

SECTION 09 6813

TILE CARPETING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Tile carpeting.

B. Related Requirements:

1. Division 01 - General Requirements.
2. Section 03 3000 - Cast-In-Place Concrete.
3. Section 09 6513 - Rubber Base.

1.02 SUBMITTALS

A. Shop Drawings: Submit dimensioned layout of carpet tile and details for binder bars.

B. Samples:

1. Submit minimum three labeled carpet tile actual size with proper backing. Carpet style and color as selected by the Owner.
2. Trim and accessories: Submit 12-inch long Samples of each type trim proposed for the Work.

C. Product Data: Submit the following:

1. Carpet tile manufacturer's published technical data fully describing carpet materials, construction, and recommended installation directions.
2. Technical data and installation instructions for each adhesive and sealer material.
3. Carpet tile manufacturer's published instructions for maintenance, care, cleaning and repair of carpet.
4. MSDS on Manufacturers recommended adhesives and primers.

D. Certificate:

1. Submit a certificate from carpet tile manufacturer that materials supplied comply with fire hazard resistance standards specified.
 2. Submit a manufacturer certification that the installer is approved by the manufacture to install the specified product.
- E. Installer's Experience Qualifications: Submit list of not less than five projects with similar scope of work, extending over period of not less than five years, indicating installer's experience record.

1.03 QUALITY ASSURANCE

- A. Comply with the following as a minimum requirement:
1. Manufacturer's installation instructions
 2. Materials shall comply with CBC Chapter 11B and ADAAG requirements.
 3. Comply with current CHPS requirements for low emitting materials, www.chps.net.
 4. Chemically based products such as sealers, primers, fillers, adhesives, etc. must be approved by owner's office of the Environmental Health and Safety (OEHS).
 5. Carpet tile must be free of Anti-Microbial Protection.
 6. Comply with ASTM F1869 for moisture testing.
- B. Requirements of Regulatory Agencies: Carpet tile shall meet requirements of federal, state and local regulatory agencies for flammability, static control, or other properties as specified with testing documentation from the manufacturer by a third party laboratory.
- C. Carpet Tile Installation: Comply with CRI 104 - Standard for Installation of Textile Floor Covering Materials.
- D. Each color of carpet tile shall be of the same dye lot.
- E. Qualifications of Installer: Minimum five years experience in successfully installing the same or similar flooring materials.
- F. Pre-Installation and Progress meetings: Prior to start of work of this section and after approval of submittals, schedule an on site Pre-Installation and progress meetings between Contractor, Supervising Installer, OWNER and Project Inspector to review construction, drawings and installation procedures in accordance with the requirements of this specification.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Full cartons of carpet tile shall be packaged and identified by the flooring manufacturer. Distributor, dealer, or vendor cutting, re-packaging, and re-labeling is not permitted.
- B. Store material at least 48 hours at room temperature prior to installation and in accordance to manufacturer's instructions.
- C. Deliver fire-rated materials with testing agency labels and required fire classification numbers attached and legible.

1.05 JOB CONDITIONS

- A. Ventilation and Temperature: Verify areas to be carpeted are ventilated to remove any off gassing from installation materials, and areas are within temperature range recommended by the various material manufacturers for Project site installation conditions. The temperature of a concrete slab must be stabilized above 65 degrees both 12 hours prior to and after the installation. The following environmental conditions inside the building are critical for proper installation. Temperature must be between 65 degrees F and 95 degrees F and the humidity between 10 percent and 65 percent for at least 72 hours before and 72 hours after installation. In addition, any adhesives and primers should be stored under these conditions for a minimum of 24 hours prior to installation.
- B. Protection: Prohibit traffic on carpet for at least 12 hours after installation. Cover carpet with heavy non-staining Kraft paper in areas where the Work of other trades is to be performed and traffic and passage areas. Protect carpet from damage or soiling. Maintain protection in place until Substantial Completion.

1.06 WARRANTY

- A. Contractor shall provide a two year installation warranty.
- B. Manufacturer shall provide a 30 year material warranty as described below:
 1. Delamination Warranty: Carpet tile will not delaminate for a minimum of 30 years from the date of installation.
 2. Zippering Warranty: Carpet tile will not zipper or develop continuous pile yarn runners in the body of the carpet for a minimum of 30 years from the date of Substantial Completion.
 3. Edge Ravel: Carpet tile will not have continuous pile yarn coming out at seams for a minimum of 30 years from the date of Substantial Completion.
 4. Cup, Dish or Dome Warranty: The manufacturer warrants that the carpet tile will not cup, dish or dome for 30 years from the date of Substantial Completion.

