

**SECTION 09 68 00
CARPETING**

SPEC WRITER NOTES:

1. Use this section only for NCA projects.
2. Delete between // ____// if not applicable to project. Also delete any other item or paragraph not applicable in the section and renumber the paragraphs.

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Section specifies //broadloom // modular// carpet, edge strips, adhesives, and other items required for complete installation.

1.2 RELATED WORK

- A. Color and texture of carpet and edge strip: Section 09 06 00, SCHEDULE FOR FINISHES.
- B. Resilient Wall Base: Section 09 65 13, RESILIENT BASE AND ACCESSORIES.

1.3 PERFORMANCE REQUIREMENTS

SPEC WRITER NOTES:

1. Specify static control only when required to meet project requirements. Installations for critical areas such as computer rooms will use the 2.0 kV requirements. Static protected carpets for most commercial installations are normally rated at 3.5 kV.
2. Choice of critical radiant flux level as it applies to building type and area of application will be made in accordance with the latest edition of NFPA 101; however where the use of Class II (0.22) watts finish is required, Class I (0.45) watts will be permitted. Critical radiant flux will generally be a minimum average of 0.45.
3. For most facilities, the 45 N (10 pound) tuft bind for loop pile and 13 N (3 pound) for cut pile are adequate. Consider 53 N (12 pound) tuft bind for any severe wear application where loop pile might be vulnerable to snagging.

- A. Static Control: Provide static control to permanently regulate static buildup to less than // 3.5 // 2.0 // ____ // kV when tested at 20 percent relative humidity and 21 degrees C (70 degrees F) in accordance with AATCC 134.

- B. Flammability and Critical Radiant Flux Requirements: Provide carpet with a minimum average critical radiant flux of // 0.22 // 0.45 // watts per square centimeter when tested in accordance with ASTM E648.
- C. Tuft Bind: Provide tuft bind force required to pull a tuft or loop free from carpet backing with a minimum // 40 N (10 pound) average force for loop pile // 18 N (3 pound) average force for cut 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 grey scale rating after 40 hours.

SPEC WRITER NOTES:

- 1. Include the following test when specifying carpet constructed of yarn dyed fibers.
- 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 440 N/m (2.5 lbs/inch).
- H. VOC Emissions:
 - 1. Provide low VOC materials and adhesive with Green Seal Certification to GS-36 and description of the basis for certification //; or // .
//

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced Installer who is certified by the International Certified Floorcovering Installers Association at the // Commercial II // Master II // certification level.

1.5 SUSTAINABILITY REQUIREMENTS

- A. Materials in this section may contribute towards contract compliance with sustainability requirements. See Section 01 8113, SUSTAINABLE DESIGN REQUIRMENTS, for project // local/regional materials, // low-emitting materials, // recycled content, // _____// requirements.

1.6 REGULATORY REQUIREMENTS FOR RECYCLED CONTENT

- A. Products and Materials with Post-Consumer Content and Recovered Materials Content:
 - 1. Contractor is obligated by contract to satisfy Federal mandates for procurement of products and materials meeting recommendations for

- post-consumer content and recovered materials content; the list of designated product categories with recommendations has been compiled by the EPA - refer to <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program#directory>.
2. Materials or products specified by this section may be obligated to satisfy this Federal mandate and Comprehensive Procurement Guidelines program.
 3. The EPA website also provides tools such as a Comprehensive Procurement Guideline (CPG) Program and Product Supplier Directory search engine and product resource guides.
- B. Fulfillment of regulatory requirements does not relieve the Contractor of satisfying sustainability requirements stipulated by Section 01 81 13, SUSTAINABLE DESIGN REQUIREMENTS, as it relates to recycled content; additional product and material selections with recycled content may be required, as determined by Contractor's Sustainability Action Plan.

1.7 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Product Data:
 1. 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.
 2. Manufacturer's printed installation instructions for the carpet, including preparation of installation substrate, seaming techniques and recommended adhesives and tapes.
 3. Manufacturer's certificate verifying carpet containing recycled materials include percentage of recycled materials as specified.
- C. Samples:
 1. Carpet: "Production Quality" samples 300 x 300 mm (12 x 12 inches) of carpets, showing quality, pattern and color specified in Section 09 06 00, SCHEDULE FOR FINISHES.
 2. Floor Edge Strip (Molding): 150 mm (6 inches) long of each color and type specified.
 3. Floor Transition Strip (Molding): 150 mm (6 inches) long of each color specified.

