Homogeneous Resilient Tile

INSTALLATION INSTRUCTIONS

Creative Terrain/Creative Terrain II

FLOOR PREPARATION AND EXISTING ADHESIVES

Sub-Floor Preparation

Sub-floors must be structurally sound, dry, clean and free of dirt, dust, wax, grease, paint, polishes, oil, curing compounds, sealers and all other materials that would interfere with good tile adhesion. The floor surface must be smooth and flat with a maximum variation of “3/16” in 10 feet and 1/32” in 12 inches per ASTM F710. All cracks, depressions and other imperfections must be repaired with a high quality, cement-based patching and/or self-leveling compound which contains portland or high alumina cement and meet or exceed the compressive strength of 3000 psi. Any uncorrected sub-floor irregularities may telegraph through the Homogeneous Resilient Tile flooring and be visible on the surface of the finished installation. Additional information regarding the subfloor installation and requirements can be found in ASTM F710.

NOTE: Never use liquid adhesive remover or solvent cleaners for removing old adhesive residue or other substances on the substrate; their use could cause failure.

Adhesive Bond Test

In addition to, and not in lieu of, any relevant moisture tests, perform an Adhesive Bond Test in several locations throughout the area to receive the flooring. Glue down a 3’ x 3’ area of floor tile with the adhesive, roll with a 150 LB sectional roller, then allow to set for 24 hours. A sufficient amount of force should be required to remove the flooring.

Bond tests should be performed across the recommended open time spectrum so the optimal working time can be determined. Working times vary depending on substrate, environment and many other factors.

IMPORTANT: Without dated documents showing pH, RH, and bond test results, no warranty claim will be considered.

Concrete

Moisture testing: It is essential that moisture tests be performed on all concrete sub-floors regardless of the grade level or whether or not the concrete is freshly poured or is classified as an older slab. Moisture testing MUST be performed by:

ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete: Moisture levels, when measured by these methods, are not to exceed requirements below. If the test results exceed the limitations, the installation should not proceed until the problem has been corrected.

Adhesive Moisture Requirements

Total Bond: Slabs up to 100% in situ RH (per ASTM F2170); pH of 12.

FlexPress: Slabs up to 99% in situ RH (per ASTM F2170); pH of 5-12.

New concrete slabs on or below grade should be treated with a permanent moisture barrier below the slab such as 6 mil polyethylene film. Any concrete in contact with earth or with less than 18” of cross-ventilated air space underneath it is considered to be on grade.

New concrete must be properly cured. A drying time of one month per inch of concrete is generally required after a slab is poured and protected from the weather. Lightweight aggregate concrete floors, floors with steel or plastic pan construction, and floors poured over a permanent moisture barrier usually require an extended drying time. If lightweight aggregate concrete weighs less

than 90 pounds per cubic foot, a topping of regular concrete at least one inch thick is required. To expedite drying time, adequate heat and ventilation should be provided.

Alkalinity (pH) Test

To determine the pH of the concrete surface, use wide range pH paper, its associated pH chart, and distilled or deionized water. Place several drops of water on a clean surface of concrete forming a puddle of approximately 1" diameter. Allow the puddle to set for 1 minute then dip the pH paper into the water. Remove immediately and compare to chart to determine pH reading.

Exceptionally Smooth Concrete

If concrete surface is exceptionally smooth, with little porosity, it should be acid etched with a 15% diluted solution of muriatic acid before commencing flooring installation. Neutralize the concrete after etching by rinsing with clear water to which a few ounces of ammonia have been added. Previously covered concrete: Completely remove all remaining floor down to bare concrete. Be sure to eliminate all residual adhesive or completely cover the sub-floor with a high-quality cementitious underlayment warranted for such applications.

Terrazzo Floors

Inspect the terrazzo for any sealer or film on the surface. This must be removed before proceeding with the installation.

Ceramic Tile

All ceramic tiles must be bonded securely to the substrate. Any loose tile must be removed. Clean existing ceramic tile using muriatic acid/water and neutralize with ammonia as directed for smooth concrete. After the floor has dried, apply a thin coat of portland or high alumina cement that meets or exceeds 3000 psi compressive strength to achieve a smooth surface prior to installation of resilient flooring.

