



# PORCELAIN TILE

## CLEANING, CARE, AND MAINTENANCE GUIDE

***These instructions are provided as a general guide to most installations. Please read and understand this information before proceeding.***

***Inspect your porcelain tile before installation to ensure this product meets your requirements. Installation of the product deems your acceptance.***

***Garden State Tile is focused on maintaining its commitment to quality so our products meet and exceed your expectations. As with every interior surfacing material, our products require nominal care in order to maintain a satisfactory appearance and acceptable sanitation.***

### **INITIAL CLEANING & MAINTENANCE**

The single-most important step for future daily maintenance involves the complete removal of grout and construction dirt after porcelain tile products have been installed. Grout manufacturers print instructions for proper mixing, curing, and cleaning of grout on each container. These directions must be followed. In most cases, porcelain tile can be cleaned successfully by scrubbing the installation with hot water and a neutral detergent, followed by a thorough rinsing, then removing the rinse water with a wet vacuum or dry toweling. If grout residue still remains, further cleaning of the tile should be accomplished in consultation with the grout manufacturer.

Some grout manufacturers distribute proprietary products which they recommend for the removal of their particular grout from the surface of tile. These products can be diluted for removal of light deposits of grouting materials with the possibility of using stronger concentrations when more aggressive cleaning is required.

Equipment recommended for more aggressive cleaning are floor scrubbers or floor buffing machines equipped with a nylon pad or brush. A wet vacuum should be used to pick up suspended grout residue and construction dirt completely.

Acid washing is rarely recommended, and is not usually necessary to successfully clean a new installation if the cleaning is done in a timely fashion. Caution should be exercised when using acid, or acid-based cleaners as they can adversely affect the grout.

If a customer insists on use of an acid for cleaning the installation, he or she should be cautioned to use sulfamic acid or phosphoric acid mixed in a solution according to manufacturers' instructions. It is important that before the acid solution is placed on the floor, the grout joints be thoroughly saturated with water first. Grouts which contain latex can actually bond more strongly to the tile surfaces if cleaned with acid. Latex or polymer modified grouts should be cleaned with a solution recommended by the grout manufacturer. Contractors or installers should also wait until the grout joint has fully cured, usually 7 to 10 days before using acidic cleaners.

Once the initial cleaning has been thoroughly completed, daily maintenance procedures can be followed for continuous and long-lasting beauty.

### ***SPECIAL GROUTING SITUATIONS***

Over the last 2 to 3 years significant changes have occurred to the grout products available in the marketplace.

- polymer enriched grouts
- epoxy grouts
- epoxy emulsion grouts
- polyurethane based grouts
- micro particle technology finely grained sand and glass spheres

Due to these and other factors some rethinking on the traditional non-recommendation of sealer/ impregnator applications has become necessary. This reappraisal has prompted a specific examination of today's new generation of grouts that are integral to all tile installations. Current grouting materials combine very small particle size with adhesion based polymers and resins that provide:



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- very effective joint/void filling
- very strong bonding agents The resulting grout film if allowed to remain on the tile surface can be very difficult to remove!
- These films come at the end of the installation
- Very often this film collects and holds the full variety of construction dirt and debris.
- The “New” tile floor can have a dull appearance.
- Light colored tile, will appear dirty from the start.
- This condition will only get worse, until such films are removed, or better yet, kept from becoming established in the first place.

Before grouting, regardless of the grout color chosen, Garden State Tile strongly recommends that a test patch be done by the contractor to determine if the grout or grout pigment will contaminate the surface of the tile.

If the test patch shows a tendency for staining or difficulty of removal when following the grout manufacturer’s instructions (particularly if the tile is light in color and the grout material is in contrast to the color of the tile or composed of urethanes, epoxies or epoxy emulsions) the application of a penetrating sealer/grout release is recommended.

- Some combinations of polished porcelain tile (micro pores) and these highly formulated/ hybrid grouts should be small scale tested and may require more than one coating of protective sealer before proceeding to the entire floor!
- Install the sealer/grout release prior to the grouting process as outlined in the manufacturer’s written product usage instructions.

Some key points:

- Allow adequate cure period typically 1 to 4 hours.
- All excess sealer (do not allow to pond) must be removed at the time of application by wiping or buffing with a clean dry cloth. This is very important for impervious porcelain surfaces.

- After the grout achieves its set, clean the floor with a solution similar to Aqua Mix Heavy Duty Tile and Grout Cleaner or Miracle Porcelain and Ceramic Tile Cleaner or a product recommended by the grout release manufacturer.

For highly textured porcelain tile, it is advisable to use a grout release, if only to improve the cleanability of the grout from the surface of the tile. Properly applied, these methods will provide a clean tile installation free of grout residue while providing significant time savings to the clean-up and maintenance process on polished and unpolished porcelain tile surfaces.

Of course, these are general recommendations. Any specific recommendations suggested by the individual manufacturers should be followed.

