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DIVISION 9 - SECTION 09 65 00

ECOsurfaces EComax Vulcanized Composition Rubber Molded Tiles

PART 1.0- GENERAL

1.1 SUMMARY

- A. The work of this section includes:
 - 1. 1" EComax Vulcanized Composition Rubber Molded Tiles
 - 2. Quad Blok 4-3/4" x 4-3/4" Connector
 - 3. 2-1/2" EComax Vulcanized Composition Rubber Molded Tiles
 - 4. Quad Blok 8" x 8" Connector
- B. Related Sections: Section(s) related to this section include:
 - 1. The work specified in this Section consists of the installation of 1" EComax tiles in accordance with these specifications, and in conformity with the dimensions and notes shown in the plans.
 - 2. The work specified in this Section consists of the installation of 2-1/2" EComax tiles in accordance with these specifications, and in conformity with the dimensions and notes shown in the plans.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard.

1.2 REFERENCES

- A. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- B. American Society for Testing and Materials (ASTM):
 - 1. See Part 2.0 PROPRIETARY PRODUCTS below
- C. Collaborative of High Performance Schools (CHPS) Section 01350
 - 1. Low-emitting materials criteria for use in a typical classroom
- D. Leadership in Energy and Environmental Design – LEED®
 - 1. International Organization for Standardization® document, ISO 14021 - Provides guidance on the terminology, symbols, testing and verification methodologies that an organization should use for self-declaration of the environmental aspects of its products and services.

1.3 SYSTEM DESCRIPTION

- A. Performance Requirements: Provide Vulcanized Composition Rubber resilient flooring, which has been manufactured and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

1.4 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. LEED: Provide documentation of how the requirements for credit will be met.

1. List of proposed materials with recycled content. Indicate pre-consumer and post-consumer content.
2. Product data and certification letter indicating percentage of recycled content for both pre-consumer and post-consumer content.
3. Recycled content is defined in accordance with the International Organization for Standardization document, ISO 14021 Environmental labels and declarations.
 - a. Post-consumer material - waste materials diverted from the waste stream after consumer or commercial use.
 - b. Pre-consumer material - materials diverted from the waste stream during the manufacturing process. Excluded are regrind, rework, and scrap.
- C. Product Data: Submit product data, including manufacturer's guide specifications product sheet, for specified products.
- D. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors, patterns and textures.
- E. Samples: Submit selection and verification samples for finishes, colors and textures.
- F. Quality Assurance Submittals: Submit the following:
 1. Certificates: If required, certification of performance characteristics specified in this document shall be provided by the manufacturer.
 2. Manufacturer's Instructions: Manufacturer's installation instructions.

Specifier Note: Coordinate paragraph below with Part 3.5 Field Quality Requirements Article herein. Retain or delete as applicable.

3. Manufacturer's Field Reports: Manufacturer's field reports specified herein.
- G. Closeout Submittals: Submit the following:
 1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operational Data) Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance.
 2. Warranty: Warranty documents specified herein.

1.5 QUALITY ASSURANCE

- A. Qualifications:
 1. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

Specifier Note: Retain paragraph below to suit project requirements; otherwise, delete paragraph below.

- a. Certificate: When requested, submit certificate indicating qualification.
2. Manufacturer's Qualifications: Manufacturer capable of providing field service representation during construction and approving application method.

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of Contract and Division 1 Regulatory Requirements Section. Repetitive statements should be avoided.

- B. Regulatory Requirements: [specify applicable requirements of regulatory agencies].
- C. Mock-Ups: Install at project site a job mock-up using acceptable products and manufacturer-approved installation methods. Obtain Owner and Architect's acceptance of finish color, texture and pattern, and workmanship standard. Comply with Division 1 Quality Control (Mock-Up Requirements) Section.
 1. Mock-Up Size: [specify mock-up size].
 2. Maintenance: Maintain mock-up during construction for workmanship comparison; remove and legally dispose of mock-up when no longer required.
 3. Incorporation: Mock-up may be incorporated into final construction upon Owner's approval.