Radiant Heated Floors

Homogeneous Resilient Tile may be installed on radiant-heated floors, provided that the surface temperature does not exceed 85ºF and the nominal operating temperature runs at 72°F.

Existing Resilient Flooring

Whenever possible, remove all old floor covering and sand off all the old adhesives. Any texture or embossing in the original installation may telegraph through the Homogeneous Resilient Tile and become visible on the surface of the new installation.

Do not install tile over any resilient floor covering on or below grade – only above grade.

If you are installing over resilient floor covering, use the following procedures: the floor covering must be sound and adhered tightly to the floor. Remove any loose or broken areas and replace them either with sound material or with a portland or high alumina cement that meets or exceeds 3000 psi which should be used to level any floor irregularities and to fill in any open seams. Thoroughly sand the surface with coarse sandpaper using an edge sander next to the walls and in spots that a regular sander may have skipped. Completely remove all the old sealers and waxes to ensure a proper bond.

WARNING! Consult the appropriate local or state authorities before disturbing any suspected asbestos containing material. If you intend to sand, remove or dispose of an existing resilient floor covering, backing, lining felt or adhesive, you should be aware that these products may contain asbestos fibers. Sanding, removal and disposal of asbestos containing material can place fine particles of asbestos in the air. It has been determined that the inhalation of free airborne asbestos fibers may be injurious to your health. Fines may be assessed against persons violating these regulations. Unless positively certain that the previously installed 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 and may govern the removal and disposal of material. See current edition of the Resilient Floor Covering Institute (RFCI) publication "Recommended Work Practices for Removal of Resilient Floor Coverings" for detailed information and instructions on removing all resilient covering structure at www.RFCI.com.

NOTE: Homogeneous Resilient Tile floor coverings and adhesives do not contain asbestos.

Wood Floors

Tile may be installed over existing sound, suspended plywood floors of double construction. Do not install directly over wood strip or plank sub-floors. Prepare such floors as follows:

- A moisture test is required using a pin-type moisture meter. The moisture content must not exceed 14%
- Subfloor must be solid, well nailed at joints and free from deflection. Missing or unsound boards must be replaced. Install ¼" underlayment grade or exterior grade plywood or ¼" underlayment grade hardboard. If floorboards are badly warped, use thicker plywood.
- Fill all holes, cracks and seams with wood putty or equivalent filler. Sand all patched areas and uneven joints. Any irregularities allowed to remain may telegraph through the tile and be visible on the surface of the new installation.

Metal Decks

Metal decking must be flat, dry, clean and free from dust, paint, asphalt, old adhesives, grease, oil, rust and other extraneous material. Level all surface irregularities with a portland or high alumina cement underlayment that meets or exceeds 3000 psi. Lightly sand or (scuff) the surface for better adhesion.

Work Benches

Tile can be applied to either wood or metal work bench surfaces. The bench surface must be flat, dry, clean and free from paint, oil, grease and other extraneous material. Metal surfaces should be lightly sanded for better adhesion.

Other Types Of Installation

For recommended procedures on other types of installations not covered in these instructions, contact Mohawk Group Technical Services at 800-833-6954 before installation commences.

CONVENTIONAL INSTALLATIONS

General

The area to receive flooring should be fully enclosed, weather tight, with the permanent HVAC system set and maintained at a minimum temperature of 65° F for 48 hours prior to, during and at least 48 hours after installation.

Avoid exposure of tile to excessive heat, such as direct sunlight, until adhesive has completely set. After installation, allow the following wait times for adhesive before performing any wet mopping, stripping or finishing of the floor:

- Total Bond: 8 Hours
- FlexPress: 72 Hours
- FlexPress: 24 Hours (Heat Welded Seams)

Install Homogeneous Resilient Tile flooring in accordance with the following procedures using only Total Bond and FlexPress adhesives. Mohawk's adhesives are the only warranted adhesives for use with Mohawk Group Homogeneous Resilient Tile products. Please refer to the product warranty for details.

Adhesive usage varies depending on whether the substrate is porous or nonporous. It is essential that the subfloor is tested to verify whether the concrete is porous or nonporous prior to the installation of the floor. To test, place several droplets of water on the slab in numerous locations within the installation area. If the water is absorbed in less than 45 to 60 seconds, the concrete is to be considered porous. If water remains beaded or is not absorbed into the concrete within this time frame, the substrate is to be considered non-porous and may have had a surface coating applied such as a curing compound and or a sealer.

