVC with printed film pattern construction

NOTE: Select surface required for project and delete item not chosen.

2. Surface: Type B, Embossed
3. Thickness: 0.1 inch (2.5mm)
4. Wear Layer Thickness:
 - a. 20 mils or 0.020 inch (0.5mm) Standard
 - b. 8 mils or 0.008 inch (0.2mm) Special Order
5. Edge: Unbeveled:
6. Size: 18 x 18 x 0.1 inches (457mm x 457mm x 2.5mm)
Size: 12 x 24 x 0.1 inches (305mm x 610 mm x 2.5mm)
7. Color and Pattern: As selected by Architect from [Manufacturer's standard collection](#).

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

2.4 ADHESIVES

- A. Adhesive - Acrylic: CBC 5001, solvent-free, low odor, acrylic based, high tack type adhesive acceptable to resilient sheet flooring manufacturer to suit flooring product and substrate conditions indicated.
- B. Adhesive - Acrylic: CBC EcoSpray U, universal, solvent-free, low odor, zero-VOC acrylic based 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 or rolling loads.
- C. Alternate Adhesive – Epoxy: CBC 951 2-part reactive solvent-free, low odor, flooring heavy-duty epoxy/urethane adhesive as recommended for flooring installations under heavy static or rolling loads, areas that are subject to top down water, freezer cases, and areas exposed to extremes of temperature.

NOTE: Use of Non-CBC adhesives with Asento vinyl tile products will void Halo Floors Warranty adhesion claims, unless otherwise acceptable to CBC Flooring.

- D. Equipment: Apply CBC 5001 High Performance adhesive using appropriate notched trowel for substrate conditions.
 1. Porous & non-porous Substrates: Use Gundlach FFA U-notch 1/32 x 1/16 x 1/32 inch (0.79mm x 1.59mm x 0.79mm) or equivalent.
 2. Floor Roller: 3-section 100 lb (45 kg)

2.5 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.

NOTE: Specifier to closely coordinate applicable sections between concrete and other subfloor substrate finishes with floor finish covering.

- B. Expansion Joints: As indicated by the Drawings, and provided by DIVISION 07

NOTE: Select appropriate Floor Finish System below to suit project and delete item not chosen.

2.6 FINISH OPTIONS

- A. Floor Cleaner/Maintainer: Provide cleaner/Maintainer protective coating system as recommended by flooring manufacturer's [Maintenance Guide](#). Wait specified time before wet cleaning.
- B. Floor Finish System - Acrylic: Provide protective finish system with a minimum of 28% solids as recommended by flooring manufacturer's [Maintenance Product Guide](#). Wait specified time before wet cleaning.
1. [System Materials](#) (as selected by architect or facility):
 - a. Acrylic Floor Finish
 - 1). Matte: Providing Gloss Level 8
 - 2). Satin: Providing Gloss Level 18
 - 3). Gloss: Providing Gloss Level 60
 - b. Neutral Cleaner
 - c. Floor Finish Stripper

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 in accordance with the substrate preparation materials and flooring manufacturer's written instructions.
- C. Install resilient flooring system in accordance with manufacturer's current [Installation Guide](#).
- D. Expansion Joints: Locate movement joints where indicated prior to installation of adhesive and resilient flooring and cover using an 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 adhesives. Allow immediate use of flooring installed using CBC EcoSpray adhesive.
- G. Wait a minimum of 48 hours until adhesive has cured 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 for the adhesive system used.

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2. Protect new installed flooring from rolling traffic and point loads as specified for the adhesive system used.
 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 2-4 days after installation until adhesive is cured.
- 3.5 CLOSEOUT ACTIVITIES
- A. Substantial Completion Requirements in accordance with 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 and modifying text as needed 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 Halo Floors Guide Specification.

HALO FLOORS AND CBC AMERICA LLC SHALL NOT BE LIABLE FOR DAMAGES ARISING OUT OF THE USE OF THIS GUIDE SPECIFICATION.