- 5. Dimensional Stability Warranty: The manufacturer warrants that the carpet tile will not lose its dimensional stability (namely: growth or shrinkage with glue-down installations) for 30 years due to normal variations in atmosphere, temperature, or humidity
 - 6. Wear Warranty: The manufacturer warrants that the carpet tile will lose no more than 10 percent by weight of the pile fiber during the life of the carpet from the date of Substantial Completion.
- C. Manufacturer shall provide a 10 year material warranty for colorfastness and texture retention.
- 1. Stain and Soil Protection: 10 year stain removal written guaranty.
 - 2. Texture Retention Warranty: The manufacturer warrants that the carpet tile will substantially maintain its physical surface texture against crushing, matting and walking out for 10 years from the date of Substantial Completion.
 - 3. Colorfastness to light: Carpet tile will not fade for 10 years due to exposure to sunlight.
 - 4. Colorfastness to atmospheric contaminants: Carpet tile will not fade for 10 years due to atmospheric contaminants.

1.07 MAINTENANCE

- A. Extra Materials: Provide minimum three cartons of extra materials for each color, pattern, and dye lot of carpet.

PART 2 - PRODUCTS

2.01 MANUFACTURERS AND PRODUCTS

- A. Modular Carpet Tile, Heavy Commercial Traffic:
 - 1. Interface - Plank style Open Ended 131400 AK00, 103179, Lapis, 25cm x 1m
- B. Adhesives and Primers: As recommended by tile carpeting manufacturer.

2.02

MATERIALS

- A. Carpet tile shall meet the following minimum standards:
 - 1. Pile: 0.195 inch maximum height level loop. No cut pile or cut and loops will be accepted.
 - 2. Dye Method: 85 percent Solution Dyed Method. 15 percent Yarn Dyed.

3. Construction: Maximum 24-inch by 24-inch Modular Carpet Tile. Tufted level loop (no cut or cut loop accepted).
4. Pile / Yarn weight: Minimum 17 ounces per square yard.
5. Minimum Density: Not less than 6,800.
6. Moisture Impervious: Carpet tile shall be unaffected by water and moisture.
7. Static Protection: The manufacturer warrants that the carpet tile will not static discharge in excess of 3.5 KV or under when tested under the AATCC Test Method 134 for the life of the carpet.
8. Carpet tile shall be able to be installed with 5 pounds hydrostatic pressure or better per 1,000 square feet per 24 hours with written documentation from manufacturer, per CRI-104.
9. Fluorochemical Treatment: Minimum of 500 parts per million: per CRI-102; after two hot extractions (AATCC171), minimum 400 Parts per Million per CRI TM-102.
10. Traffic Classification: Class III – Extra Heavy Commercial Traffic (more than 1000-foot traffic per day).
11. GSA Certification: Carpet tiles shall meet or exceed the General Services Administration requirements.
12. Flammability:
 - a. Flooring Radiant Panel: Class I- per ASTM E648
 - b. NBS Smoke Density: Less than 450 per test ASTM E662; NFPA-258
 - c. Flame Resistant: Shall pass Methenamine pill test ASTM E662.
 - d. Materials shall meet requirements of California Proposition 65. In case of fire, no material shall be used that emit gas and is prohibited by California Proposition 65.
13. Run Resistant Strength: Not less than 25 pounds, in accordance with the Loop Pile Run Resistance test (TP 155-86), wet or dry for a minimum of 30 years.
14. Indoor Air Quality: Carpet tile and adhesion systems shall meet or exceed CRI and EPA guidelines (green label plus certified and labeled) and may not contain any VOC's such as: 4PCH (4 phenylcyclohexeneor, SBR latex (Styrene Butadiene Rubber).
15. Recycling Program: Carpet tile shall be eligible for a recycling program (the carpet tile will be recycled and no part of the reclaimed carpet enters a landfill)

either through the carpet tile manufacturer or fiber manufacturer. If project scope included removal and disposal of existing carpet or carpet tile, contractor is responsible for delivery to a certified recycling center. A recycling certificate must be submitted to OAR, with its name and address of location of recycling center, date and weight of carpet recycled. Contractor is responsible for costs associated with recycling.

