

## SECTION 09 68 00

CARPET  
01/07

## PART 1 GENERAL

## 1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

## AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

AATCC 107	(2002) Colorfastness to Water
AATCC 134	(2006) Standard Test Method for Electrostatic Propensity of Carpets
AATCC 16	(2004) Colorfastness to Light
AATCC 165	(1999) Colorfastness to Crocking: Textile Floor Coverings - AATCC Crockmeter Method

## ASTM INTERNATIONAL (ASTM)

ASTM D 3278	(1996; R 2004e1) Flash Point of Liquids by Small Scale Closed-Cup Apparatus
ASTM D 5252	(2005) Operation of the Hexapod Drum Tester
ASTM D 5417	(2005) Operation of the Vettermann Drum Tester
ASTM D 5793	(2005) Binding Sites Per Unit Length or Width of Pile Yarn Floor Coverings
ASTM D 5848	(2005) Mass Per Unit Area of Pile Yarn Floor Coverings

## CARPET AND RUG INSTITUTE (CRI)

CRI 104	(2002) Standard for Installation Specification of Commercial Carpet
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## INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO 2551	(1981) Machine-made Textile Floor Coverings - Determination of Dimensional Changes Due to the Effects of Varied Water and Heat Conditions
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## U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

40 CFR 247	Comprehensive Procurement Guideline for Products Containing Recovered Materials
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## 1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

### SD-02 Shop Drawings

Installation; G, AE

Three copies of drawings indicating areas receiving carpet, carpet types, textures and patterns, direction of pile, and locations of edge molding. Installation drawings for the following items diagramming edge moldings and carpet direction for approval prior to installation.

### SD-03 Product Data

Carpet; G, AE  
Adhesives and Concrete Primer; G

Manufacturer's catalog data and printed documentation stating physical characteristics, durability, resistance to fading, and flame resistance characteristics for each type of carpet material and installation accessory.

Surface Preparation; G, AE  
Installation; G, AE

Three copies of the manufacturer's printed installation instructions for the carpet, including preparation of substrate, seaming techniques, and recommended adhesives and tapes.

Regulatory Requirements; G, AE

Three copies of report stating that carpet and carpet components contain recycled materials and/or involvement in a recycling or reuse program. Include in the report percentage of post-industrial and post-consumer recycled material. Include manufacturer's independent, third party certification of compliance with Carpet and Rug Institute's Green Label Indoor Air Quality program

### SD-04 Samples

Carpet; G, AE

- a. Carpet: Two "Production Quality" samples 18 by 18 inches of each carpet proposed for use, showing quality, pattern, and color specified.
- b. Vinyl or Aluminum Moldings: Two pieces of each type at least 12 inches long.
- c. Special Treatment Materials: Two samples showing system and installation method.

### SD-06 Test Reports

#### Moisture and Alkalinity Tests

Three copies of test reports of moisture and alkalinity content of concrete slab stating date of test, person conducting the test, and the area tested.

### SD-07 Certificates

#### Carpet

Certificates of compliance from a laboratory accredited by the National Laboratory Accreditation Program of the National Institute of Standards and Technology attesting that each type of carpet and carpet with cushion material conforms to the standards specified.

#### Regulatory Requirements

Report stating that the carpet contains recycled materials and indicating the actual percentage of recycled material.

### SD-10 Operation and Maintenance Data

#### Carpet; G, AE Cleaning and Protection; G, AE

Three copies of carpet manufacturer's maintenance instructions describing recommended type of cleaning equipment and material, spotting and cleaning methods, and cleaning cycles.

#### Operational Service

Documentation of manufacturer's take-back program for carpet. Include contact information, summary of procedures, and the limitations and conditions applicable to the project. Indicate manufacturer's commitment to reclaim materials for recycling and/or reuse.

## 1.3 REGULATORY REQUIREMENTS

Provide the Carpet and Rug Institute (CRI) Indoor Air Quality (IAQ) label for carpet, carpet cushion, and adhesives or demonstrate compliance with testing criteria and frequencies through independent laboratory test results. Carpet, carpet cushion, and adhesives bearing the label will indicate that the carpet has been tested and meets the criteria of the CRI IAQ Carpet Testing Program, and minimizes the impact on indoor air quality. Procure carpet in accordance with 40 CFR 247, and where possible, purchased locally to reduce emissions of fossil fuels from transporting.