- D. Shop Drawings: Installers layout plan showing seams and cuts for //broadloom carpet// and //modular carpet tile//.
- E. Maintenance Data: Carpet manufacturer's maintenance instructions describing recommended type of cleaning equipment and material, spotting and cleaning methods and cleaning cycles.

1.8 DELIVERY AND STORAGE

- A. Deliver carpet in manufacturer's original wrappings and packages clearly labeled with manufacturer's name, brand, name, size, dye lot number and related information.
- B. Deliver adhesives in containers clearly labeled with manufacturer's name, brand name, number, installation instructions, safety instructions and flash points.
- C. Store in a clean, dry, well-ventilated area, protected from damage and soiling. Maintain storage space at a temperature above 16 degrees C (60 degrees F) for 2 days prior to installation.

1.9 ENVIRONMENTAL REQUIREMENTS

- A. Maintain areas in which carpeting is to be installed at a temperature above 16 degrees C (60 degrees F) for 2 days before installation, during installation and for 2 days after installation. Maintain a minimum temperature of 13 degrees C (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.

1.10 WARRANTY

- A. Carpet and installation subject to terms of "Warranty of Construction" FAR clause 52.246-21, except that warranty period is extended to two years.

SPEC WRITER NOTES:

1. Update Applicable Publications to current issue at time of project specification preparation.

1.11 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by the basic designation only. Comply with applicable provisions and recommendations of the following, except as otherwise shown or specified.

SPEC WRITER NOTES:

1. Remove reference citations that do not remain in Part 2 or Part 3 of edited specification.
2. Verify and make dates indicated for remaining citations the most current at date of submittal; determine changes from date indicated on the TIL download of the section and modify requirements impacted by the changes.

B. American National Standards Institute (ANSI)/NSF International (NSF):
 NSF/ANSI/140-13 Sustainable Carpet Assessment Standard

C. American Association of Textile Chemists and Colorists (AATCC):
 16.1-14 Colorfastness to Light
 107-13 Colorfastness to Water
 134-19 Electric Static Propensity of Carpets
 165-21 Colorfastness to Crocking: Textile Floor Coverings-AATCC Crockmeter Method

D. American Society for Testing and Materials (ASTM):
 D3278-21 Flash Point of Liquids by Small Scale Closed-Cup Apparatus
 D5116-17 Determinations of Organic Emissions from Indoor Materials/Products
 E648-19AE01 Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
 F1869-22 Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
 F2170-19A Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes

E. The Carpet and Rug Institute (CRI):
 Carpet Installation Standard CRI 104 (2015)

PART 2 - PRODUCTS

- SPEC WRITER NOTES:
1. Do not use cushions under carpet.
 2. Specify glue down installation only, using nylon carpet.
 3. See Carpet and Rug Institute, Construction guide carpet specification.

2.1 CARPET

- A. General:
1. Provide product as indicated and selected by Architect.

2. VOC Limits: Use carpet and carpet adhesive that comply with the following limits for VOC content when tested according to ASTM D 5116:

- a. Carpet, Total VOCs: 0.5 mg/sq.m x hr.
 - b. Carpet, 4-PC (4-Phenylcyclohexene): 0.05 mg/sq.m x hr.
 - c. Carpet, Formaldehyde: 0.05 mg/sq.m x hr.
 - d. Carpet, Styrene: 0.4 mg/sq.m x hr.
 - e. Adhesive, Total VOCs: 10.00 mg/sq.m x hr.
 - f. Adhesive, Formaldehyde: 0.05 mg/sq.m x hr.
 - g. Adhesive, 2-Ethyl-1-Hexanol: 3.00 mg/sq.m x hr.
- B. Certification: //Platinum level of NSF/ANSI 140.// CRI's "Green Label Plus" program.//
- C. Color, Texture, and Pattern: As specified in Section 09 06 00, SCHEDULE FOR FINISHES.

2.2 ADHESIVE AND CONCRETE PRIMER

- A. Water-resistant, mildew resistant, non-staining to suit products and subfloor conditions indicated to comply with flammability requirements for installed carpet as recommended by the carpet manufacturer.
- B. Comply with ASTM D3278.