- D. Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's instructions and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.
- E. Pre-installation Testing: Conduct pre-installation testing as follows: [specify substrate testing; consult with flooring manufacturer].

1.6 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials at temperature and humidity conditions recommended by manufacturer and protect from exposure to harmful weather conditions.

1.7 PROJECT CONDITIONS

- A. Temperature Requirements: Maintain air temperature in spaces where products will be installed for time period before, during and after installation as recommended by manufacturer.
- B. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

Specifier Note: Coordinate article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty) Section.

1.8 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to and not a limitation of, other rights Owner may have under Contract Documents.

Specifier Note: Coordinate paragraph below with manufacturer's warranty requirements.

1. Warranty Period: [Specify term] years commencing in Date of Substantial Completion.

1.9 MAINTENANCE

- A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 1 Closeout Submittals (Maintenance Materials) Section.

Specifier Note: Revise paragraph below specifying size and percentage as required for project.

1. Quantity: Furnish quantity of Vulcanized Composition Rubber flooring units equal to [specify %] of amount installed.
2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra materials.

PART 2.0 - PROPRIETARY PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.1 PROPRIETARY PRODUCT(S)

- A. ECosurfaces EComax Vulcanized Composition Rubber Molded Tiles
 1. 1" EComax Vulcanized Composition Rubber Molded Tiles
 2. Quad Blok 4-3/4" x 4-3/4" Connector
 3. 2-1/2" EComax Vulcanized Composition Rubber Molded Tiles
 4. Quad Blok 8" x 8" Connector

2.2 1" ECOmax Vulcanized Composition Rubber Molded Tiles

1" ECOmax Vulcanized Composition Rubber Molded Tiles		
Vulcanized Composition Rubber Molded Tile consisting of a high-density wear layer and cylindrical support feet that provide maximum resiliency and water drainage with ECOguard factory-applied urethane coating		
Material:		Made from 100% Vulcanized Composition Rubber and EPDM granules bound in both underlayment and wear surfaces with a wear and weather resistant polyurethane
Tile Dimension	Manufacturer	24" x 24" x 1" thick
Tile Standard Tolerances	Manufacturer	Width/Length: ± 1/8" Thickness: ± 1/8"
Wear Surface Density	Manufacturer	60.0 lbs/cu. ft.
Abrasion	ASTM D3389	0.20 mg loss/cycle (2000 cycles, H18Wheels)
Static Load Limit	ASTM F970	400 lb/in ² < 0.005 in
Coefficient of Friction	ASTM D2047	> 0.9
Chemical Resistance	ASTM F925	5% Acetic Acid, no change 70% Isopropyl Alcohol: no change 5% Sodium Hydroxide: no change 5% Hydrochloric Acid: no change 5% Ammonia: no change Bleach; no change 5% Phenol: no change Sulfuric Acid: no change
Noise Reduction Coefficient	ASTM C423	0.10 Sabine/ft ²
Impact Insulation Class	ASTM E492	49
Sound Transmission Coefficient	ASTM E413	51
Sustainability	ASTM E2129	Data collected
VOCs	ASTM D5116	Pass

2.3.1 Quad Blok 4-3/4" x 4-3/4" Connection System

Quad Blok 4.74" x 4.74" Connection System		
Vulcanized Composition Rubber granules encapsulated in a wear and water-resistant elastomeric network, made from 100% post-consumer Vulcanized Composition Rubber		
Dimensions	Manufacturer	4-3/4" x 4-3/4" x 15/32" (12 cm x 12 cm x 12 mm)
Density	ASTM D297	46 lbs. / cu. ft. minimum

