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DIVISION 9 Finishes - SECTION 09 65 00 Resilient Flooring

Forest Rx, Strait Rx, Cosmos Rx and Infinity Rx Vulcanized Composition Rubber Backed Sheet Vinyl Unbacked Forest 2mm, Strait 2mm, Cosmos 2mm and Infinity 2mm Sheet Vinyl

PART 1.0- GENERAL

1.1 SUMMARY

- A. The work of this section includes:
1. Vulcanized Composition Rubber-backed sheet vinyl:
 - Forest Rx, Strait Rx, Cosmos Rx and Infinity Rx
 2. Unbacked 2mm – Sheet vinyl:
 - Forest 2mm, Strait 2mm, Cosmos 2mm and Infinity 2mm
 3. Sanitary Base
 4. Weld rod
 5. Adhesives:
 - E-Grip III, E-Grip Evolve and Gerbert 2300
- 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 F970 Standard Test Method for Static Load Limit
 2. ASTM F2753 Standard test Method for Dynamic Rolling Load
 3. ASTM F1303-99 Standard Test Method for Resistance to Chemicals of Resilient Flooring
 4. ASTM F1514 Resistance to heat.
 5. ASTM F1515 Resistance to light.
 6. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as measured by the James Machine.
 7. ASTM E648 Behavior to fire.
 8. ASTM F2199 Dimensional stability.
 9. ASTM E2129 Standard Practice for Data Collection for Sustainability Assessment of Building Products.
 10. ASTM D5116 Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products

11. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
 12. ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
 13. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
- C. European Committee for Standardization (EN)
1. EN649 / EN ISO 10582 Resilient Floor Coverings Heterogeneous polyvinyl chloride floor coverings – Specification for Abrasion Resistance.
- D. International organization for Standardization (ISO)
1. ISO 105-B02 Textiles – Test for color fastness.
- E. Collaborative of High Performance Schools (CHPS) Section 01350
1. Low-emitting materials criteria for use in a typical classroom
- F. South Coast Air Quality Management District (SCAQMD) Rule #1168
1. VOC standards for adhesive and sealant applications
- G. 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 rubber back sheet vinyl 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 5 years commencing on 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 resilient 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 International™

- A. Address: 715 Fountain Ave., Lancaster, PA 17601; Telephone: (800) 322-1923, (717) 295-3400; Fax: (717) 295-3414; Email: info@Ecoreintl.com

2.2 DISTRIBUTOR: Ecore Commercial

- A. Address: 715 Fountain Ave., Lancaster, PA: (877) 258-0843, Email: contact@Ecorecommercial.com

2.3 PROPRIETARY PRODUCT(S)

- A. Ecore Commercial and adhesives manufactured by Ecore International for commercial applications.
1. Forest Rx, Strait Rx, Cosmos Rx or Infinity Rx Vulcanized Composition Rubber-backed resilient sheet vinyl flooring and accessories.
 2. Forest 2mm, Strait 2mm, Cosmos 2mm and Infinity 2mm Sheet Vinyl flooring and accessories
 3. E-Grip™ III a single-component, zero-VOC, urethane adhesive
 4. E-Grip Evolve vinyl acrylic adhesive
 5. Gerbert 2300 Premium Two-Part Urethane Adhesive

2.3.1 Forest Rx, Strait Rx, Cosmos Rx and Infinity Rx – Vulcanized Composition Rubber-Backed Sheet Vinyl

- A. **Product Name:** The fusion bonded, double-ply, Vulcanized Composition Rubber backed vinyl surface furnished under this specification shall be Ecore's Forest Rx, Strait Rx, Cosmos Rx or Infinity Rx, distributed by Ecore Commercial
- B. **Material:** Made from a formulation of Vulcanized Composition Rubber granules encapsulated in a wear and water-resistant elastomeric network fusion bonded to a heterogeneous, PUR enhanced, vinyl wear layer
- C. **Sheet Dimension:** Forest Rx, Strait Rx, Cosmos Rx or Infinity Rx Vulcanized Composition Rubber backed sheet vinyl will have an overall thickness of 7mm, consisting of a 5mm 6015H Vulcanized Composition Rubber backing, fusion bonded to a 2mm vinyl surface layer. Surface wear layer 0.7mm Standard roll sizes 6 ft wide by 30 LF [1.828 m by 9.144 m]

D. Sheet Weight:	1.26 lb/ft ² [6130 g/m ²]
E. Sheet Standard Tolerances:	Width: +3/4" - 0" Length: +1% - 0" Thickness: ± .4 mm
F. Colors:	Specify color from manufacturer's standard colors.
G. Static Load Limit (ASTM F970):	Pass
H. Dynamic Rolling Load (ASTM F2753)	10,000 cycles: No Damage, No Change
I. Coefficient of Friction: (ASTM D2047)	> 0.6
J. Chemical Resistance: (ASTM F1303-99)	Excellent
K. Abrasion resistance: (EN 649/EN ISO 10582)	Group T / Type 1
L. Dimensional Stability: (ASTM F-2199)	± 0.40%
M. Behavior to Fire: (ASTM E-648)	Class I
N. Light Fastness: ISO 105-B02 (Method 3)	> 6
O. Resistance to Light: (ASTM F-1515)	Pass
P. Resistance to Heat: (ASTM F-1514)	Pass
Q. FloorScore:	Pass
R. CHPS/CA 01350 (ASTM D5116):	Pass

