

**SECTION 09624  
RESILIENT ATHLETIC SURFACING**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Section includes: Resilient athletic surfacing, including [recycled] [virgin] rubber flooring
- B. Related Sections: Section(s) related to this section include:
  - 1. Section 03 – Concrete Substrate.
  - 2. Section 06 – Plywood Substrate.

**1.02 REFERENCES**

- A. Standards listed by reference, including revisions by issuing authority, form a part of this specification section to extent indicated. The Standards listed here are identified with a designation number, title or other designation established by the issuing authority.
- B. American Society for Testing and Materials (ASTM):
  - 1. ASTM C1028 Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method
  - 2. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
  - 3. ASTM E492 Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine
- C. Other referenced documents
  - 1. LEED-NC, version 3

**1.03 SYSTEM DESCRIPTION**

- A. Performance Requirements: Provide resilient rubber athletic surfacing system and accessories as produced by a single manufacturer, including recommended primers, adhesives, sealants and leveling compounds, all of which have been manufactured and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.

**1.04 SUBMITTALS**

- A. General: Submit listed submittals in accordance with the Conditions of the Contract and Division 1 Submittal Procedures Section.
- B. Product data: Submit product data, including manufacturer's specification sheet and installation instructions for specified products. Include methods of installation and substrate preparation for each type of substrate.

- C. Sustainable Design Submittals: For projects requiring LEED submittal based on LEED-NC version 3
  - 1. Submit documentation substantiating that Connor PowerDrop contains a minimum of 0.5% pre-consumer and a minimum of 74.9% post-consumer recycled content and therefore contributes to Materials & Resources Credit 4.
  - 2. Submit documentation substantiating that the project is located within 500 miles of the manufacturing facility and therefore contributes to Materials & Resources Credit 5.
- D. Samples: Submit samples for each type and color of resilient rubber athletic surfacing and accessories required. Provide samples of flooring materials.
- E. Quality Assurance Submittals: (1) Certified test reports showing compliance with specified performance characteristics and physical properties, (2) Bond and moisture tests with location diagrams and results, and (3) Manufacturer's Installation Instructions.
- F. Closeout Submittals: (1) Cleaning & Maintenance Data (Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance), and (2) Warranty.

#### **1.05 QUALITY ASSURANCE**

- A. Installer: Installer should be highly experienced in performing work of this section, having previously done work similar to that required for this project.

#### **1.06 SEQUENCING/SCHEDULING**

- A. Ordering: Comply with Manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
- B. Delivery: Deliver materials in Manufacturer's original, unopened, undamaged packaging.
- C. Storage: Store materials at temperature and in humidity conditions recommended by manufacturer and protect from exposure to harmful weather conditions. Store resilient athletic surfacing materials in spaces where they will be installed for at least 48 hours before beginning installation.
- D. Installation: Except as otherwise indicated herein, sequencing or scheduling for performance of work of this section in relation with other work is Contractor's option. Install resilient athletic surfacing and accessories after other finishing operations, including painting, have been completed. Do not install resilient flooring over concrete slabs until the latter have been cured and are sufficiently dry to achieved bond with adhesive as determined by the resilient recycled rubber flooring manufacturer's recommended bond and moisture test. Do not take tests later than ten days prior to scheduled installation. Notify Architect immediately of unsatisfactory conditions.

#### **1.07 PROJECT CONDITIONS**

- A. Temperature: Maintain minimum temperature as recommended by Manufacturer, but not less than 65 degrees Fahrenheit (18 degrees Celsius) in spaces to receive resilient athletic surfacing for at least 48 hours prior to installation, during installation and for not less than 48 hours after installation. Subsequently, maintain minimum temperature of 55 degrees Fahrenheit (13 degrees Celsius) in areas where work is completed.

- B. Moisture: Prior to floor finish installation, take moisture tests on all concrete floors regardless of age or grade level. The test shall be a calcium chloride test. Conduct one test for every 1,000 or less square feet of resilient athletic surfacing. Conduct tests around the perimeter of the room, at columns and where moisture may be evident. The moisture emission from the concrete shall not exceed 3.0 pounds per 1,000 square feet per 24 hours. Submit a diagram of the area showing the location and results of each test to the Architect, Owner, Construction Manager or General Contractor. If the test results exceed the limitations do not proceed with the installation until the problem has been corrected.

**PART 2 - PRODUCTS**

**2.01 ACCEPTABLE MANUFACTURER**

- A. Provide Connor PowerDrop resilient athletic flooring by **Connor Sports Flooring**, 251 Industrial Park Road, Amasa, MI; telephone 1.800.283.9522; [www.connorfloor.com](http://www.connorfloor.com) .

**2.02 MATERIALS**

- A. Provide **Connor PowerDrop** -- black recycled rubber tiles with EPDM colored granules as follows:
  - 1. **Construction:** Tile to be produced in block format and cut to thickness. Tiles must lay flat without requirements of weighting down or adhesive.  
Tiles made from cylinder (rolls) not to be allowed due to curling potential.
  - 2. **Material:** 100% post-consumer recycled SBR, EPDM rubber and polyurethane binder.
  - 3. **Tile Size:** 24" x 24"
  - 4. **Thickness:** 1"
  - 5. **Standard Colors:** Select from Standard color line.
  - 6. **Recycled Content:** Black tile shall have 90.1% pre-consumer recycled content. 10% color shall have 0.5% pre-consumer and 87.4% post-consumer recycled content. 35% color shall have 1.4% pre-consumer and 82.9% post-consumer recycled content. 95% color shall have 3% pre-consumer and 74.9% post-consumer recycled content.
  - 7. **Standard Color:** EPDM %: [10%] [35%] [95%]

