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DIVISION 9 - SECTION 09 65 00

Composed Origins Vulcanized Composition Rubber / Cork Commercial Flooring

PART 1.0- GENERAL

1.1 SUMMARY

- A. The work of this section includes:
 - 1. Vulcanized Composition Rubber / Cork tile
 - 2. Adhesive
 - 3. Surface coating
- B. Related Sections: Section(s) related to this section include:
 - 1. Concrete Substrate: Division 3 Concrete Section(s)
 - 2. Plywood Substrate: Division 6

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. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers – Tension
 - 2. ASTM F137 Standard Test Method for Flexibility of Resilient Flooring Materials with Cylindrical Mandrel Apparatus
 - 3. ASTM F970 Standard Test Method for Static Load Limit
 - 4. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as measured by the James Machine
 - 5. ASTM F925 Standard Test Method for Resistance to Chemicals of Resilient Flooring
 - 6. ASTM C423 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
 - 7. ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
 - 8. ASTM E492 Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine
 - 9. ASTM E413 Classification for Rating Sound Insulation
 - 10. ASTM E2129 Standard Practice for Data Collection for Sustainability Assessment of Building Products
 - 11. ASTM D5116 Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products

12. ASTM D297 Standard Practice for Rubber Products - Chemical Analysis
 13. ASTM D395 Standard Test Methods for Rubber Property - Compression Set
 14. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
 15. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
 16. ASTM D2859 Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials
 17. ASTM D3389 Standard Test Method for Coated Fabrics Abrasion Resistance
- C. Collaborative of High Performance Schools (CHPS) Section 01350
1. Low-emitting materials criteria for use in a typical classroom
- D. South Coast Air Quality Management District (SCAQMD) Rule #1168
1. VOC standards for adhesive and sealant applications

1.3 SYSTEM DESCRIPTION

- A. Requirements: Provide Vulcanized Composition Rubber (VCR) / Cork 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.
 - 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. Regulatory Requirements: [specify applicable requirements of regulatory agencies].

- B. 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.
- C. 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.
- D. 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.

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.
 1. Quantity: Furnish quantity of 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 MANUFACTURER/ 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 MANUFACTURER: Ecore Intl.

- A. Address: 715 Fountain Ave., Lancaster, PA 17601; Telephone: (877) 258-0843, (717) 295-3400; Fax: (717) 295-3414; Email: info@ecoreintl.com

2.2 DISTRIBUTOR: Ecore Commercial

- A. Address: 715 Fountain Ave., Lancaster, PA 17601; Telephone: (877) 258-0843, (717) 295-3400; Fax: (717) 295-3414; Email: info@ecoreintl.com

2.3 PROPRIETARY PRODUCT(S)

- A. Vulcanized Composition Rubber / Cork Flooring and adhesives manufactured by Ecore for indoor commercial applications.
 1. Vulcanized composition rubber / cork tile flooring
 2. E-Grip III single-component, zero-VOC, urethane adhesive
 3. LOBADUR® 2K Invisible Protect two component thin film coating

2.3.1 Vulcanized Composition Rubber / Cork tile Flooring

- A. Product Name: The vulcanized composition rubber / cork surface furnished under this specification shall be Ecore's Composed Origins
- B. Material: Made from a formulation of vulcanized rubber and cork encapsulated in a wear and water-resistant elastomeric network with multiple colored reprocessed ColorMill EPDM rubber.
- C. Tile Dimensions: 1/8" [3.2 mm] thickness x 12" width x 24" length
- D. Tile Weight: 0.9 lb/ft² [4.1 kg/m²]
- E. Standard Tolerances: Tile width and length: + 0.5%
Tile thickness: ± .3 mm
- F. Colors: Specify color from manufacturer's standard colors
- G. Tensile Strength (ASTM D412): 200 lb/in² min.

H. Static Load Limit (ASTM F970):	Pass	0.002 in (250 psi)
I. Coefficient of Friction: (ASTM D2047)	>	0.6
J. Abrasion Testing (ASTM D3389)	<	1 g
K. Flammability Critical Radiant Flux (ASTM E648)	Class	1
L. CHPS/CA 01350 (ASTM D5116)	Pass	
M. Chemical Resistance (ASTM F925)	Excellent	

2.3.2 E-Grip III One-Component Urethane Adhesive

A. Product Name:	The one-part urethane adhesive under this specification shall be ECORE's E-Grip III one-component, urethane adhesive.	
B. Material:	E-Grip III is a one-component urethane, moisture-cured, non-sag, permanently elastic adhesive that has excellent adhesion to elastomers, concrete, and wood	
C. Adhesive Type:	One-component urethane	
D. Adhesive Cure System:	Moisture-cured	
E. Weight:	4 gallon pail-56 lbs; 2 gallon pail-28 lbs; 10.1 oz cartridges	
F. Color:	Medium grey	
G. VOC Content:	0 lb/gal calculated	
H. Freeze/Thaw:	Stable	
I. Application Temperature:	40° F - 100° F	
J. Relative Humidity (RH) Test (ASTM F2170)	Maximum 85%	
K. Flashpoint:	> 500° F	
L. Shelf Life:	12 months	
M. Working Time:	30-40 minutes	
N. Trowel:	1/16" x 1/32" x 5/64" U-notch	
O. Coverage Rate – Trowel:	120 ft ² / gal. – 1/16" x 1/32" 5/64"	
P. SCAQMD Rule #1168	0 lb./gal. calculated	

2.3.3 LOBADUR 2K Invisible Protec

A. Product Name:	The film coating shall be LOBADUR 2K Invisible Protec.	
B. Material:	LOBADUR 2K Invisible Protec is a 2-component waterborne thin film coating	
C. Weight:	1 gallon = 8.6 pounds	
D. Color:	Milky white	

E. VOC Content:	< 140 g/l
F. Freeze/Thaw:	Stable
G. Application Temperature:	55° F - 77° F
H. Ambient Air Relative Humidity	40-75% RH when installed
I. Flashpoint:	Not applicable
J. Shelf Life:	12 months
K. Pot life:	2 hours
L. Coverage Rate:	350 - 450 sq. ft. / gal

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 (VCR) / Cork 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. Composed Origins Vulcanized Composition Rubber (VCR) / Cork Commercial Flooring Installation: Comply with Composed Origins Technical Manual for installation procedures and techniques.
- 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 is not required.

- A. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service, consisting of product use recommendations and periodic site visits 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