2.3.2 2-1/2" ECOmax Vulcanized Composition Rubber Molded Tiles

ECOsurfaces 2-1/2" ECOmax Vulcanized Composition Rubber Molded Tiles		
Made from 100% Vulcanized Composition Rubber and ColorMill® EPDM granules bound in both underlayment and wear surfaces with a wear and weather resistant polyurethane		
Performance Criteria	Test Method	Result
Tile Dimension	Manufacturer	24" x 24" x 2-1/2" thick
Tile Weight	Manufacturer	26.5 pounds nominal
Tile Standard Tolerances	Manufacturer	Width: ± 1/8" ; Thickness: ± 1/8"
Wear Surface Density	Manufacturer	60.0 lbs/cu. ft. min
Abrasion	ASTM D3389	.1 or 0.20 mg loss/cycle (2000 cycles, H18Wheels)
Tensile Strength	ASTM D412	200lb/in ² min. (surface layer)
Accelerated Aging	DIN 1835 Part 6	105% Tensile Retention, 87% Elongation Retention
Coefficient of Friction	ASTM D2047	> 0.9
Static Load Limit	ASTM F970	400 lb/in ² < 0.005 in.
Chemical Resistance	ASTM F925	5% Acetic Acid, no change 70% Isopropyl Alcohol: no change 5% Sodium Hydroxide: no change

		5% Hydrochloric Acid: no change 5% Ammonia: no change Bleach; no change 5% Phenol: no change Sulfuric Acid: no change
Noise Reduction Coefficient	ASTM C423	0.10 sabine/ft ²
Impact Insulation Class	ASTM E492	50 minimum
Sound Transmission Coefficient	ASTM E413	50 Mimimum
Delta IIC	ASTM E2179	29
VOCs / CHPS/CA 01350	ASTM D5116	Pass
Flammability	ASTM D2859	Pass

2.3.3 Quad Blok 8" x 8" Connector

ECOsurfaces Quad Blok 8" x 8" Connection System		
Vulcanized Composition Rubber granules encapsulated in a wear and water-resistant elastomeric network		
Dimensions	Manufacturer	7-3/4" x 7-3/4" x 11/16" (20.32 cm x 20.32 cm x 17mm)
Density	ASTM D297	46 lbs. / cu. ft. minimum

2.4 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

2.5 RELATED MATERIALS

- A. Related Materials: Refer to other sections listed in Related Sections paragraph herein for related materials.

2.6 SOURCE QUALITY

- A. Source Quality: Obtain Vulcanized Composition Rubber resilient flooring materials from a single manufacturer.

PART 3.0 - EXECUTION

Specifier Note: Revise article below to suit project requirements and specifier's practice.

3.1 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

3.2 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

3.3 PREPARATION

- A. Surface Preparation: [specify applicable product preparation requirements].

Specifier Note: Coordinate article below with manufacturer's recommended installation details and requirements.

3.4 ERECTION/INSTALLATION/APPLICATION/CONSTRUCTION

- A. Vulcanized Composition Rubber Flooring Installation: Comply with ECOsurfaces Technical Manual for installation procedures and techniques for ECOsurfaces Vulcanized Composition Rubber resilient flooring installation.
- B. Finish Color/Textures/Patterns: [specify installation finishes coordinated with finishes specified in Part 2 Products].
- C. Related Products Installation: Refer to other sections listed in Related Sections paragraph herein for related products installation.

3.5 FIELD QUALITY REQUIREMENTS

Specifier Note: Edit paragraph below. Establish number and duration of periodic site visits with Owner and manufacturer and specify below. Consult with manufacturer for services required. Coordinate paragraph below with Division 1 Quality Assurance Section and Part 1 Quality Assurance Submittals herein. Delete if manufacturer's field service not required.

- A. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.
 - 1. Site Visits: [specify number and duration of periodic site visits].

3.6 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.

3.7 PROTECTION

- A. Protection: Protect installed product and finish surfaces from damage during construction.

Specifier Note: Retain article below to suit project requirements. Article may be used to describe specific criteria requirements of similar products or equipment.

3.8 SCHEDULES

Specifier Note: Retain paragraph below to suit project requirements. Reference a schedule or include a schedule as an attachment, which indicates where to locate products and equipment.

- A. Schedules: [Specify reference to applicable schedules].

END OF SECTION