



Architectural Specifications

SECTION 09-62-00 Specialty Flooring

Cushioned Flooring System

Note to specifiers. This is a guide specification. Edit carefully for your current project. In case of questions, contact SATECH, Inc. at: **360-748-8711** or info@smartcellsusa.com

PART 1 - GENERAL

1. SUMMARY

- A. Cushioned Flooring for fatigue relief of standing / walking workers (e.g. behind ticket counters at airports or in pharmacies)
- B. Cushioned surface to reduce fall-related injuries (e.g. child play areas or senior-care facilities for seniors who are at risk of falling).

Note: All SmartCells applications are for indoor use except when using SmartCells unfinished EPDM tiles; these tiles may be used outside buildings in uncontrolled climate conditions.

2. QUALITY ASSURANCE

- A. Comply with governing codes and regulations
- B. Applicator Qualifications: Application shall be performed by an applicator with a minimum of five (5) years of successful fabrication and installation of cushioned flooring of similar size and scope
- C. Meet or exceed the Durometer Hardness requirements of ASTM D2240
- D. Meet or exceed the Strength and Flexibility requirements of ASTM D412
- E. Meet or exceed the Slip Resistance requirements of ASTM C1028-96
- F. Meet or exceed the Fire Rating requirements of ASTM E648

3. SUBMITTALS

- G. Product Data: Submit manufacturer's printed description of materials, Color/ Treatment Options, Installation Instructions, Care guide and Warranty Information
- H. Samples: Submit one (1) Large 10"x10" samples(sections) of product tiles and one (1) Transition samples

4. WARRANTY

- I. Manufacturer Warranty: Provide manufacturer's eight (8) year limited warranty to be free from defects in material and workmanship, under normal use and service.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Provide Cushioned Flooring manufactured by: SATECH, Inc. , PO Box 1264, Chehalis, WA 98532; Telephone: (360) 748-8711, Fax: (360) 748-8822, email: info@smartcellsusa.com, website: www.SmartCellsUSA.com

2.2 MATERIALS

- A. Cushioned Flooring: PLTFRM (uncovered rubber tile unless noted)
- i. Features
 - ii. Product Configuration
 - a. Size: 36 inch square
 - b. Thickness: 1 inch
 - c. Weight: 2.9-3.1 lbs/sq. ft.
 - d. Thermal Coefficient of Expansion: 42.8×10^{-6} inches/inch °F
 - e. Chemical Resistance for standard EPDM & SBR formulations: Water – Excellent, Acids – Fair-Good, Alkali – Fair, Animal & Vegetable Oils – Fair, Alcohols – Good, Oil & Gasoline – Poor, Aliphatic Hydrocarbons – Poor, Aromatic Hydrocarbons – Poor. NOTE: SATECH offers both ESD and Grease-resistant (Nitrile) rubber formulations.
 - iii. Specifications:
 - a. Durometer Hardness: Shore, type A, durometer: 46-55 (ASTM D2240)
 - b. Flexibility: 300% modulus: 400 +/- 200 psi (ASTM D412)
 - c. Tensile Strength: 500-1000 psi (ASTM D412)
 - d. Slip Resistance (ASTM C1028-96) [edit the following list for your current project](#)
 1. Unfinished Tile Surface: Dry > 1.0, Wet > 1.0
 2. Poly Coated Tile Surface (no embedded flecks): Dry .88, Wet > .30
 - e. Fire Rating (ASTM E648) and NFPA Flammability Rating [edit the following list for your current project](#)
 1. Unfinished Cushioned Flooring Tile Surface:
 - a. NFPA Flammability Rating = 1 (material must be preheated before ignition can occur)
 - b. ASTM E648 – Class 3
 2. POLY Coated Tile Surface: Class 2
 3. CARPET TILE Covered Cushioned Flooring: Class 1
 4. SHEET VINYL Covered Cushioned Flooring: Class 1
 - iv. LEED

- a. Recycled Material (LEEDS Section 4.1) – Black SBR & EPDM SmartCells Tiles Requirement: 10% recycled content (post-consumer + ½ pre-consumer)
SATECH is currently not using recycled content in its products. SATECH, Inc. products, therefore, are not currently eligible for LEEDS MR Credit 4.1 or 4.2, which require 10% and 20% recycled content, respectively.
- b. Indoor Environmental Quality (Section 4.3 / 2.2.3) – Black EPDM SmartCells Tiles SATECH Inc. anti-fatigue and fall protection subfloor cushioning systems meets VOC emission requirements, credit provided for:
 - 1. USGBC LEED v3 (2009) for Commercial Interiors, EQ Credit 4.3 Low-Emitting Materials – Flooring Systems, Option 2
 - 2. Collaborative for High Performance Schools (CHPS) EQ Credit 2.2.3 Flooring Systems as defined in CHPS Best Practices Manual, 2009 Criteria.
 - 3. CRI Green Label Plus Meets 14-day emission factor criteria and qualifies for: USGBC LEED v3 (2009) for Commercial Interiors, EQ Credit 4.3 Low-Emitting Materials – Flooring Systems, Option 1.
- v. Surface Options
 - a. Unfinished -- as-molded EPDM or SBR rubber surface (typically used behind airline ticket counters, baggage handling areas, TSA work areas, manufacturing production lines, etc.). Solid color options: black, brown, gray, green, blue & tan. Surface has a 'tiled' appearance. Surface has a 'tiled' appearance.
 - b. SILK Finish, – surface is modified at the SATECH factory to achieve a 'flat', reduced friction surface (SBR rubber only). Solid color options: black, brown, gray, green, blue & tan. Surface has a 'tiled' appearance.
 - c. POLY Finish – surface is coated with a clear poly urethane coating at the SATECH factory to achieve a 'satin' appearance (SBR rubber only). Solid color options: black, brown, gray, green, blue & tan. The poly coating can be flecked with paint chips to provide color/ texture contrast over the solid color base. See SATECH color chart for base color and chip color scheme options. Tile seams are sealed to prevent fluid penetration to the subfloor. Surface has a 'tiled' appearance.
 - d. CARPET TILE – surface is covered at the customer site with compatible/approved carpet tiles. Contact SATECH for approved Carpet Tiles. The SmartCells rubber cushion is black EPDM rubber.
 - e. SHEET VINYL – surface is covered at the customer site with compatible/approved sheet vinyl. Contact SATECH for approved Sheet Vinyl products. The SmartCells rubber cushion is black EPDM rubber. Sheet vinyl may be covered up the wall with the use of the BURKE MERCER product 070 flexible cove stick/support.