## 1.4 DELIVERY AND STORAGE

Deliver materials to the site in the manufacturer's original wrappings and packages clearly labeled with the manufacturer's name, brand name, size, dye lot number, and related information. Remove materials from packaging and store them in a clean, dry, well ventilated area (100 percent outside air supply, minimum of 1.5 air changes per hour, and no

recirculation), protected from damage, soiling, and moisture, and strong contaminant sources and residues, and maintain at a temperature above 60 degrees F for 2 days prior to installation. Carpet tiles shall not be stored with materials which have high emissions of volatile organic compounds (VOCs) or other contaminants. Do not store carpet near materials that may offgas or emit harmful fumes, such as kerosene heaters, fresh paint, or adhesives.

#### 1.5 ENVIRONMENTAL REQUIREMENTS

Maintain areas in which carpeting is to be installed at a temperature above 60 degrees F and below 90 degrees F for 2 days before installation, during installation, and for 2 days after installation. Provide temporary ventilation during work of this section. Maintain a minimum temperature of 55 degrees F thereafter for the duration of the contract. Do not permit traffic or movement of furniture or equipment in carpeted area for 24 hours after installation. Complete other work which would damage the carpet prior to installation of carpet.

#### 1.6 SCHEDULING

Install carpet systems after the installation and ventilation period of materials or finishes which have high short-term emissions of VOCs, formaldehyde, particulates, or other air-borne compounds which may be adsorbed by or settle on the carpet tiles.

#### 1.7 WARRANTY

Provide manufacturer's standard performance guarantees or warranties including minimum ten (10) year wear warranty, two (2) year material and workmanship and ten (10) year tuft bind and delamination.

#### 1.8 OPERATIONAL SERVICE

Collect information from the manufacturer about maintenance agreement options, and submit to Contracting Officer. Service shall reclaim materials for recycling and/or reuse. Service shall not landfill or burn reclaimed materials. When such a service is not available, local recyclers shall be sought after to reclaim the materials.

### PART 2 PRODUCTS

#### 2.1 CARPET

Furnish first quality carpet; free of visual blemishes, streaks, poorly dyed areas, fuzzing of pile yarn, spots or stains, and other physical and manufacturing defects. Provide carpet materials and treatments as reasonably nonallergenic and free of other recognized health hazards. Provide a static control construction on all grade carpets which gives adequate durability and performance. Provide the Carpet and Rug Institute (CRI) Indoor Air Quality (IAQ) Label. Carpet type bearing the label will indicate that carpet has been tested and meets the criteria of the CRI Green Label Requirements for Indoor Air Quality Test Criteria. Carpet tiles shall have Carpet Component Identification Codes as established by the CRI for future recycling. The labels shall be permanently printed or attached to the carpet backing. The codes shall identify, at minimum, the carpet's face fiber, primary backing, and secondary backing.

### 2.1.1 Polyester Carpet Face Fibers

For informational purposes, a list of sources known to recycle polyester carpet face fibers is provided below. Note that the Contractor is not limited to these sources. An approved product from other sources may be submitted for the Government's approval during construction. Acceptable manufacturer's include, but are not limited to:

Bretlin, Inc.  
LaFayette, Georgia

Central Vermont Carpet  
Barre, Vermont

Environmental Building Supplies  
Portland, Oregon

Image Industries  
Amuchee, Georgia

Martin Color-FI  
Edgefield, South Carolina

Talisman Mills, Inc.  
Mequon, Wisconsin

### 2.1.2 Physical Characteristics

#### 2.1.2.1 Modular Tile Carpet A

Carpet shall comply with the following:

- a. Carpet Construction: Tufted.
- b. Type: Modular tile 20 by 20 inch square with 0.15 percent growth/shrink rate in accordance with ISO 2551.
- c. Pile Type: Level-loop.
- d. Pile Fiber: Commercial 100 percent branded (federally registered trademark) nylon continuous filament.
- e. Yarn Ply: Minimum 2.
- f. Gauge or Pitch: Minimum 1/12 inch in accordance with ASTM D 5793.
- g. Stitches or Rows/Wires: Minimum 10 per square inch.
- h. Finished Pile Yarn Weight: Minimum 28 ounces per square yard. This does not include weight of backings. Determine weight in accordance with ASTM D 5848.
- i. Pile Density: Minimum 9164 oz/cy average, weight density 256564.
- j. Dye Method: Solution dyed.
- k. Backing Materials: Provide primary backing materials like those customarily used and accepted by the trade for each type of carpet. Provide secondary backing to suit project requirements of

those customarily used and accepted by the trade for each type of carpet, except when a special unitary back designed for gluedown is needed. Carpet backing may contain post-consumer or post-industrial recycled content.

