

**SPECIAL SPECIFICATION**

**SECTION 09680S**

**CARPET TILE**

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## **SPECIAL SPECIFICATION**

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#### **CARPET TILE**

#### **PART 1 - GENERAL**

##### **1.01 RELATED DOCUMENTS AND SECTIONS**

- A. Section 01445S – Testing for Indoor Air Quality, Baseline IAQ, and Materials
- B. Section 01450S – Sequence of Finish Installation.
- C. Section 01505S – Construction Waste Management
- D. Section 01805S – Environmental Objectives
- E. Section 03300S – Cast-in-Place Concrete
- F. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

##### **1.02 SUMMARY**

- A. Furnish and install carpet tile, vinyl base adhesives and accessories as shown on construction drawings or as otherwise requested. On projects over 100 square yards, furnish an additional 5 percent of carpet to be stored on SNL site for maintenance/replacement needs. Additional carpet shall be packaged for storage to prevent damage from sagging, warping, and other deleterious effects.

##### **1.03 REFERENCES**

- A. American Association of Textile Chemists and Colorists (AATCC)
  - 1. 16E Colorfastness to Light: Watercooled Xenon-Arc Lamp, Continuous Light
  - 2. 20 Fiber Analysis - Qualitative
  - 3. 134 Electrostatic Propensity of Carpets
  - 4. 165 Colorfastness to Crocking - AATCC Crockmeter Method
  - 5. 174 Antimicrobial Activity Assessment of Carpets
- B. American Society of Testing and Materials (ASTM)

1. D2859 Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials
  2. D1335 Standard Test Method for Tuft Bind of Pile Yarn Floor Coverings
  3. D3676 Standard Specification for Rubber Cellular Cushion Used for Carpet or Rug Underlay
  4. D3936 Standard Test Method for Resistance to Delamination of the Secondary Backing of Pile Yarn Floor Covering
  5. D5252 Standard Practice for the Operation of the Hexapod Drum Tester
  6. D5417 Standard Practice for the Operation of the Vetterman Drum Tester
  7. E648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
  8. E662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
- C. Consumer Product Safety Commission (CPSC)
1. FF-1-70 Methenamine Pill Test
- D. National Fire Protection Association (NFPA)
1. 285T Smoke Density (DBS)
- E. Carpet and Rug Institute (CRI)
1. TM101 Assessment of Carpet Surface Appearance Change
  2. TM102 Fluorochemical Finishes
  3. 104 Standard for Installation of Commercial Carpet
  4. Indoor Air Quality Testing Program

#### 1.04 SUBMITTALS

- A. The following shall be submitted in accordance with Division 1, Section "Descriptive Submittals":
- B. Product Data: Submit manufacturer's product literature and installation instructions for each type of carpeting material and installation accessory required.

C. Samples

1. Submit manufacturer's standard size samples showing full range of colors, textures and patterns available for each type of carpet tile required.
2. Submit four 18-inch square samples for each type of carpet tile required. Submit samples that are large enough to show pattern repeat if beyond an 18-inch sample dimension.
3. Submit samples of each type exposed edge stripping, vinyl base, and accessory item.

D. Certification

1. Submit manufacturer's certificate stating all materials are asbestos-free and lead paint-free.
2. Submit certificate stating that the manufacturer and installer comply with Quality Assurance requirements. Include a minimum of five (5) references, complete with addresses, telephone numbers and contact persons for installations within the time period indicated.
3. Submit manufacturer's certificate stating that materials furnished comply with specified requirements. Include supporting independent certified laboratory testing data indicating that material meets specified test requirements.
4. Submit Material Safety Data Sheet (MSDS) for adhesives, leveling compounds, and primers required.
5. Submit written warranty information stating compliance with requirements.
6. Submit manufacturer's documentation of recycled content for each product.
7. Submit documentation of manufacturer's buyback and/or recycling program.
8. Submit manufacturer's documentation that carpet and adhesives meet the Carpet and Rug Institutes (CRI) Indoor Air Quality (IAQ) Testing Programs Green Label or comply with the following total volatile organic compounds (VOC) emissions criteria:
  - a. Carpet not to exceed 0.5 milligrams per square meter per hour
  - b. Adhesive not to exceed 10.0 milligrams per square meter per hour