Clean Up

Use a clean, wet cloth to clean up adhesive while still wet. Dried adhesive may require the use of mineral spirits or denatured alcohol.

Equipment

It is essential that the 1/16”x1/32”x1/32” trowel and 150 lbs roller be used. Worn trowels should be discarded. NEVER re-notch a trowel. If the trowel notches are too large, too much adhesive will be used. This will result in excessive adhesive seepage at the seams and will cause the tile to float and shift. Clean up after the installation is then very difficult. In addition, the seams will be ledged making them very noticeable and dirt catchers as well.

If you delay rolling the tile because of excessive seepage, the adhesive will not be adequately transferred to the back of the tile causing an adhesion failure. If the notches are worn on the trowel, the adhesive will be spread too thin resulting in adhesion failure.

Laying Tile

When laying individual tiles, do not slide tiles into place. The correct procedure is to place a corner of the tile in place next to the adjoining tile and carefully guide it into proper position. Shading (checkerboard look) can occur due to manufacturing process. This will be removed during the initial maintenance process.

Work Off The Tile Whenever Possible

When it’s necessary to work on the tile, to avoid tile shifting work from a kneeling board.

Roll and cross roll the tile with 150 pound sectional roller immediately after the tile is laid. Roll a second time one hour later. Inspect the floor for raised edges one hour after the second rolling. If necessary, roll a third time. Use a hand roller in areas that cannot be reached with a large roller.

IMPORTANT! ANY ADHESIVE AT SEAMS OR ON FINISHED SURFACES OF TILE MUST BE REMOVED WHILE THE ADHESIVE IS STILL WET.

USING ADHESIVES

Read the instructions for proper sub-floor preparation before opening the adhesive. If the installation will be flash coved, see special instructions under FLASH COVING.

All adhesive, floor tile and subfloor (i.e. concrete slabs) should be conditioned at the expected operational temperature and ambient humidity level. Maintain these levels at least 48 hours before, during and after the tile is installed using Mohawk Total Bond or FlexPress.

Adhesive working and open times vary based on job conditions, substrate, temperature and humidity. Ensure that the installation is well lit to allow effective examination of the tile and the overall installation.

Gapping Between Tiles

The primary causes of visible gapping in resilient tile flooring include improper subfloor preparation, incorrect adhesive selection or installation, inadequate acclimation, and insufficient temperature control before, during, and up to 72 hours after installation. To prevent gapping, it is essential to maintain stable temperatures by keeping the product, subfloor, and surrounding environment as close in temperature as possible. Significant temperature differences can cause the flooring to expand or contract, leading to gaps.

Mohawk Group has rigorously tested its adhesives to ensure exceptional shear strength. Once fully cured, these adhesives help minimize product gapping caused by temperature fluctuations.

Please note that Mohawk Group does not cover damage or gapping caused by the use of pressure-sensitive adhesives, which generally have lower shear strength.

Mohawk Total Bond Adhesive

Total Bond is the preferred adhesive for our Homogeneous Resilient Tile as it provides optimal bond strength and superior aesthetic results. Total Bond provides a faster, more install-friendly alternative to two-part epoxy systems. With extremely tenacious tack, high shear and peel strength and low odors, it is engineered for heavy rolling loads and challenging environments. Total Bond is a waterproof design that forms an unlimited moisture vapor barrier that can also take the punishment introduced by topical liquids.

Tesitng for RH and pH of concrete slabs is not required.

For technical data visit: https://s7d4.scene7.com/is/content/MohawkResidential/mhg_total_bond_tds

FlexPress Adhesive

FlexPress serves as a secondary option, though it may result in gapping under certain conditions. It is an acrylic adhesive that provides outstanding protection against moisture and alkalinity, low odor, and fast set up.

Testing Requirements: Slabs up to 99% and 5-12 pH.

For technical data visit: https://s7d4.scene7.com/is/content/MohawkResidential/mhg_flexpress_tds

SEAMLESS INSTALLATIONS

Additional details available in Mohawk Group's Homogeneous Resilient Tile Seam Welding Instruction Guide.