2.3 SEAMING TAPE

- A. Hot-melt adhesive tape or similar product recommended by carpet manufacturer for taping seams and butting cut edges at backing to form secure seams and to prevent pile loss at seams.
- B. VOC content of any seam sealant must be less than 50 grams/liter; do not use sealants that contain 1,1,1-trichloroethane or toluene.

2.4 LEVELING COMPOUND (FOR CONCRETE FLOORS)

- A. Provide Portland cement bases polymer modifier with latex or polyvinyl acetate resin manufactured specifically for resurfacing and leveling concrete floors. Products containing gypsum are not acceptable.
- B. Determine the type of underlayment selected for use by condition to be corrected.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

- A. Comply with manufacturer's recommendations to prepare substrates indicated to receive carpet.
- B. Remove subfloor coatings, including curing compounds and other substances that are incompatible with adhesives.

- C. Broom and vacuum clean subfloors to be covered with carpet. After cleaning, examine subfloor for moisture, alkaline salts, carbonation, or dust.

SPEC WRITER NOTES:

1. Include moisture testing for products with impervious backing.

- D. Moisture Testing: Perform moisture and pH test as recommended by the flooring and adhesive manufacturers. Perform test locations starting on the deepest part of the concrete structure. Proceed with installation only after concrete substrates meet or exceed the manufacturer's requirements. In the absence of specific guidance from the flooring or adhesive manufacturer the following requirements are to be met:

1. Perform moisture vapor emission tests in accordance with ASTM F1869. Proceed with installation only after substrates have a maximum moisture-vapor-emission rate of 1.36 kg of water/92.9 sq. m (3lb of water/1000 sq. ft.) in 24 hours.
2. Perform concrete internal relative humidity testing using situ probes in accordance with ASTM F2170. Proceed with installation only after concrete reaches maximum 75 percent relative humidity level measurement.

- E. Concrete Subfloor Preparation: Apply concrete slab primer according to manufacturer's directions where recommended by carpet manufacturer.

3.3 BROADLOOM CARPET INSTALLATION

- A. Comply with CRI Carpet Installation Standard.
- B. Comply with carpet manufacturer's recommendations for seam locations and direction of carpet. Maintain uniformity of carpet direction and lay of pile.
- C. Cut and fit to butt tightly to vertical surfaces, permanent fixtures and built-in furniture.

3.4 MODULAR TILE INSTALLATION

- A. Comply with CRI Carpet Installation Standard.
- B. Install modular tiles with // permanent vinyl-compatible // release // _____ // adhesive and snugly jointed together.
- C. Lay tiles in // the same direction // an alternating pattern // _____ // with accessibility to the subfloor where required.
- D. Cut and fit to butt tightly to vertical surfaces, permanent fixtures and built-in furniture.

3.5 ENTRANCE CARPET INSTALLATION

- A. Install carpet with // permanent vinyl-compatible // release // _____// adhesive and tightly butt together.
- B. //Lay tiles in // the same direction // an alternating pattern // _____//. //
- C. //Install roll goods smooth, uniform, and secure, with a minimum of seams. Prepare regular, unnoticeable, and treated seams with a seam adhesive. Install breadths parallel, with carpet pile in the same direction. Match patterns accurately. Neatly cut and fit, securely, cutouts at door jambs, columns, and ducts. Locate seams at doorways parallel to and centered directly under doors. Do not make seams perpendicular to doors or at pivot points. //
- D. //Cut mats to specified size and finish them with a tapered vinyl edge that is glued and sewn on. //

3.6 EDGE STRIPS INSTALLATION

- A. Install edge strips over exposed carpet edges adjacent to uncarpeted finish flooring.
- B. Install proper thickness of transition strips over exposed carpet edges and adjacent flooring material.
- C. Anchor metal strips to floor per manufacturer's recommendations.

3.7 PROTECTION AND CLEANING

- A. Remove waste, fasteners and other cuttings from carpet floors.
- B. Vacuum carpet and provide suitable protection. Do not use polyethylene film.
- C. Do not permit traffic on carpeted surfaces for at least 48 hours after installation. Protect the carpet in accordance with CRI 104.
- D. Do not move furniture or equipment on unprotected carpeted surfaces.
- E. Just before final acceptance of work, remove protection and vacuum carpet clean.

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