- E. Maintenance Instructions: Submit manufacturer's printed instructions for maintenance of installed work, including methods and frequency recommended for maintaining optimum condition under anticipated traffic and use conditions. Include precautions against materials and methods which may be detrimental to finishes and performance.

## 1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Firm (material producer) with not less than 5 years of production experience, whose published literature clearly indicates general compliance of products with requirements of this section.
- B. Installer Qualifications: Firm with not less than 5 years of experience in installation of commercial carpet tile of type, quantity and installation methods similar to work of this section.
- C. For each colorway, per floor, furnish carpet tile from one dye lot only.

## 1.06 TESTING

- A. Flammability Tests
  - 1. Radiant Panel: ASTM E648, Class I.
  - 2. Smoke Density: NFPA 258T or ASTM E662, 450 maximum.
  - 3. Methenamine Pill Test: Self Extinguishing (CPSC FF-1-70 or ASTM D 2859).
- B. Lightfastness: 4.0 minimum at 60 hours (AATCC 16E).
- C. Crocking: 4.0 minimum wet or dry (AATCC 165).
- D. Static Electricity (AATCC 134): 3.5 KV at 20 percent R.H., 70 degrees F .
- E. Dimensional Stability (DIN STD. 54318-AACHEN Test): 0.2 percent maximum.

## 1.07 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site in original factory wrappings and containers, clearly labeled with identification of manufacturer, brand name, quality or grade, fire hazard classification, and lot number.
- B. Store materials in original undamaged packages and containers, inside well-ventilated area protected from weather, moisture, soiling, extreme temperatures, humidity; laid flat, blocked off ground to prevent sagging and warping. Maintain temperature in storage area above 40 degrees F. Do not stack packages higher than recommended by manufacturer.
- C. Comply with instructions and recommendations of manufacturer for special delivery, storage, and handling requirements.

## 1.08 SEQUENCE AND SCHEDULE

- A. Coordinate work of this section with other work to ensure that installed carpeting materials are not damaged or soiled.

## 1.09 WARRANTY

- A. Warranty shall cover all labor and materials, including labor and installation costs involved to replace defective product.
- B. Wear: 15 years.
- C. Fiber Loss: 15 years
- D. Delamination: 15 years
- E. Edge Ravel: 15 years
- F. Colorfastness: 15 years
- G. Dimensional Stability: Lifetime
- H. Soil Repellant: Lifetime
- I. Anti-Static: Lifetime.
- J. Workmanship/Installation: 2 years.

## PART 2 – PRODUCTS

- A. The carpet covered by this specification is intended for end use applications that have a Severe Use Classification. All products (carpet and adhesives) from current production must be retested on a quarterly basis to ensure continuing compliance with CRI IAQ Test Program requirements. It is the Contractor's responsibility to provide only products compatible with adjacent materials in the assembly.

### 2.01 MANUFACTURERS

- A. As selected on drawings.

### 2.02 MATERIALS

- A. Products: As selected on drawings.
- B. Compatibility: Provide carpet, adhesives, and other related materials that are compatible with one another and with substrates under conditions of service and application.

### 2.02 AVAILIBILITY

- A. Product shall have a lead time of not more than eight (8) weeks from the time the dealer receives the order to the time SNL receives the product.

### 2.03 AESTHETICS

- A. Patterns and colorways shall be available for a minimum of ten (10) years.
- B. All product within the same floor of a project shall be from the same dye lot.

