



CSI | Achieve

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DIVISION 9 Finishes: SECTION 09 65 66 Resilient Athletic Flooring PLAE Achieve - Recycled Rubber Flooring

PART 1.0 - GENERAL

1.1 SUMMARY

A. The work of this section includes:

1. PLAE Athletic Recycled Rubber
2. Adhesives

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: Test method used to evaluate the tensile (tension) properties of rubber.
2. ASTM F137: Standard Test Method for Flexibility of Resilient Flooring Materials with Cylindrical Mandrel Apparatus.
3. ASTM C518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
4. ASTM D2047: Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as measured by the James Machine.
5. ASTM D2859: Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials.
6. ASTM F1514: Standard Test Method for Measuring Heat Stability of Resilient Flooring by Color Change.
7. ASTM F1515: Standard Test Method for Measuring Light Stability of Resilient Flooring by Color Change
8. ASTM F925: Standard Test Method for Resistance to Chemicals of Resilient Flooring
9. ASTM E303: Standard Test Method for Skid Resistance
10. ASTM F2117: Standard Test Method for Vertical Rebound
11. ASTM F2157: Standard Test Method for Deformation
12. ASTM F2569: Standard Test Method for Force Reduction
13. ASTM D3776: Standard Test Method for Weight Per Unit Area
14. ASTM E90: Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
15. ASTM E492: Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine
16. ASTM E2179- Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors



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C. 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 recycled 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. Indicated pre-consumer and post-consumer content.

2. 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.

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.

2. Manufacturer's Qualifications: Manufacturer capable of providing field service representation during construction and approving application method.



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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. 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.

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 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.

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

1. Quantity: Furnish quantity of recycled 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.

3. Cleaning: Furnish flooring manufacture's neutral cleaner for initial cleaning and maintenance of the finished floor surface.



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PART 2.0 - PROPRIETARY PRODUCTS

2.1 MATERIALS AND ATTRIBUTES

Recycled SBR rubber and EPDM rubber granules bound by polyurethane. Factory-fused, dual-layer rolls and tiles provide resistance to sagging and indentation by direct, blunt impact. Entire system delivers maximum durability and simple maintenance. Platforms include three pieces of non-beveled Achieve tiles (one inlay and two bumper drop zones) and lie flush with surrounding Achieve.

2.2 PROPRIETARY PRODUCTS

1. PLAE Achieve 8mm rolls consisting of a 5mm PLAEtech underlayment with a 3mm EPDM surface wear layer.
2. PLAE Achieve 13mm rolls consisting of a 10mm PLAEtech underlayment with a 3mm EPDM surface wear layer.
3. PLAE Achieve 18mm rolls consisting of a 15mm PLAEtech underlayment with a 3mm EPDM surface wear layer.
4. PLAE Clutch Adhesive

2.2.1 Achieve 18mm Flooring

PERFORMANCE	STANDARDS	18MM
Tensile Strength	ASTM D412	188 lbs/sq inch
Flexibility	ASTM F137	Pass
Thermal Conductivity	ASTM C518	1.0850 Btu in./h ft ²
Coefficient of Friction	ASTM D2047	
Neolite		Dry = 1.11 / Wet = 0.96
Leather		Dry = 1.05 / Wet = 0.89
Resistance to Light	ASTM F1515	Pass
Resistance to Chemicals	ASTM F925	Good
(24 hrs and 5 min)		
Taber Abrasion	ASTM F4060	Good
Resistance to Heat	ASTM F1514	Pass
Pill Flammability	ASTM D2859	Pass
Skid Resistance	ASTM E303	Dry = 99 / Wet = 99
Vertical Rebound	ASTM F2117	95%
Deformation	ASTM F2157	0.9 mm
Force Reduction	ASTM F2569	33.1%
Acoustical Performance		
STC	ASTM E90	52
IIC	ASTM E492	52
ΔIIC	ASTM E2179	24

2.2.2 Achieve 13mm Flooring

PERFORMANCE	STANDARDS	13MM
Tensile Strength	ASTM D412	158.5 lbs/sq inch
Flexibility	ASTM F137	Pass
Thermal Conductivity	ASTM C518	0.9809 in./h ft ²
Coefficient of Friction	ASTM D2047	



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PERFORMANCE (cont.)