- m. Recycle Efforts: Products shall be returnable and or recyclable.

## 2.2 PERFORMANCE REQUIREMENTS

a. ARR (Appearance Retention Rating): Test carpet with the minimum 3.5-4.0 (Severe) ARR in accordance with either the [ASTM D 5252](#) (Hexapod) or [ASTM D 5417](#) (Vettermann) test methods using the number of cycles for short and long term tests as specified.

b. Static Control: Provide static control to permanently regulate static buildup to less than 3.5 kV when tested at 20 percent relative humidity and [70 degrees F](#) in accordance with [AATCC 134](#).

c. Tuft Bind: Provide tuft bind force required to pull a tuft or loop free from carpet backing with a minimum [10 pound](#) average force for loop pile.

d. Colorfastness to Crocking: Comply dry and wet crocking with [AATCC 165](#) and with a Class 4 minimum rating on the AATCC Color Transference Chart for all colors.

e. Colorfastness to Light: Comply colorfastness to light with [AATCC 16](#), Test Option E "Water-Cooled Xenon-Arc Lamp, Continuous Light" and with a minimum 4 gray scale rating after 40 hours.

f. Colorfastness to Water: Comply colorfastness to water with [AATCC 107](#) and with a minimum 4.0 gray scale rating and a minimum 4.0 transfer scale rating.

g. Delamination Strength: Provide delamination strength for tufted carpet with a secondary back of minimum [2.5 lbs/inch](#).

## 2.3 ADHESIVES AND CONCRETE PRIMER

Adhesives and concrete primers shall comply with applicable regulations regarding toxic and hazardous materials. Provide waterproof, nonflammable, and nonstaining adhesives and concrete primers for carpet installation to meet local air-quality standards, and as required by the carpet manufacturer. Provide release adhesive for modular tile carpet as recommended by the carpet manufacturer. Provide adhesives flashpoint of minimum [140 degrees F](#) in accordance with [ASTM D 3278](#).

## 2.4 COLOR, TEXTURE, AND PATTERN

Provide color, texture, and pattern shall be as indicated on the drawings.

## PART 3 EXECUTION

### 3.1 SURFACE PREPARATION

Do not install carpet on surfaces that are unsuitable and will prevent a proper installation. Repair holes, cracks, depressions, or rough areas

using material recommended by the carpet or adhesive manufacturer. Free floor of any foreign materials and sweep clean. Before beginning work, test subfloor with glue and carpet to determine "open time" and bond.

### 3.2 MOISTURE AND ALKALINITY TESTS

Test concrete slab shall for moisture content and excessive alkalinity in accordance with [CRI 104](#).

### 3.3 PREPARATION OF CONCRETE SUBFLOOR

Do not commence installation of the carpeting shall until concrete substrate is at least 90 days old. Prepare the concrete surfaces in accordance with instructions of the carpet manufacturer. Match carpet, when required, and adhesives to prevent off-gassing to a type of curing compounds, leveling agents, and concrete sealer.

### 3.4 INSTALLATION

Isolate area of installation from rest of building. Perform all work by installers who are CFI certified (International Certified Floorcovering Installer Association), or manufacturer's approved installers. Conduct installation in accordance with the manufacturer's printed instructions and [CRI 104](#). Protect edges of carpet meeting hard surface flooring with molding and install in accordance with the molding manufacturer's printed instructions. Follow ventilation, personal protection, and other safety precautions recommended by the adhesive manufacturer. Continue ventilation during installation and for at least 72 hours following installation.

#### 3.4.1 Modular Tile Installation

Install modular tiles with release adhesive and snugly jointed together. Lay tiles in the same direction with accessibility to the subfloor where required.

### 3.5 CLEANING AND PROTECTION

#### 3.5.1 Cleaning

After installation of the carpet, remove debris, scraps, and other foreign matter. Remove soiled spots and adhesive from the face of the carpet with appropriate spot remover. Cut off and remove protruding face yarn. Vacuum carpet clean.

#### 3.5.2 Protection

Protect the installed carpet from soiling and damage with heavy, reinforced, nonstaining kraft paper, plywood, or hardboard sheets. Lap and secure edges of kraft paper protection to provide a continuous cover. Restrict traffic for at least 48 hours. Remove protective covering when directed by the Contracting Officer.

### 3.6 REMNANTS

Provide remnants remaining from the installation, consisting of scrap pieces more than [2 feet](#) in dimension with more than [6 square feet](#) total to the owner. Remove non-retained scraps from site and recycle appropriately.

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