



Greatmats Specialty Flooring Installation Instructions Diagonal Heavy Duty Carpet Tiles

1 GENERAL

Diagonal Tile must be installed by professional flooring installers experienced at installing commercial floor covering products. Installers must have sufficient professional liability insurance coverage (aka Errors and Omissions Insurance) for the project.

Training programs such as the International Standards & Training Alliance (INSTALL), The International Certified Floorcovering Installers Association (CFI), and Flooring American University are recommended. If this is your first project installing Greatmats Diagonal Heavy Duty Carpet Tile or if it has been several months since you last installed it, please call Greatmats Specialty Flooring.

These instructions have been developed to offer the best opportunity for proper and successful flooring installation and any deviation may result in failure. Installation instructions, all Safety Data Sheets (SDS) and label instructions must be read, fully understood and followed. For all situations that are not covered in this document, please contact Greatmats.

Because 90% of all dirt in a building comes in on footwear Greatmats strongly recommends installing and maintaining entrance matting (preferably permanently installed) at all outdoor entrances (20-30 linear feet for major entrances; less for infrequently used entrances). Doing this will improve indoor air quality, reduce maintenance costs, and lengthen the life of your floors.

Unless stated otherwise, follow the specific requirements of *ASTM F710 – Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring*. Please visit www.astm.org for copies of any ASTM document.

The General Contractor (or owner) must provide a structurally sound subfloor; new concrete slabs must conform to *ASTM C33/C33M — Standard Specification for Concrete Aggregate*. When concrete slabs have or are suspected of having Alkali Silica Reaction (ASR) present, do not proceed and contact Greatmats. All on and below grade concrete subfloors require a confirmed effective vapor retarder. The vapor retarder must have a low permeance (≤ 0.1), having a minimum thickness of 10 mils, or meeting *ASTM E1745 requirements — Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs*. Confirm it was placed directly underneath the concrete, above the granular fill. If this is not possible, use a topically applied moisture mitigation system that conforms to *ASTM F3010 – Standard Practice for Two-Component Resin Based Membrane- Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings*. It must be applied following the manufacturer's written instructions. Chemical adhesive removers must not be used. Do not install where hydrostatic pressure can occur; contact Greatmats. Also the concrete subfloors must not be subject to shrinking, curling, cracking or moving in any way. Greatmats accepts no liability for a failure or complaint due to slab movement of any kind.

Diagonal Tile may be installed on radiant heated slabs providing the maximum temperature of the surface of the substrate does not exceed 85°F under any condition of use. The radiant heating system must be lowered or turned off for at least 48 hours before installation of the flooring material to allow proper adhesion of the adhesive to the subfloor. The room temperature must be maintained at a minimum of 65°F for 48 hours prior, during and at least 72 hours after installation. Then the temperature of the radiant heating system can be increased gradually (~3% per day) so that the substrate and the flooring material can adapt to the temperature change together.

To minimize the chance of damage, proper glides must be used on chairs and other furniture that may slide directly across the floor. They must have glides that are a minimum of 1" diameter. Heavy objects such as

Greatmats Specialty Flooring Diagonal Tile Installation Instructions Continued

equipment, appliances, fixtures and heavy furniture must not be moved directly across the floor. Using protective boards will reduce the chance of damage.

Direct sunlight can cause UV damage (fading or bleaching) to most interior finishes, so Low E glass should be selected that will reduce the UV transmission to less than 1%. If glass without sufficient UV protection has already been installed, apply 3MTM protection film (or similar) on the windows to reduce the UV transmission to less than 1%. Please contact the film manufacturer for specific recommendations and application instructions.

Protect all materials and maintenance products from extremes of temperature during shipping. Do not stack pallets. These instructions supersede any verbal or written instructions from Greatmats Specialty Flooring representatives, and must be followed for the warranty to remain in effect.

2 MOISTURE TESTING and ADHESIVE

Moisture testing is mandatory following the protocol of *ASTM F2170 – Standard Test Method for Determining Relative Humidity in Concrete Slabs using in situ Probes*, regardless of grade level or whether the concrete is freshly poured or classified as an older slab. It is the responsibility of the General Contractor/End User to have the concrete subfloor tested for moisture. It is the responsibility of the Flooring Contractor to request the moisture test results prior to installing the flooring, or they may wish to perform the testing themselves. It is also recommended that an International Concrete Repair Institute (ICRI) Tier 2 Certified Technician performs the moisture testing. If for any reason you are unable to drill into the subfloor, contact Greatmats Specialty Flooring technical department.