## 2.03 ACCESSORIES

- A. Carpet Edge Guard, Nonmetallic: Extruded or molded heavy-duty vinyl or rubber carpet edge guard of size and profile required with minimum 2-inch wide anchorage flange; colors compatible with carpet furnished.
- B. Cutback Underlayment and Patching Compound: "Henry 345" Flooring Underlayment Powder, as manufactured by W. W. Henry Company or approved equal.
- C. Vinyl Base: 4 inches high, coved, 0.080 inch gauge.
- D. Miscellaneous Materials: As recommended by manufacturers of carpet and other carpeting products for intended application.
- E. Releasable Adhesive for Carpet: Provide water-resistant, low VOC (not to exceed 10.0 milligram per square meter per hour), releasable, non-staining type as recommended by carpet manufacturer which complies with flame spread rating required for carpet installation.
- F. Concrete Sealer: Provide concrete sealer compatible with carpet backing material and adhesive.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates for moisture content alkaline presence and other conditions under which carpet tile is to be installed. Provide Calcium Chloride test results to verify amount of moisture in new or existing slabs. Calcium Chloride shall be less than or equal to three (3) pounds per one thousand (1000) square feet in 24 hours. Alkalinity testing shall result in a pH range of 5 – 9. Notify CPM in writing of conditions detrimental to proper completion of the work. Do not proceed until unsatisfactory conditions have been corrected.
- B. Field verify all dimensions and other work conditions affecting the installation of carpet tile.

### 3.02 PREPARATION

- A. General
  - 1. Concrete shall be cured, clean and dry before installation proceeds.

2. Repair minor holes, cracks, depressions or rough areas using floor patching/leveling compound that is compatible with the adhesive to be used. Protrusions over 1/32 inch shall be leveled. Large patched areas shall be primed.
  3. Whenever a powdery or porous surface is encountered, a primer compatible with the adhesive shall be used to provide a suitable surface for glue-down installation.
  4. Remove existing brass utility caps and install SNL-furnished grout fill caps; grout level with existing substrate.
  5. Remove grease, oils, loose particles, paint, dirt, curing and parting agents, and all other foreign substances. Clear away debris and scrape up cementitious deposits from surfaces to receive carpet tile; vacuum clean immediately before installation.
  6. Subfloor shall be level and smooth and free from scaling and irregularities per Carpet and Rug Institute acceptable standards (CRI 104).
  7. Coordinate carpet installation with any underfloor electrical/telephone/data so conductors and cables are pulled prior to carpet installation. Accessories (floor power/communications monuments) shall be installed on top of carpet after installation.
  8. Sequence carpet tile installation with other work to minimize possibility of damage and soiling of carpet during remainder of construction period.
  9. Maintain room temperature at minimum 65 degrees F for at least 24 hours prior to installation and relative humidity at approximately that at which the area is to be maintained.
- B. Concrete (No Previous Flooring Material): Apply a concrete sealer coat at the rate recommended by the sealer manufacturer. Use thin, fast drying primers that are compatible with adhesives. Apply adhesive only after primer is completely dry.
- C. Concrete (Previous Flooring Materials Removed): Remove existing adhesive by grinding with a concrete grinding machine and moist sand. Do not use solvents to remove adhesive. Apply concrete sealer at rate recommended by the sealer manufacturer. Use thin, fast drying primers that are compatible with adhesives. Completely cover area with cutback neutralizer per manufacturer's recommendations.
- D. Wood: Patch all surface irregularities and seal with wood sealer as recommended by manufacturer.
- E. Vinyl Tile: Replace all loose, missing, and broken tiles with tiles of equal thickness making note of any special requirements with respect to asbestos on the Jobsite Hazard

Evaluation. Strip existing tile of wax, dirt and other foreign substances. Completely cover area with cutback neutralizer per manufacturer's recommendations.