Use Sheet Adhesive 2602510 AlfaWay Extra for adhering vinyl to SmartCells.

2.3 ACCESSORIES

- vi. Tapes & Adhesives:
 - a. SmartCells tile edge glue instant adhesive: CA PLUS FS 500 CPS.
 - b. Double-sided tape for attaching ramp and transitions to the floor: POLYKEN 108.
 - c. Adhesive for Carpet Tile: Full spread acrylic-based, pressure-sensitive adhesive as recommended by carpet tile manufacturer; if not recommended then use Mohawk EnPress PSA.
 - d. Adhesive for Sheet Vinyl: 2602510 AlfaWay Extra
- vii. Caulking / Sealants
 - a. Sealant for sealing unfinished SmartCells, coated SmartCells and Vinyl Covering top surfaces to walls and vertical surfaces: Clear Big Stretch D10240 mfg by Sashco for general water resistant applications or E6100 Adhesive, non-sag formula, mfg by Eclectic Products for water proof applications.
- viii. Transitions / Reducers
 - a. Under Carpet Tile and under Sheet Vinyl floor reducers:
 - 1. 12" wide reducers: Two layers of ½" x 12-to-0" wide reducers from Johnsonite or Roppe reduces from 1" high to 0".
 - 2. 18" wide reducers: Two layers of ½" x 18-to-0" wide reducers from Roppe reduces from 1" high to 0".
 - b. Exposed Transitions:
 - 1. 3.5" wide SmartCells Rubber Ramp: transitions from 1" to 1/8", can be used as a "snap-on" ramp to SmartCells tiles. For use with coated or unfinished SmartCells tiles. Color options: Black, Brown, Green, Gray, Tan, and Blue.
 - 2. 3.5" wide modified SmartCells Rubber Ramp: transitions from 0" to 1/8". For use with Carpet Tile or Sheet Vinyl covered SmartCells: Includes "T" top. Color: Black only.
 - 3. 12" wide transition: TRN12, Black or Yellow with "T" top; transitions from 1" to 0".
 - 4. 18" wide transition: TRN18, Black only with "T" top; transitions from 1" to 0".
- ix. Connectors - SmartCells connectors may be used to connect SmartCells tiles together without edge gluing. When SmartCells connectors are used the cushioning system will not result in a sealed surface.
- x. Shower Drains – For shower drains integrated into surrounding floor space, a ZURN Z415H floor drain or equivalent is installed. An adjustable

drain head provides for the height of the 1" SmartCells structure (as if you were pouring another layer of concrete over an existing floor) and a clamping collar at the top of the adjustable shower drain enables the sheet flooring to be clamped and sealed to the drain at the finished floor level.

2.4 PRODUCT SUBSTITUTIONS – No substitutions permitted

PART 3 - EXECUTION

3.1 DELIVERY, STORAGE & HANDLING

A. Delivery: Product delivered on wood pallets (36" to 42" square) with appropriate labels. Full pallets typically weigh approximately 1100 lbs.

B. Storage: Materials to be stored in covered space out of the sunlight and elements. 48 hours prior to installation, materials to be moved into climate controlled space, equivalent to the environment where the product will be used.

3.2 EXAMINATION

A. Substrate surface should be clean, water tight, and smooth without abrupt changes in elevation. Chips or dents in the substrate surface greater than ½" in diameter may telegraph through to the surface. The Cushioned Floor surface will reflect general substrate unevenness. Provisions for leveling the substrate surface may be necessary but is not as critical as it is for the glue down of thin sheet flooring or floor tiles.

3.3 INSTALLATION

A. Comply with Manufacturer's installation instructions.

B. Installation by Manufacturer Certified Installers.

REFERENCES

A. ASTM D2240 Standard Test Method for Rubber Property – Durometer Hardness

B. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension

C. ASTM D297 Standard Test Methods for Rubber Products-Chemical Analysis

D. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source

E. ASTM C1028-96 Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method

F. LEED US Green Building Council Leadership in Energy and Environmental Design

SATECH, Inc.

1769 Bishop Road, Chehalis, WA 98532

www.smartcellsusa.com | (360) 748-8711 | info@smartcellsusa.com

