



## Greatmats Specialty Flooring Spectation 9mm Straight Edge and Interlocking Rubber Tile Installation Instructions

### 1. GENERAL

Spectation™ is recommended for indoor use only and must be installed by professional flooring installer's experienced at installing commercial resilient floor covering products that 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 Spectation™ or if it has been several months since you last installed, please call Greatmats Specialty Flooring to review installations recommendations and obtain guidance for your specific application.

These instructions must be followed, they are developed to offer the best opportunity for a proper and successful flooring installation, and any deviation may result in an installation failure. 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 Specialty Flooring directly.

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*. For copies of any ASTM document please visit [www.astm.org](http://www.astm.org).

The General Contractor (or owner) must provide a structurally sound concrete 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, contact Mats Inc. directly. On and below grade concrete subfloors require a confirmed effective vapor retarder with a low permeance ( $\leq 0.1$ ) having a minimum thickness of 10 mils, or meets the requirements of *ASTM E1745 — 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 then 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 manufacturers written instructions. Chemical adhesive removers must not be used and do not install where hydrostatic pressure can occur, contact Greatmats Specialty Flooring directly. In addition the concrete subfloors must not be subject to shrinking, curling, cracking or moving in any way. Greatmats Specialty Flooring accepts no liability for a failure or complaint due to slab movement of any kind.

Spectation™ can be installed on radiant heated slabs providing the maximum temperature of the surface of the slab does not exceed 85°F under any condition of use. To allow proper adhesion of the adhesive to the subfloor, the radiant heating system must be lowered, or turned off for at least 48 hours prior to installation of the flooring material. The room temperature must be maintained at a minimum of 65°F for 48 hours prior, during and at least

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72 hours after installation. Then the temperature can be increased gradually so that the substrate and the flooring material can adapt to the temperature change together. A rapid change could result in thermal shock and de-bonding.

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 inch in diameter. Heavy objects such as 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 damage most interior finishes so where appropriate, 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 then 3M protection film (or similar) should be applied on the windows to reduce the UV transmission to less than 1%. This will reduce the effects of the UV damage (fading or bleaching). Please contact the manufacturer of the film direct 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 in order for the warranty to be 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* and must be performed, 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.

**Note:** Testing for moisture following the protocol of *ASTM F1869 – Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride* may be an available option, depending on the manufacturer. Please confirm with the manufacturer directly.

The test results must not exceed the maximum acceptable relative humidity for the adhesive. If they do 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 manufacturers written instructions.

Test methodology, results and photographs must be documented and provided to the flooring contractor, general contractor, owner and/or architect. Providing the moisture test results are acceptable to both Greatmats Specialty Flooring and the adhesive manufacturer then the installation may proceed.

- **Acceptable Adhesive:**

- Mapei Ultrabond G-21:

- Premium Two-Part Urethane Flooring Adhesive

- ASTM F2170* (in-situ relative humidity) limit is 75%RH

- Coverage ~ 125 - 185 sq. ft. / gallon depending on substrate

- 1/16 inch x 1/16 inch x 1/16 inch square notched trowel (FCA) Working Time ~ 40

- minutes depending upon conditions

- pH testing is not required.

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

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  $\leq 3/16^{\text{th}}$  inch over 10 feet. Irregularities in the substrate must be repaired using only commercial grade

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leveling compound or patching compounds that have a minimum compressive strength  $\geq 3000$  psi. All leveling compound must be a minimum of 1/8<sup>th</sup> inch deep and be fully warranted by the manufacturer for the use of the project including the moisture conditions, priming

### 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 and report the damage.

Store in the area (pre acclimatized) to be installed for a minimum period of 72 hours. Spectation™ must be stored flat and parallel. Do not store on edge, if material is distorted or otherwise damaged during storage or transportation, do not install it.

### 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  $60^{\circ}\text{F}$  and  $80^{\circ}\text{F}$  with an ambient relative humidity between 35% - 65% for a minimum of 72 hours prior to commencement of installation, during the installation and 72 hours after the installation.

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

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 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, as it also helps to smooth the concrete. 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 clean the floor.

- **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 positively 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](http://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/>.

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### 5.2. Wood Substrates

All wooden subfloors must be a total minimum thickness of 1-1/4 inch 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 permanently 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 cannot accept any liability of the plywood joints telegraphing through the finished floor.

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, or other hardboard underlayment, or other uneven or unstable substrates.