### 3.03 INSTALLATION

- A. General: Perform installation in accordance with manufacturer's instructions, except where more stringent requirements are shown or specified, and except where project conditions require extra precautions or provisions to ensure satisfactory performance of the work.
1. Field verify all dimensions and other work conditions affecting the installation of carpet tile.
  2. Unless otherwise noted or approved on drawings, begin laying tile at centerline
  3. Comply with carpet tile instructions for direction of carpet tile. Unless otherwise noted on drawings align pattern and pile in the same direction, parallel to the centerline of the area or room
  4. Extend carpet tile under open-bottomed obstructions and under removable flanges and furnishings, and into alcoves and closets of each space. Existing systems furniture shall be raised or removed to accommodate continuous carpet installation.
  5. Provide cut-out where required, and bind cut edges where not concealed by protective edge guards or overlapping flanges.
  6. Install carpet edge guard where edge of carpet is exposed; anchor guards to substrate. Use full length strips only.
  7. Expansion Joints: Do not bridge building expansion joints with carpet tile; provide for movement.
  8. Carpet tile shall be free from movement when subjected to traffic.
  9. Do not use pieces smaller than 1/3 of a standard tile without prior approval by the SDR.
  10. Provide mockup for approval by SDR of special cuts/effects such as mitered corners at borders or graphic patterns that are prepared and installed onsite.
  11. Where there are floor finish material changes at doors, place centerline of abutting materials below door.
- B. Glue Down Installation
1. Fit sections of carpet tile into each space prior to application of adhesive. Trim edges.

2. Apply a full spread of adhesive uniformly to substrate in accordance with manufacturer's instructions unless otherwise indicated by SDR. Follow MSDS instructions for ventilation requirements. Butt carpet tile edges tightly together to form seams without gaps. Butt edges tightly to vertical surfaces. Eliminate air pockets and ensure uniform bond. Remove adhesive promptly from face of carpet tiles.
- C. Self-adhesive installation: Install per manufacturer's recommendation.
- D. Miscellaneous Installation, Stairway Carpeting: Install per manufacturer's recommendation. Provide vinyl nosing at each riser. Match adjoining carpet installation.
- E. Install vinyl base after completion of carpet work. Use adhesive recommended by vinyl base manufacturer.
- F. Coordinate adhesive blocking areas with SDR when floating carpet tile over access flooring.

#### 3.04 CLEANING AND PROTECTION

- A. Remove and dispose of debris and recycle all unusable scraps.
- B. Vacuum carpet tile using commercial quality vacuum cleaner. Remove spots and replace carpet tile where spots cannot be removed. Trim any protruding face yarn where required.
- C. Provide a heavy, non-staining paper or plastic walkway as required by JA over carpeting in direction of traffic. Maintain protection intact until final acceptance by SNL.
- D. Advise SDR of protection methods and materials necessary to prevent deterioration or damage until substantial completion.

#### 3.05 CARPET REMOVAL

- A. All carpet tile and scraps removed from SNL projects shall be recycled or reapplied. Disposal of product in landfill is not permitted.
- B. Vacuum in-place carpet with industrial vacuum prior to demolition or debris-producing renovation.
- C. Remove carpet.
- D. Stack on pallets for handling.
- E. Store carpet off ground and under cover to prevent contamination of materials by water, foreign matter or other causes.

- F. Coordinate with SNL Inspector to deliver removed carpet to SNL recycling program or contact manufacturer for pick-up for recycle. In the case that the manufacturer does not have a recycling program, contact an independent recycling program such as:
1. Collins & Aikman floore carpet buyback program: (800 248-2878) or [www.powerbond.com](http://www.powerbond.com)
  2. Dupont - Partnership for Reclamation: (800 328-7719) or [www.dupontcommercial.com](http://www.dupontcommercial.com)
  3. Evergreen Nylon Recycling: (804 520-3589) or [www.n6recycling.com](http://www.n6recycling.com)
  4. BASF 6ix Again: (800 652-9964) or [www.basf.com](http://www.basf.com)
  5. Shaw Incorporation: (800 441-7429) or [www.shawinc.com](http://www.shawinc.com)

END OF SECTION