

**CARPET**

**DOCUMENT NUMBER: 09600**

**APPLICATION: ELEMENTARY, MIDDLE AND HIGH SCHOOL**

**DATE OF ISSUE:**

**06-03-16 – revised moisture tolerance**

03-23-16 - revised

04-01-02 – revised web site

01-22-02 – revised web site

03-16-00 – revised to comply with FSPMA Carpet MC-01A.3

8-15-95 - changed pattern requirements

4-24-95 - first issued

**NOTES:**

Carpet is to comply with the following criteria. The Design Professional is required to incorporate these requirements into standard specification format.

**ATTACHMENTS:**

**Carpet Tile Design Criteria, dated 06-03-16**

**CARPET TILE DESIGN CRITERIA**  
**06-03-16**

- A. Construction: Level or textured loop pile, fiberglass reinforced thermoplastic composite backing or PVC-free cushion backing. Nylon and backing fully fused under heat and pressure and warranted against delamination.
- B. Tile Size: Square, with dimensions between 18" and 24".
- C. Dye Method. 100 percent solution dyed. □
- D. Nylon Pile Fiber Identity. The pile fiber shall consist of 100% branded (i.e., federally registered trademark) soil hiding and static resistant, with a permanent integral static control element (antistatic topical coatings are not acceptable), advanced generation continuous filament nylon (Type 6 or Type 6,6) which may contain reclaimed nylon polymer. Subject to compliance with all specified requirements herein, acceptable brands include:
  - 1) Universal
  - 2) Aquifil
  - 3) Antron
  - 4) Eco Solution Q SD
  - 5) Dynex
- E. Fluorochemical Finish. A minimum average of 400 ppm fluorine on the pile fiber when 3 separate tests are conducted in accordance with CRI TM-102 test method. □
- F. Soil / Stain Resistance. Durable stain inhibitor should be applied to the fiber during product manufacturing to resist fiber staining and soiling. After market topical treatments are not accepted. Carpets shall have a minimum of 6 when tested in accordance with AATCC 175 and a minimum of 3 when tested in accordance with AATCC 195. □
- G. Electrostatic Propensity. A peak electrostatic charge generation not to exceed 3.5 KV maximum, when tested according to AATCC Method 134 (step & scuff method). □
- H. AACHEN Test - Modular Tile Dimensional Stability: +/- 0.15% maximum (ISO 2551).
- I. Tuft Bind (ASTM D-1335): 8.0 lbs minimum average value.
- J. Pile Thickness: 0.093 inch - 0.187 inch per ASTM D418, Section 12.
- K. Pile Yarn Density: 5500 oz. per cubic yard minimum.
- L. Adhesion System: Adhered, Pre-adhered or Adhesiveless Backing System; must comply with Americans with Disabilities Act, Section 4.5.3.
- M. Anti-microbial Treatment: Not required. Antimicrobial agents may be incorporated into the backing or adhesive only. If used, antimicrobial agents shall be applied during the carpet manufacturing process and must pass anti-bacterial and anti-fungal activity when tested in accordance with AATCC Test Method 174-1993, Antimicrobial Activity Assessment of Carpets, with not less than 2-mm halo of inhibition for gram-positive bacteria, not less than 1-mm halo of inhibition for gram-negative bacteria, and no fungal growth, according to AATCC 174. Must meet GSA requirements.

- N. Carpet and Rug Institute (CRI)-TM-101 “Severe” Appearance Retention Rating in conformance with ASTM D-5252 Hexapod test method using number of cycles for short and long-term test cycles as specified.
- 1) The exposure conditioned carpet shall be assessed according to CRI TM 101- Assessment of Carpet Surface Appearance Change using CRI Carpet Appearance Retention Grading Scales. Carpet shall achieve a “Severe” Appearance Retention Rating with a TARR value  $\geq$  3.5 in conformance with the CRI Carpet Appearance Retention Grading Scales.
  - 2) Test shall be by an independent, third-party testing agency.
- O. Flame / Smoke Resistant Standards - Provide carpet complying with ratings as indicated for the following:
- 1) Flooring Radiant Panel Test - ASTM E-648-78 and/or NFPA 253 Carpeting shall have a minimum critical radiant flux of forty-five hundredths (0.45) watts per square centimeter (cm<sup>2</sup>).
  - 2) Methenamine Tablet Test - DOC-FF-1-70 and/or ASTM D 2859-76. Carpet shall meet the "Standards for the Surface Flammability of Carpets"
  - 3) Smoke Density Test - NFPA 258 and/or ASTM E 662-83 Carpet shall have a specific optical density (DM) of four hundred fifty (450) or less (flaming).
- P. Colorfastness to Light - AATCC 16, Option E: Minimum rating of 4 on grey scale after 80 hours exposure.
- Q. Colorfastness to Crocking - AATCC 165: Minimum rating of 4 wet and dry.
- R. Static Resistance: carpet construction to provide a minimum of 3.0 KV resistance for 20% R. H. at 70 degrees, AATCC 134.
- S. Environmental Sustainable Carpet Assessment Standard NSF 140: Manufacturer and specified product must be tested and certified at a Minimum Gold or Platinum Level. Carpet shall conform to the following environmental characteristics:
- 1) Carpet manufacturing processes is certified by a recognized ISO registrar to the current requirements of ISO 14001 for environmental management systems
  - 2) Manufacturer has an established reclamation process for recycling used carpet and is able to facilitate the most environmentally favorable disposal of ANY type of carpet.
  - 3) Carpet Backing System must contain a minimum of 25% recycled content
  - 4) Construction Waste Management – At least 50% of the used carpet shall be able to be recycled, reused or salvaged by weight of construction
- T. Delamination: No delamination per ASTM D3936.
- U. Indoor Air Quality. Registered CRI Green Label Plus. Emissions factors shall not exceed the following measured at the 24 hour test period:
- 1) Total volatile Organic Compounds. 0.5 mg/m<sup>2</sup>□hr
  - 2) Formaldehyde. 0.05 mg/m<sup>2</sup>□hr
  - 3) 4- Phenylcyclohexene (4-PC). 0.05 mg/m<sup>2</sup>□hr
  - 4) Styrene. 0.4 mg/m<sup>2</sup>□hr
- V. Florida Building Code: Must comply with Florida Building Code.

W. Moisture Emission:

- 1) Standard acceptable relative humidity: At a minimum, carpet tile and adhesion systems must be acceptable for use over concrete with 85% or lower internal relative humidity.
- 2) High moisture content substrate: Carpet tile and adhesion systems intended for use over substrates with high moisture content must be acceptable for use over concrete at 95% or lower internal relative humidity

X. WARRANTY: Manufacturer shall guarantee their product against the following for a period of not less than (15) fifteen years from the date of installation. Warranty shall be sole source responsibility of the manufacturer. Second source warranties or warranties that involve parties other than the manufacturer are unacceptable. Warranty shall be non-prorated.

- 1) Wear: Surface fiber wear not more than 10 percent by weight. □
- 2) Static Generation: Less than 3.0 kV at 70 degrees F., and 20 percent relative humidity. □
- 3) No delamination or edge ravel. □
- 4) No dimensional instability (i.e. shrinkage, curling, and doming) which adversely affect ability of tile to lie flat. □
- 5) Mergeability: Carpet of same style and colorway, but from different dyelots and/or manufacturing dates to be mergeable and interchangeable, both at initial installation and at later selective replacement, to create a continuous carpeted surface with no tile appearing out of place.
- 6) Colorfastness to Light and Atmospheric Contaminants: no significant change in color due to exposure to light or exposure to atmospheric contaminants (Ozone or Oxides of Nitrogen).