1. Remove tile from carton and store flat in stacks (not to exceed 6" in height) at temperatures and durations called for by the adhesive used. This allows tile to adjust to room temperature.
2. Lay out field. For FLASH COVING, the last sections should end at least 6" from the wall to allow space for use of router and hot air welding tools around the room perimeter. Follow the instructions under FLASH COVING to cut and dry-fit appropriate material.
3. Apply the adhesive, per the instructions, and install the field making sure to properly roll and cross roll with the sectional roller. Allow the adhesive to cure overnight.
4. Using a scrap piece of tile, set the router so that the blade cuts a groove to a depth of approximately one-half of the thickness (~.060 in.) of the tile. Route all field seams in one direction only being careful to keep the groove centered on the seam as closely as possible. Use a chamfering plane to router cove pieces where the router cannot be operated.
5. While seamless installations are usually flash coved, top set cove base or other treatment may be used at the floor/wall junction. In these instances, use a chamfering plane to finish the groove close to the wall where the router cannot be operated.
6. Preheat the hot air welding tool. Using the 4mm welding nozzle, weld the bead into the groove.
7. Trial weld a few scrap pieces before starting on the floor so that adjustments in the heat setting may be made. **NOTE:** Beginners may find it easier to work with a lower heat; however, with experience, welding will be faster with a higher heat. A lower heat is recommended for correcting mistakes or welding in awkward places. A good weld is achieved when a small amount of melted bead overflows along the edges of the groove.
8. After the weld has cooled, shave off the excess bead with a spatula. If the bead is shaved before it has cooled, it will shrink below the surface of the flooring. Keep the spatula sharp by periodic honing with a fine sharpening stone.
9. After welding and trimming all seams in one direction, repeat the routing, welding, and trimming procedures on all seams running in the other direction.

FLASH COVE INSTALLATIONS

Coving of tile up the wall eliminates accumulations of dirt and bacteria at the floor-wall junction. CONVENTIONAL or SEAMLESS INSTALLATIONS may be flashcoved. Additional instructions for flash coving are available at www.mohawkgroup.com, but the following highlights the procedure:

1. Install a suitable cove cap strip (either metal or plastic) around the entire room. Exercise care so that the top of the cove cap strip height is consistent. Use either flat-headed nails or contact bond adhesive to cove cap.
2. Place a cove strip at floor-wall junction to support tile at the bend.
3. Lay out the field so the tile ends a minimum of 6" from the wall.
4. Install the field in accordance with the procedures listed under either CONVENTIONAL or SEAMLESS INSTALLATIONS and allow the adhesive to cure for at least 24 hours. This is critical for properly forming coving and achieving a finished appearance.
5. Dry cut cove tile pieces to fit. Remove pieces and apply adhesive to the exposed floor and wall.
6. Install the pieces and roll thoroughly with a hand roller. FlexPress adhesive allows heat welding after 24 hours.

MAINTENANCE

Initial Maintenance Instructions

Initial maintenance is REQUIRED to ensure a good visual appearance. Before proceeding, please note the following:

1. After installation, allow the following wait times for adhesive before performing any wet mopping, stripping or finishing of the floor:
   - Total Bond: 8 Hours
   - FlexPress: 72 Hours
   - FlexPress: 24 Hours (Heat Welded Seams)
2. Mohawk Group only approves the following initial maintenance methods and procedures. Other unapproved methods and procedures may cause poor visual appearance.
3. Never, at any time, buff Mohawk Group Homogeneous Resilient Tile in excess of 350 RPM.
   NOTE: Floors become slippery when wet and care must be taken. Appropriate barriers to wet areas and "warning/caution" placards should be used in all instances.