- B. Carpet tile shall be from one dye lot.
- C. Full cartons of carpet tile shall be cut, packaged, and identified by the factory. Distributors, dealers and vendor cutting, re-packaging, and re-labeling are not permitted.
- D. Stair Nosing: Universal Moldings # A-544-BA 1 commercial (butt to nosing) type or equal, installed with recommended sized screws.
- E. Adhesive: Water-resistant latex-based adhesive recommended by carpet tile manufacturer for re-leasable adhesive carpet tile installation. Where primers or sealers are furnished, verify their compatibility with adhesive.
- F. Crack Filler and Leveling Compound: 100 percent cementitious binder type (as defined by ASTM C150), shall be approved by Owner's Office of Environmental Health and Safety (OEHS). The following manufacturers are currently listed as approved by OEHS:
 - 1. Webcrete #95 as manufactured by Durabond
 - 2. Ardex SD-F as manufactured by Ardex
 - 3. Or as recommended by flooring manufacturer and approved by LAUSD's Office of Environmental Health and Safety.
 - 4. Leveling Compound shall meet or exceed 200 pounds when tested in accordance with ASTM 1583.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Before installation is started, examine surfaces to receive carpet tile. Deficiencies shall be corrected before starting Work of this section.
- B. Field verify dimensions and other conditions affecting this Work before commencing carpet tile installation.

3.02 PREPARATION

- A. Provide concrete moisture vapor emission and pH testing to concrete specified to be covered with carpet tile. Includes concrete placed below, on and above grade. For replacement projects, concrete slabs not in direct contact with ground may be excluded from this requirement. Comply with requirements of ASTM F1869.
- B. Testing shall take place after allowing concrete to dry for a minimum of 90 days. Testing to be scheduled no less than one or more than three weeks prior to scheduled flooring installation.
- C. Quantification of Concrete Moisture Vapor Emissions
 1. The test site should be maintained at the same temperature and humidity conditions as those anticipated during normal occupancy. These temperature and humidity levels should be maintained for 48 hours prior and during test period. If meeting this criteria is not possible, then minimum conditions should be 75 plus or minus 10 degrees F and 50 plus or minus 10 percent relative humidity. When a building is not under HVAC control, a recording hygrometer or data logger shall be in place recording conditions during the test period. A transcript of this information must be included with the test report.
 2. The number of vapor emission test sites is determined by the square footage of the facility. The minimum number of tests to be placed is equal to three in the first 1,000 square feet and one per each additional 1,000 square feet.
 3. Tests sites are to be cleaned of adhesive residue, curing compounds, paints, sealers, floor coverings, etcetera 24 hours prior to the placement of test kits.
 4. Weigh test dish on site prior to start of test. Scale must report weight to 0.1 grams. Record weight and start time.
 5. Expose Calcium Chloride and set dish on concrete surface.
 6. Install test containment dome and allow test to proceed for 72 hours.
 7. Retrieve test dish by carefully cutting through containment dome. Close and reseal test dish.
 8. Weigh test dish on site recording weight and stop time.
 9. Calculate and report results as “pounds of emission per 1,000 square feet per 24 hours”.
 10. Follow manufacturer’s corrective measures accordingly. Moisture vapor emission must meet manufacture’s recommendation prior to installation.
- D. Quantification of pH Level

1. At each vapor emission test site, after removal of test containment dome, perform pH test.
 - a. Place several drops of water onto the concrete surface to form a puddle approximately 1 inch in diameter.
 - b. Allow the water to set for approximately 60 seconds
 - c. Dip the pH paper into the water and remove immediately, compare color to chart provided by paper supplier to determine pH reading
 - d. Acceptable range is pH5 to pH9. Excessive alkalinity shall be neutralized prior to installation of the carpet tile.
 - e. Record and report results.
 - f. Follow manufacturer's corrective measures accordingly.

- E. Preparation of Subfloors: Any leveling compound used over a vapor or moisture barrier will be warranted to be installed in a wet or moist environment without moisture limitations.
 1. Delay application of flooring until sub-floors are sufficiently dry according to flooring manufacturer's recommendations, or perform remedial measures as recommended by flooring materials manufacturer.

- F. Cleaning and Drying: Clean concrete floor slabs of oil, grease, waxes, curing compounds, dust, dirt, debris, paint, and other deleterious substances. Failure to remove or seal old adhesives or other floor coatings may result in installation failure. Provide a commercial vacuum cleaner to remove dust and dirt. Do not furnish oiled or chemical treated sawdust or any similar product for dust removal.