2.3.2 Unbacked Forest 2mm, Strait 2mm, Cosmos 2mm and Infinity 2mm Sheet Vinyl

A. Product Name:	The vinyl surface furnished under this specification shall be Ecore's Forest 2mm, Strait 2mm, Cosmos 2mm or Infinity 2mm distributed by Ecore Commercial
B. Material:	Sheet vinyl with a heterogeneous PUR enhanced vinyl wear layer
C. Sheet Dimension:	Forest 2mm, Strait 2mm, Cosmos 2mm and Infinity 2mm sheet vinyl will have an overall thickness of 2mm. It shall have a 0.7mm (0.028") print film layer and a 1.23mm (0.048") backing ply. Standard roll size 74" ft wide x 30 LF [1.88 m by 9.14 m]
D. Sheet Weight:	0.89 lb/ft ² [4.34 kg/m ²]
E. Colors:	Specify color from manufacturer's standard colors.
F. Static Load Limit (ASTM F970):	750
G. Coefficient of Friction: (ASTM D2047)	> 0.6
H. Chemical Resistance: (ASTM F1303-99)	Excellent

I. Abrasion resistance: (EN 649/EN ISO 10582)	Group T / Type 1
J. Indentation Recovery: (EN 433)	< 0.10mm (<0.003")
K. Behavior to Fire: (ASTM E-648)	Class I
L. Light Fastness: ISO 105-B02 (Method 3)	> 6

2.3.3 Weld Rod

A. Product Name:	Welding rod under this specification shall be weld rod distributed by Ecore Commercial.
B. Material:	Vinyl
C. Colors:	Specify color from Ecore Commercial standard colors.
D. Dimensions:	Standard lengths of 328 LF [100 M] by 3mm in thickness. Custom lengths not available.
E. Spool Weight:	11.023 lbs [5kg]

2.3.4 Sanitary Wall Base

A. Product Name:	Sanitary Wall base under this specification shall be Sanitary Wall Base distributed by Ecore Commercial.
B. Material:	Proprietary thermoplastic rubber formulation
C. Colors:	Specify color from Ecore Commercial colors
D. Dimensions:	4" (10.16 cm) high with 2" (5.0 cm) toe. Thickness of .110" (2.8 mm) Length: 25 ft. (7.62 M) coils. Custom lengths not available
E. ASTM F-1861	Meets Type TP, Group 1 (solid) Standard Specification for Wall Resilient Wall Base
F. Coil Weight:	11.5 lbs (5.2 kgs.) / coil
G. Behavior to Fire: (ASTM E 84/NFPA 255)	Class B
H. Behavior to Fire: (ASTM E-648 /NFPA 253)	Class I

2.3.5 E-Grip III one-component urethane adhesive for Forest Rx, Strait Rx, Cosmos Rx and Infinity Rx

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 and is engineered for indoor and outdoor applications.
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 cartridge – 1.3 lbs.
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 1/16" x 1/16" square notch
O. Coverage Rate:	95 ft ² / gal. – 1/16" x 1/16" x 1/16"
P. SCAQMD Rule #1168	0 lb./gal. calculated

2.3.6 E-Grip Evolve vinyl acrylic adhesive for Forest Unbacked 2mm, Strait 2mm, Cosmos 2mm and Infinity 2mm

A. Product Name:	The one-component vinyl acrylic wet-set adhesive under this specification shall be Ecore's E-Grip Evolve.
B. Material:	E-Grip Evolve is a one-component acrylic wet-set adhesive designed specifically for vinyl, LVT and sound underlayments for indoor applications on wood and concrete
C. Adhesive Type:	One-component acrylic, hard-set, wet-lay transitional
D. Adhesive Cure System:	Transitional vinyl acrylic
E. Weight:	4 gallon pail – 33.2 lbs.
F. Color:	Off-white
G. VOC Content:	Less than .28 lbs/gal (34 g/l)
H. Freeze/Thaw:	Stable
I. Application Temperature:	65° F - 90° F
J. Relative Humidity (RH) Test (ASTM F2170)	Maximum 80%
K. Flashpoint:	> 212° F
L. Shelf Life:	2 years
M. Working Time:	30 minutes
N. Trowel:	1/32" x 1/16" x 1/32" square notch 1/16" x 1/16" x 1/16" square notch
O. Coverage Rate:	150 ft ² / gal. 200 ft ² / gal

2.3.7 Ecore's Gerbert 2300 Premium Two-Part Urethane Adhesive for Unbacked Forest 2mm, Strait 2mm, Cosmos 2mm and Infinity 2mm

- | | |
|---|---|
| A. Product Name: | The two-part urethane adhesive under this specification shall be Ecore's Gerbert 2300 Premium Two-Part Urethane adhesive. |
| B. Material: | Gerbert 2300 is a two-part reactive adhesive with low volatile organic compounds, designed for indoor and outdoor flooring installations, with excellent adhesion to concrete, wood, and vinyl flooring and tile, suitable for extra heavy traffic and rolling loads, as well as freezer and surface water-spray areas. |
| C. Adhesive Cure System: | Epoxy two-part reactive urethane |
| D. Weight: | 1 gallon two-part kit - 13 lbs. |
| E. Color: | Off-white |
| F. VOCs SCAQMD Rule #1168 | 10 g/L |
| G. Freeze/Thaw: | Stable |
| H. Application Temperature: | 50° F - 90° F |
| I. Relative Humidity (RH) Test (ASTM F2170) | Maximum 80% |
| J. Flashpoint: | Part A >200°F (93°C)
Part B >200°F (93°C) |
| K. Shelf Life: | 2 years |
| L. Working Time: | 30 minutes |
| M. Trowel (typical): | 1/32" x 1/16" x 1/32" |
| N. Coverage Rate: | 185 to 245 sq. ft. / U.S. gal. (1/32" x 1/16" x 1/32" trowel) |

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 Recycled 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