The test results must not exceed the maximum acceptable relative humidity for the adhesive. If test results exceed the maximum relative humidity, the installation must not proceed until either the subfloor dries to an acceptable level or an effective mitigation system is used that conforms to *ASTM F3010* installed following the manufacturer's written instructions.

Test methodology, results and photographs must be documented and provided to the Flooring Contractor, General Contractor, owner and/or architect. Providing all of the test results are acceptable, the installation may proceed.

Acceptable Adhesive: Release-Bond:

Acceptable for dry areas only. *ASTM F2170* (in-situ relative humidity) limit 90%RH. Coverage ~ 150 - 175 sq. ft. / gallon, depending on substrate. Working Time ≤ 2 hours after its dry-to-the-touch, depending upon conditions. 1/16 inch x 1/16 inch x 1/16 inch square-notched trowel (FCA). **Note:** pH testing is not required for this adhesive.

3 HANDLING and STORAGE

Upon receipt of the flooring at the project, immediately remove from the pallet in the properly conditioned area. If packaging is damaged, take photos and mark shipping documents as such before signing for the shipment. Contact shipper and/or Greatmats Specialty Flooring, and report the damage. Store the tiles in the area (pre-acclimatized) for a minimum period of 24 hours.

Great care is taken to properly label and inspect materials for defects at all phases of handling by Greatmats Specialty Flooring. However, in the rare case where the wrong product or material with visible defects is shipped, these products must not be installed. Careful inspection of the product before installing is the responsibility of the installer. Installation of the product denotes acceptance of the product. Greatmats Specialty Flooring will not honor any warranty complaints for materials installed in the wrong color, with visible defects or other damage.

4 SITE CONDITIONS

Areas must be enclosed, weather tight and properly conditioned at a constant ($\pm 5^{\circ}\text{F}$) service temperature that is between 60°F and 80°F with an ambient relative humidity between 35% - 65% for a minimum of 72 hours prior to, during and 72 hours after the installation.

The substrate surface must be at least 5°F above dew point. Example: If the ambient conditions are 70°F and 65%RH, the dew point is 57°F , and you must not proceed unless the surface temperature is at a minimum of 62°F . Dew point calculators are available on the web.

Greatmats Specialty Flooring Diagonal Tile Installation Instructions Continued

Areas of the flooring subjected to direct sunlight, for example through doors or windows, must be covered using blinds, curtains, cardboard or similar materials for 24 hours before, during, and for a period of 72 hours after the installation to allow the adhesive to cure.

5 SUBSTRATE PREPARATION

When cleaning the substrate, use only dustless vacuum cleaners to remove all dirt and debris.

5.1 Concrete Substrates:

All subfloors must be permanently dry, clean, smooth and structurally sound per *ASTM F710 — Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring*. Concrete subfloors must be free of efflorescence dust, solvents, paint, wax, varnish, oil, grease, asphalt, old adhesives and other extraneous materials that may interfere with the bond or void the warranty of the flooring. These must be completely removed by mechanical means only. Dustless diamond grinding is one method to remove contaminants and bond breakers and it also helps to smooth the concrete.

All burnished or polished concrete surfaces must be mechanically abraded or roughed-up sufficiently to provide a mechanical key for the adhesive.

No expansion joint or moving joint can be covered over or filled. Use a suitable industry standard expansion joint assembly system as required. All substrates should be both smooth (ridge free) and with a minimum flatness tolerance of $\leq 3/16''$ over 10 feet. Irregularities in the substrate must be repaired using only commercial-grade leveling compound or patching compounds that have a minimum compressive strength ≥ 3000 psi. All leveling compounds must be fully warranted by the manufacturer for the use of the project, including the moisture conditions, priming, etc. When dry, sand the surface smooth using a 36 grit sanding disc, screen or similar on a single disc rotary machine with a suitable dust control, and then vacuum clean the floor. Permanently dormant control joints and cracks must be properly cleaned out to remove all dirt and debris or contaminants and filled to a smooth finish using a suitable commercial grade underlayment, following the manufacturer's written instructions.

• **Warnings:** All local, state and federal regulations must be followed. Do not sand, dry sweep, dry scrape, drill, saw, shot-blast or mechanically chip or pulverize existing resilient flooring, backing, lining felt, asphalt "cutback" adhesive or other adhesive. These products may contain asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Unless certain that the product is a non-asbestos containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content. Various local, state and federal government agencies have regulations governing the removal of in-place asbestos-containing material. If you contemplate the removal of a resilient floor covering structure that contains (or is presumed to contain) asbestos, you must review and comply with all applicable regulations. Do not use any chemical adhesive removers. The RFCI's (Resilient Floor Covering Institute) "Recommended Work Practices for Removal of Resilient Floor Coverings" is a defined set of instructions that addresses the task of removing all resilient floor covering structures, including adhesive and adhesive residues. For more information, contact RFCI directly at www.rfci.com or 706-882-3833. **Note:** Occupational Safety and Health Administration (OSHA) has amended its existing standards and determined that people exposed to respirable crystalline silica at the previous permissible exposure limits, face a significant risk of material impairment to their health. For more information, go to <https://www.osha.gov/silica/>.