Neolite

Leather

Resistance to Light

Resistance to Chemicals

(24 hrs and 5 min)

Taber Abrasion

Resistance to Heat

Pill Flammability

Skid Resistance

Vertical Rebound

Deformation

Force Reduction

Weight Per Unit Area

Acoustical Performance

STC

IIC

ΔIIC

STANDARDS (cont.)

ASTM F1515

ASTM F925

ASTM F4060

ASTM F1514

ASTM D2859

ASTM E303

ASTM F2117

ASTM F2157

ASTM F2569

ASTM D3776

ASTM E90

ASTM E492

ASTM E2179

13MM (cont.)

Dry = 1.11 / Wet = 0.96

Dry = 1.05 / Wet = 0.89

Pass

Good

Good

Pass

Pass

Dry = 99 / Wet = 99

99%

1.0 mm

30.7%

337.0 oz/sq yard

2.2.3 Achieve 8mm Flooring

PERFORMANCE

Tensile Strength

Flexibility

Thermal Conductivity

Coefficient of Friction

Neolite

Leather

Resistance to Light

Resistance to Chemicals

(24 hrs and 5 min)

Taber Abrasion

Resistance to Heat

Pill Flammability

Skid Resistance

Vertical Rebound

Deformation

Force Reduction

Acoustical Performance

STC

IIC

ΔIIC

STANDARDS

ASTM D412

ASTM F137

ASTM C518

ASTM D2047

ASTM F1515

ASTM F925

ASTM F4060

ASTM F1514

ASTM D2859

ASTM E303

ASTM F2117

ASTM F2157

ASTM F2569

ASTM E90

ASTM E492

ASTM E2179

8MM

135 lbs/sq inch

Pass

0.4 Btu in./h ft²

Dry = 1.11 / Wet = 0.96

Dry = 1.05 / Wet = 0.89

Pass

Good

Good

Pass

Pass

Dry = 99 / Wet = 99

99.7%

2.0 mm

12.6%



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2.2.4 PLAE Clutch Adhesive:

DESCRIPTION

CLUTCH is a high-strength, one-part urethane that spreads easily. CLUTCH has a non-slump formula that will help ensure contact and adhesive transfer because the ridges will bridge normal gaps between the flooring and substrate. It allows fast installation even with complicated patterns due to its strong green grab. No flash time is required, so installation can commence immediately. It offers superior flexibility and is designed to adapt to seasonal changes. CLUTCH offers high shear strength and antimicrobial protection, which makes it suitable for outdoor and indoor use.

SPECIAL FEATURES

- Single component and no mixing required
- Zero VOCs (per SCAQMD Rule 1168)
- High-strength polyurethane formula
- Indoor and outdoor applications
- No moisture vapor limitations / unlimited RH (withstands 100% RH)

This adhesive will maintain its integrity and performance even when high levels of moisture or water are present.

SUBFLOOR EXAMINATION

Prior to installation, the subfloor must be checked according to national standards. It must be solid and sound, level, free of indentations as well as resistant to pressure and tension. Follow the appropriate industry standards, including ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring. Should areas require patching, leveling, and/or moisture mitigation, follow the manufacturers' Technical Data Sheets for the for the installation instructions. Concrete substrate should NOT be smooth and reflective; it must have a concrete surface profile of CSP 1-3 as defined by International Concrete Repair Institute (ICRI, Guideline No. 03732). It also must be tested in accordance with ASTM F3191 and be found porous, where a ¼" drop of water must absorb into the concrete within 1 minute.

APPROVED SUBSTRATES

- Concrete
- Cement patching and self-leveling compounds
- APA-grade plywood
- Asphalt*

*Not all flooring types are compatible with asphalt; refer to the installation instructions of the flooring before installation.

APPROVED FLOORING TYPES

- Rubber tiles
- Rubber underlayment
- Foam-and urethane-backed turf
- Sports flooring
- Hardwood flooring
- Rubber-backed vinyl

INSTALLATION PROCEDURE (NON-HARDWOOD)

Spread the adhesive with the appropriate notched trowel, or use a glue box to spread the adhesive onto the seaming tape. Lay the flooring into the adhesive and press down firmly. Do not allow the adhesive to skin over prior to flooring installation. Skinning (cured adhesive) will prevent the proper transfer of the adhesive to the substrate and flooring.

Roll the installation using the flooring manufacturer's recommendations. Periodically check to ensure that there is enough coverage of the adhesive to the flooring; most flooring types will require >80% coverage and transfer. Tape and/or weigh seams to keep contact until the adhesive sets.