Deep Scrub Cleaner

1. To start the required initial deep scrub cleaning process, sweep or dust mop the floor to remove any large debris.
   NOTE: Never use oil base treated dust mops.
2. Dilute Mohawk Group Homogeneous Resilient Tile Initial Deep Scrub Cleaner with cool clean water (1:64 -- 2 oz. per gallon of water) and apply liberally to the area to be deep scrubbed.
3. **WEAR SAFETY GLASSES AND GLOVES.**
4. Sweep or dust mop floor to remove debris.
5. Do not use oil-based treated dust mops.
6. Apply liberal amounts of solution uniformly to floor with a mop.
7. Let stripper solution soak for 5 minutes. **DO NOT ALLOW SOLUTION TO DRY ON FLOOR.**

8. Using the Deep Scrub maroon pad, agitate the floor thoroughly with an automatic scrubber or low-speed rotary machine (350 rpm max). To enhance cleaning, place a red floater pad above the maroon pad before beginning the process. At least 5 passes are required to properly deep scrub the floor. Replace the Deep Scrub maroon pad every 1000 square feet (500 square feet per side).
9. Use an automatic scrubber, wet vac or mop and bucket to pick up dirty solution.
10. Mop up any tracks left by automatic scrubbers before they dry.
11. Rinse thoroughly and detail mop floor with clean water and clean mop.
12. Let floor dry completely before applying finish.

Matte Floor Finish

1. Ensure floor is clean and completely dry after the Deep Scrub process.
2. Apply Mohawk Homogeneous Resilient Tile Matte Floor Finish in a uniform coat using a microfiber flat mop system with a microfiber finishing pad.
3. Apply finish liberally to the mop head for even coverage without over saturating.
4. There are two methods for applying the Matte Floor Finish: Pour the finish into a roller tray and saturate the mop head and evenly spread the finish across the area to be treated or using a spray bottle, apply the finish directly onto to the floor and use the microfiber mop to evenly spread the finish across the area to be treated.
5. Allow finish to air dry approximately 30–45 minutes before applying the next coat. More time may be needed in high humidity.
6. Apply at least two coats for optimal results.
7. Homogeneous Resilient Tile Matte Floor Finish leaves floors with a natural matte finish. NOTE: It is very important to follow the specific directions for cleaning Mohawk Group HT. Treating it otherwise can negatively impact visual appearance.

Ongoing Maintenance Instructions

1. An ongoing maintenance program is recommended. Though there are many ongoing maintenance products that can keep your Homogenous Resilient Tile floor looking good, it is impossible for Mohawk Group to test and approve all methods. For ongoing maintenance, please be sure to use a commercial grade neutral pH cleaner.
2. Frequency of maintenance can be daily or on a periodic basis depending on visual requirements, traffic and other site specific environmental conditions.
3. No maintenance program should ever include high speed burnishing. Never, at any time, buff Mohawk Group Homogeneous Resilient Tile in excess of 350 RPM.

NOTE: Floors become slippery when wet and care must be taken. Appropriate barriers to wet areas and “warning / caution” placards should be used in all instances.

Daily Maintenance

1. Sweep or dust mop the floor to remove any large debris. NOTE: Never use oil base treated dust mops.
2. Use a commercial grade neutral pH cleaner. Please follow manufacturer’s instructions. Damp mop or auto scrub using a generic red pad. Rinse as necessary and then allow to dry completely.

Periodic Maintenance

Sweep or dust mop the floor to remove any large debris. Use a water-based treatment only. Damp mop or automatic scrub using a neutral pH cleaner and a Red pad. The floor can also be recoated to rejuvenate as necessary. To do so, automatic scrub using a neutral pH cleaner with a red pad. Rinse with clear water and allow to dry. Floor surface must be clean, dry, and free of residue before the Matte Floor Finish is applied again.

Floor Finish Stripping Process:

Mohawk Group Deep Scrub can also be used as a floor stripper. Depending on foot traffic, the floor will eventually need to be stripped and more floor finish will need to be applied. If Periodic Maintenance is performed every 3-6 months, the floor should not have to be stripped but every 1-2 years depending on the level of foot traffic.

Before starting the stripping process, Sweep or dust mop the floor to remove any large debris.

Never use oil base treated dust mops. Dilute the Deep Scrub/Stripper 1 part cleaner/stripper to 20 parts of water or 6 oz per gallon with cool clean water and apply liberally to the floor. Be sure to always keep the surface wet. Using a maroon pad, agitate the floor thoroughly with a low-speed rotary machine, or automatic scrubber (350 rpm max). Pick up the solution with a wet vacuum, automatic scrubber or a mop and bucket. Then rinse with clean water only. Allow floor to dry completely before applying the new Matte Floor Finish or a commercial grade acrylic finish of your choice.

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