**2.03 PRODUCT TESTING**

Product Testing

- 1. ASTM D3676 (top layer): 65 pcf – 80 pcf (depends on surface color)
- 2. ASTM E648 Critical radiant flux: Class II
- 3. ASTM E492 Impact sound: FIIC >50
- 4. ASTM D624 Tear strength: 70 pli min.
- 5. ASTM D412 Tensile strength: >200 psi
- 6. ASTM D412 Elongation: >150%
- 7. ASTM D2047 Coefficient of friction: >0.95
- 8. LEED-NC: Can contribute up to six LEED credits
  - a. MR Credit 4 Recycled Content:
    - 1) Black: 90.1% post-consumer

- 2) 10% color: 0.5% pre-consumer, 87.4% post-consumer
- 3) 35% color: 1.4% pre-consumer, 82.9% post-consumer
- 4) 95% color: 3% pre-consumer, 74.9% post-consumer

b. MR Credit 5 – project location must be within 500 miles of manufacturer

#### 2.04 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

### PART 3 – EXECUTION

#### 3.01 SUBSTRATE PREPARATION

- A. Examine substrates and conditions where resilient rubber athletic surfacing will be installed. Require installer to inspect sub-floor surfaces to determine that they are satisfactory. A satisfactory sub-floor surface is defined as one that is dry, smooth, and free from cracks, holes, ridges, sealers or coatings preventing adhesive bond and other defects impairing performance or appearance. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by flooring manufacturer. Do not proceed with installation until unsatisfactory conditions are corrected.

#### 3.02 INSTALLATION

- A. Preparations: (1) Leveling: Use leveling and patching compounds as recommended by flooring manufacturer for filling small cracks, holes and depressions and leveling sub-floors. This contractor shall be responsible for leveling new or existing floors whose surface varies up to 5/16". Notify Owner, Architect and General Contractor in writing where substrate varies more than above before proceeding with the work. (2) Cleaning: Remove coatings from sub-floor surfaces that would prevent adhesive bond, including curing compounds incompatible with resilient athletic surfacing adhesives, paints, oils, waxes and sealers. Broom clean or vacuum surfaces to be covered, and inspect sub-floor. (3) Priming: Apply concrete slab primer, if recommended by flooring manufacturer, prior to application of adhesive. Apply in compliance with manufacturer's direction.
- B. Field Verification: Field verify, prior to installation, exact layout dimensions of all seams, floor patterns, grain directions and insets with Architect. Start of work without Architect approval of field verification is not permitted and unauthorized installations shall be replaced at Contractors expense.
- C. General:
1. Strictly comply with manufacturer's installation instructions and recommendations.
  2. If required, adhere resilient athletic surfacing to substrates using full spread of adhesive applied in compliance with flooring manufacturer's directions.
  3. Where moveable partitions are shown, install resilient athletic surfacing before partitions are erected.
  4. Extend flooring into toe spaces, door reveals and into closet and similar openings. Scribe, cut and fit resilient athletic surfacing to permanent fixtures, built-in furniture and cabinets, pipes, outlets and permanent columns, walls and partitions.

5. Maintain reference markers, holes or openings that are in place or plainly marked for future cutting by repeating on finish flooring as marked on sub-floor. Use chalk or other nonpermanent-marking device.

6. If utilizing adhesive method, tightly cement edges to perimeter of floor around covers and to covers. Tightly cement flooring to sub-base without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks or other surface imperfections.

D. Installing resilient athletic surfacing molded tiles:

1. Match tiles for color and pattern by using tile from cartons in same sequence as manufactured and packaged if so numbered.

2. Lay tile from starting point, either against a wall or existing border, discounting minor offsets, so that tile at opposite edges of room are of equal width. Adjust as necessary to avoid use of cut widths less than 1/2 tile at room perimeters. Lay tile square to room axis, unless otherwise shown.

3. Cut tile neatly around all fixtures. Broken, cracked, chipped or deformed tiles are not acceptable. Generally, lay tile with grain running in one direction unless shown or directed otherwise. Verify grain directions with Architect prior to installation.

E. Loose Laid Method:

1. Product can be loose laid indoors over suitable firm substrate using the interlocking molded dowel pin system. Each tile contains six (6) barbed dowels to secure tile in place. Dowels are inserted into factory molded dowel holes and the tiles are driven together using a wooden block or mallet.

### **3.03 CLEANING AND PROTECTION**

A. General Cleaning: Refer to Manufacturer's Cleaning and Maintenance Instructions.

B. Post Installation Cleaning: Sweep or vacuum floor thoroughly. Do not wash floor until time period recommended by resilient flooring manufacturer has elapsed to allow resilient athletic surfacing to become well sealed in adhesive. Damp mop floor being careful to remove marks and excessive soil. Remove any excess adhesive or other surface blemishes, using appropriate, non-abrasive cleaner recommended by flooring manufacturer.

C. Protection: Protect installed product and finish surfaces from damage during construction and until acceptance. Cover resilient flooring with un-dyed, un-treated building paper until inspection for Substantial Completion.

D. Inspection Cleaning: Clean resilient athletic surfacing not more than four days prior to date scheduled for inspections intended to establish date of Substantial Completion in each area of project. Clean resilient flooring by method recommended by resilient flooring manufacturer.

E. Owner's Personnel: Instruct Owner's personnel in proper maintenance procedures.

### **3.04 EXTRA MATERIALS**

A. General: Furnish extra materials from same manufactured lot as materials installed. Deliver to Owner enclosed in protective packaging with appropriate identifying labels.

END OF SECTION