5.2 Wood Substrates:

All wooden subfloors must be a total minimum thickness of 1-1/4" and overlaid with overlapping joints using APA (American Plywood Association) underlayment-grade plywood, installed per *ASTM F1482 — Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring*.

Wooden substrates must not be in direct contact with concrete subfloors, even if built on sleepers. All suspended wood floors must have adequate under floor ventilation and a permanent, effective vapor retarder or membrane placed directly on the ground beneath the air space. **Note:** As plywood will expand and contract due to changes in moisture content and temperature, Greatmats Specialty Flooring cannot accept any liability of the plywood joints telegraphing through the finished floor.

Greatmats Specialty Flooring Diagonal Tile Installation Instructions Continued

Do not install over lauan panels, plywood with knots, OSB, hardwood flooring, treated wood (i.e. CCA, fire-rated plywood, or other coated wood), particle board, chipboard, flakeboard, fiberboard, Masonite™, pressboard, other hardboard underlayment, or other uneven or unstable substrates.

5.3 Gypsum Substrates:

Gypsum substrates are not suitable for any “wet” areas; however for areas that will remain dry, they can be acceptable. They must meet the requirements of *ASTM F710* including the smoothness/levelness and having a minimum compressive strength of 3000 psi. It must also be fully warranted for the use of the project including the relative humidity (%RH) content of the subfloor unless an *ASTM F3010* compliant mitigation system is also used and have a written, project-specific confirmation from the Gypsum manufacturer.

The manufacturer’s written instructions must also be followed including the amount of mixing water used, the drying time and any requirements for priming (typically before application). Dry sand the surface smooth using a 36 grit sanding disc, screen or similar on a single disc rotary machine with a suitable dust control, and clean the floor.

5.4 Other Subfloors

Do not install over existing resilient floor coverings. Remove the flooring and adhesive, and prepare the subfloor properly. Do not install over non-compatible substrates such as asphalt, any bituminous or asphalt-saturated material.

Substrates such as terrazzo, stone, ceramic tile and metal must be covered with a suitable underlayment/leveling compound such as Ardex K60 or similar following the manufacturer’s written instructions. Please contact Greatmats Specialty Flooring directly for specific recommendations for all other types of subfloors/substrates.

6 LAYOUT

The material layout should be decided by the architect, designer or end user. Take care in planning so you do not have small cuts at the perimeter.

7 INSTALLATION

Following the design layout, measure and mark your starting lines perpendicular to each other using a string line, straight edge and pencil and the 3:4:5 method. Take care in planning so you do not have small cuts at the perimeter.

Starting at the center and following your start lines, dry-lay all the tiles into position using the pyramid method and cut to fit all of the perimeter tiles.

Remove a workable section, carefully stacking them neatly and in order.

Apply the Release-Bond adhesive using the correct trowel notch, evenly without the formation of puddles or voids. Do not apply fresh adhesive over drying adhesive as this may result in telegraphing of adhesive lines. Replace worn trowels to ensure proper spread rate; do not re-notch.

Allow the adhesive to become touch dry. Carefully re-place the flooring back into its proper position, and slowly roll in both directions utilizing a 100-150 lb. three-section roller. Repeat the process for all remaining areas.

8 CLEAN UP

Do not wash or perform any maintenance of the floor for a minimum of 72 hours after the installation is completed to allow adhesive to cure. Follow the Diagonal Tile Maintenance Instructions.

9 PROTECTION

Wait 72 hours before allowing rolling traffic on the floor. If construction is to continue or if heavy rolling loads or furniture are to be moved over the flooring, wait a minimum of 24 hours, sweep or vacuum the floor and cover with plywood or hardboard panels.

10 INSTALLATION TOOLS CHECKLIST

Greatmats Specialty Flooring Diagonal Tile Installation Instructions Continued

- String line
- Straight edge and pencil
- 100 lbs. three section roller
- Adhesive trowel and replacement blades
- Utility knife and blades
- Tape measure

Greatmats.com

117 Industrial Ave.

Milltown, WI 54858

V: 877-822-6622