### 5.3. Gypsum Substrates

Gypsum underlayment's patching and leveling compounds can be acceptable substrates providing they meets the substrate performance 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 manufacturers written instructions must also be followed including the amount of mixing water used, the drying time and any requirements for priming (typically before application). 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 clean the floor. Mat Bond testing is required prior to any installation to confirm the suitability of the preparation method, application and all of the proposed products to be used.

### 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, metal must be covered with a suitable underlayment/leveling compound following the manufacturer's written instructions. Please contact Greatmats Specialty Flooring direct for specific recommendations for all other types of subfloors/substrates.

## 6. LAYOUT

After substrate is prepared properly the area must also be kept free of any other trades or traffic (protect if necessary) and clean. When cleaning the substrate, use only dustless vacuum cleaners to remove all dirt and debris.

When installing it is the flooring contractor's responsibility to take into consideration the working time of the adhesive and make adjustments for areas that will dry faster or slower due to air movement etc.

The material layout should be decided by the architect, designer or end user; however, mats generally recommends that the interlocking tiles are installed in the ashlar (brick bond) method.

Measure and mark your starting lines perpendicular to each other using a string line, straight edge/pencil and the 3:4:5 method. Take care in planning so you do not have small cuts at the perimeter. Chalk lines are acceptable for the interlocking tiles.

Great care is taken to properly label and inspect materials for defects at all phases of manufacturing and 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.

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Greatmats Specialty Flooring will not honor any warranty complaints for materials installed in the wrong color, with visible defects or other damage.

### 7. INSTALLATION

#### 7.1 Square Edge Tile Installation

Using your start line dry lay the tiles from the center outwards (north/south). Make sure that tiles do not run off from your lines. Butt each tile to the prior tile(s), do not pressure fit them. If the first few tiles are not installed correctly, it will adversely affect the entire installation. Install the second row (perpendicular). Starting at the center, lay all the tiles into position using the pyramid method and following the design. **Note:** Cut all the perimeter tiles last.

Once completed remove a workable section not too large as the flooring must be installed within the working time of the adhesive (wet-set) resulting in full transfer to the back of the flooring. Neatly stack the tiles (in order) and again clean the substrate.

Apply Mapei G21 adhesive with a 1/16 inch x 1/16 inch x 1/16 inch square notched trowel evenly without the formation of puddles or voids. Do not make any sharp turns with the adhesive trowel as this practice can result in uneven adhesive, drying and bond failure. Never force dry adhesives or patching compounds by using fans. Do not get adhesive on the surface as it is very difficult to remove. Do not apply fresh adhesive over drying adhesive (remove it) as this may result in lippage. Replace worn trowels to ensure the proper spread rate and do not re-notch them.

Keeping within the "working time", replace the stacked tiles back into the correct position in the adhesive bed. Immediately after placement into the adhesive bed, slowly roll in both directions using a heavy roller (minimum 100 lbs.) and repeat the rolling process after 1 hour. Only if required, place weights on any lifting edges or corners to ensure proper bonding. Repeat this procedure for the remainder of the project. Do not allow any foot traffic for 12 hours, ice skate blades and cleats for 48 hours or heavy rolling loads for 72 hours.

#### 7.2 Interlocking Tile Installation

Carefully clean the area again. Measure the length, width and thickness of the tile at the top of the stack and tiles at the bottom of each stack. If they do not match then do not proceed with any cutting the perimeter until they do. This can be a result of the tiles remaining stacked for two weeks or more, and can take up to 72 hours to acclimate. Take care during the installation to identify tiles with any shade variations as any found should be relocated to a less visible area.

Start from the center of the room ensuring that the tile is laid exactly along the pencil lines. Work outward from the first tile in both directions, assure a tight fit by tapping the interlocking edges together using a rubber mallet while making sure that tiles do not run off the guide lines. Start the second row (perpendicular) also at the center of the area and complete it per the design. **Note:** Cut the perimeter tiles to fit last.

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### 8. **CLEAN UP**

Do not get adhesive on the top surface of the product as it is very difficult to remove. Depending upon your timing it may be possible to remove uncured adhesive using a clean cloth and 70% Isopropyl alcohol, liquid soap and water maybe an alternative.

**Note: Using mineral spirits or similar products to remove adhesive may alter the surface appearance of the product. Any damage to the product as a result of adhesive removal is solely the responsibility of the installer.**

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