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Always test an area to ensure product satisfaction and adhesion to the substrate.

INSTALLATION PROCEDURE (HARDWOOD)

Spread the adhesive with the appropriate notched trowel, and immediately begin installation of hardwood flooring. Hardwood flooring must be installed using a "wet-lay" method. Do not allow the adhesive to skin over prior to flooring installation.

Skinning (cured adhesive) will prevent the proper transfer of the adhesive to the substrate and flooring. Periodically check to ensure that there is enough coverage of the adhesive to the flooring; engineered hardwood flooring requires 80% coverage and transfer for proper bonding. Solid hardwood flooring requires >95% coverage and transfer for proper bonding.

For moisture-vapor protection of engineered floors, 100% substrate coverage and transfer is required.

Always test an area to ensure product satisfaction and adhesion to the substrate.

LIMITATIONS

- Slab temperature should be between 40oF and 100oF during installation. Large fluctuations in temperature during installation and cure should be avoided.
- Do not use on wet, dusty, contaminated, or friable substrates; do not use over substrates/slabs treated with sealers or curing compounds; do not use in areas subject to hydrostatic head.
- Do not allow heavy traffic or rolling loads for a minimum of 24 hours.
- Hardwood installations are limited to above- or on-grade.
- Refer to flooring manufacturer's recommendations and NWFA's specifications for proper acclimation, verification of moisture content of flooring with a moisture meter, and expansion relief around perimeter throughout installation.
- High humidity and temperatures will shorten open and working times.

The foregoing representations are based on the results of most current product and material testing within a controlled environment and are of a nonobligatory advisory nature only. As such, they do not constitute an express or implied warranty of any kind including the Warranty of Merchantability and/or Fitness for a Particular Purpose. Because we have no control over the actual quality of workmanship, materials used, and worksite conditions, PLAE will in no event be liable for any incidental and/or consequential damages. Therefore, we strongly recommend that prior on-site testing be conducted to refer to and study the suitability of the product for the intended purpose. With the release of this technical information sheet, all prior versions become invalid.

GENERAL FEATURES

- Provides sound-dampening properties
- Provides unlimited moisture-vapor protection for wood flooring
- Contains no water
- High-solids content
- Freeze/Thaw stable
- May contribute to LEED

INSTALLATION FEATURES

- "Wet-Lay" and no flash time required
- Strong grab
- Good ridge retention
- Very low odor
- Easy-to-spread polyurethane adhesive



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LONG-TERM FEATURES

Excellent warranty with multiple flooring types

FLASH TIME

No flash required, 0 minutes

OPEN TIME

Approximately 45 minutes at 70°F and 50% humidity

INSTALLATION APPROXIMATE COVERAGE RATES

- Glue Box: approx. 50 SF/gal.
 - Trowel #4 (outdoor on rough surface): up to 50 SF/gal.
 - Minimum Run Length: 110 LF/pail (glue 9" wide)
 - Recommended Run Length: 160 lf/pail (glue 9" wide)
 - Maximum Run Length: 210 lf/pail (glue 9" wide)
- 3/32" x 3/32" x 3/32" V-Notch Trowel: 130 SF/gal
- 1/16" x 1/16" x 1/16" Square-Notch Trowel: 95 SF/gal
- 1/8" x 1/8" x 1/8" Square-Notch Trowel: 80 SF/gal
- Engineered Wood Flooring: 1/4" x 1/4" (V-Notch): 30-35 SF/gal

Please Note: It is up to the installer to determine the proper trowel for the job. Larger trowel sizes may be required to reach the minimum adhesive coverage.

KEEP OUT OF REACH OF CHILDREN
FOR PROFESSIONAL USE ONLY
NOT LABELED FOR CONSUMER USE
SEE SAFETY DATA SHEET

2.3 PRODUCT SUBSTITUTIONS

A. Substitutions: No substitutions permitted.

2.4 RELATED MATERIALS

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

2.5 SOURCE QUALITY

A. Source Quality: Obtain recycled 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 MANUFACTURERS' INSTRUCTIONS

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



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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. Recycled Rubber Flooring Installation: Comply with PLAE Installation Manual for installation procedures and techniques for PLAE Achieve Rolls recycled 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 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 finished surfaces from damage during construction.

3.8 SCHEDULES

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

END OF SECTION