- G. Leveling: Verify floor slabs true to level and plane within a tolerance of 3/16 inch in 10-feet. Test floor areas both ways with a 10-foot straightedge and repair high and low areas exceeding allowable tolerance. Pop ups shall be hammered out and floor filled with an approved cementitious leveling compound. Remove high areas by power sanding, stone rubbing or grinding, chipping off and filling with an approved cementitious leveling compound, or equivalent method. Fill low areas with an approved cementitious leveling compound. Repair and level the surfaces having abrupt changes in plane, such as trowel marks or ridges, whether or not within the allowable tolerance. Again clean areas where repairs are performed and prime floor using recommended primer by manufacture. Do not sand, stone rub grind or power chip floor adhesives that contain asbestos.

- H. Wood subfloors: Clean wood subfloors of oil, grease, waxes, dust, dirt, debris, paint, and other deleterious substances. Do not furnish oiled or chemical treated sawdust or any similar product for dust removal. Sand off projecting ridges. If recommended by

carpet tile manufacturer, prime floors with a recommended primer, compatible with adhesives to be installed.

- I. Conditioning of Materials: Carpet tile and adhesives shall be conditioned at the Project site at not less than 65 degrees F and relative humidity between 10 percent and 65 percent for 48 hours prior to installation and in accordance to manufacturer's instructions.
- J. Floors should be level and sound. Any trowel marks from old adhesives must be sanded smooth, creating a level surface prior to the application of adhesives and primers.

3.03 CARPET TILE INSTALLATION

- A. General: Install carpet tile in accordance with requirements of CRI 104, except where more stringent requirements are specified herein or recommended by carpet materials manufacturers.
- B. Install carpet tiles in each dye lot in the number sequence as furnished by manufacturer. Measure the area to find the best starting point that will utilize a maximum size perimeter tile. After selecting the starting point, snap a chalk line that bisects this point by at right angles. To achieve a perfect angle form a triangle by measuring 6-inch up from the center point. Then measure 8-inch out from the center point. Then, find a 10-inch angle between these two points. (See manufacturers written instructions for complete details).
- C. Color Control: Install dye lot in the number sequence at locations indicated to prevent shading variations. Install only one dye lot for each area of building unless otherwise reviewed. If more than one dye lot is required, obtain prior review of color match between dye lots by Owner and its representative's written approval.
- D. Carpet Tile Fit: Refer to the layout Shop Drawings. The corners of the carpet tiles should be flat to assure a proper fit. Install the carpet tiles snugly. Be careful to not to over tighten the installation.
- E. Laying and Seaming: Cut carpet tiles for seams between rows and prevent damage to loops, prevent edge ravel, and preserve uniform row alignment and spacing on both sides and across seams. Install carpet tiles with loop rows in straight lines both ways, free of offsets, waviness, distortion, or misalignment. Cut seam edges straight and square with backing. Trim carpet tiles at walls, columns, and penetrations for a compressed fit.
- F. Doorways: Extend carpet tiles into doorways without piecing in and seam to the carpet on other side of door under door centerline except where metal thresholds occur; no small filler pieces of carpet tiles will be permitted at doorways.
- G. Adhesive Installation: Provide proper equipment as required by manufacturer. Evenly spread adhesive free of excess or thin areas. Place and lay carpet tile within open time of adhesive.

- H. Binder Bars: Provide bars at edges of carpet tiles not abutting walls or other construction, securely fastened in place by using aluminum drive nails. Precisely align splices and tightly miter angles.

3.04 PROTECTION

- A. Protect the Work of this section until Substantial Completion. Limit rolling traffic on carpet tiles for at least 12 hours after installation. Cover carpet tiles with heavy non-staining Kraft paper in areas where the Work of other trades is to be performed and/or traffic and passage areas. Protect carpet from damage or soiling. Maintain protection in place until Substantial Completion.

3.05 CLEANING

- A. As each carpeted area is completed, clean up dirt and debris, remove spots and soiling with proper cleaner, trim off loose threads with sharp scissors, and vacuum entire area clean.

3.06 CLEAN-UP

- A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.07 INSTRUCTION

- A. Before Substantial Completion of the Work, should the district request and at the districts discretion, provide a four hour Owner instruction period for proper maintenance of carpeting. Instructions shall be provided by technical representative of manufacturer.

END OF SECTION