In the event grout residue or build-up does happen to occur on newly installed unprotected tile, reclamation of the floor through a timely and aggressive cleaning effort is necessary.

Please note the recommended methods and materials listed below:

- Employ a heavy (75 to 90 lb. head weight) swing type floor scrubber
- Equip the unit with a heavy duty Green floor stripping pad
- Grout manufacturer’s recommended grout haze remover used in conjunction with the floor machine
- Make note of areas where significant grout residue is visible
- Work the floor in smaller more manageable sections
- Allow the grout haze cleaner adequate dwell (10 to 15 minutes) time prior to floor scrubbing activity
- Using the floor cleaning equipment, thoroughly scrub the section, repeat of this process may be necessary
- Follow promptly with the removal of the dirty slurry through the use of a wet vacuum. DO NOT MOP as this will only serve to redistribute the dirty slurry on the floor



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- The cleaned section should now be thoroughly rinsed and revacuumed possibly twice to insure all dirty slurry and cleaning residue has been removed
- Dry buff the finished floor to a dry uniform finish, using the floor scrubber with a soft white pad or fleece pad.

### **PENETRATING SEALERS**

For polished tiles, the use of a penetrating type sealer is required prior to grouting. A penetrating sealer is one that does not leave a coating on top of the tile. Rather, these sealers assist in filling the microscopic surface pores.

The grinding involved in the polishing process produces microscopic surface pores on all polished tile products. Penetrating sealers can fill these pores, making the tile even more impervious to surface staining, resulting in easier maintenance. Penetrating sealers do not alter the appearance of porcelain products since they are designed only to fill the microscopic pores and not to coat the tile. Slip resistance also should not be affected.

Proper application of penetrating sealers is important. Follow the manufacturer's application guidelines. If you have questions prior to application, contact the manufacturer directly. The following is a suggested application procedure for a penetrating sealer:

1. Surface must be thoroughly clean and free of any foreign matter that may prevent the sealer from penetrating.
2. Apply in a circular motion using a clean rag, an applicator or a dense sponge, working sealer tightly into tile surface.
3. One thin application should be sufficient.
4. Completely remove excess sealer from the surface within 3 to 4 minutes using a clean cotton cloth, rag or absorbent paper towels. Penetrating-type sealers must not be allowed to dry on tile surface.

Penetrating sealers are applied only once, and generally do not require constant maintenance through reapplication.

### **TOP FINISHES AND WAXES**

Porcelain tile's dense, low-absorptive body inhibits the penetration of contaminants and, therefore, is a tile that is easy to maintain. The low absorptive nature of our porcelain tile not only inhibits dirt and stains, but also prevents top finishes and most chemicals from penetrating the surface.

Top finishes, those that become a coating over the tile and grout joints, are not recommended by Garden State Tile. They will change the appearance of the tile by coating the surface and giving matte finished tiles a shiny finish. When a particular type of tile is selected for the coefficient of friction values, the values can be changed by the application of the finish. Rather than improving the ability to maintain the surface, top finishes will increase the maintenance requirement.

Top coating finishes also will show traffic patterns as the finish becomes scratched or wears away. Some finishes may even peel off in spots.

Problems most frequently encountered with the use of top coating finishes are:

1. Wear patterns are easily developed over time.
2. Finish applied to a floor which has not been properly cleaned will cause the floor to look hazy.
3. Finishes applied to textured surfaces will wear unevenly on the raised areas as compared to the low areas.
4. Improperly applied finishes can turn a milky white color.
5. Multiple coats of top finish can cause discoloration of the tile surface.

When problems such as these occur, the finish must be stripped off of the tile and a new coat of finish reapplied. This is a costly and unnecessarily repetitive procedure.

### **PROPER CARE DURING CONSTRUCTION**

Since porcelain products are considered to be a finish material, they should not be installed until all heavy construction is completed.

Between the installation and putting the floor into service, it is imperative to properly protect the tile and grout in order to avoid construction related cleaning problems. Generally, there is a build-up of dirt and debris on every construction site. This dirt and debris may cause the grout, and sometimes the tile, to be adversely affected.

Garden State Tile recommends that a protective cover be put over the tile surface to safeguard the appearance. The cover could include uncolored Kraft paper, cardboard, plywood, or any other clean covering that will not damage the integrity of the installation. Do not use plastic as it may not allow the grout and thin-set to properly cure, and it also may become extremely slippery as construction dust settles. Proper and diligent care must be used to maintain the protective cover during construction. This will insure a quality appearance when the floor is opened for continuous use.

### ***CHEMICAL RESISTANCE***

Porcelain tiles are chemical resistant to both strongly acidic and strongly alkaline chemical products, with the exception of hydrofluoric acids or compounds containing fluoride salts and derivatives. Hydrofluoric acid is the only acid which will attack porcelain tiles, due to their molecular structure.

### **DAILY MAINTENANCE**

In keeping with Garden State Tile's long-standing position on sustainability we highly recommend the use of low VOC, non-hazardous, and non-polluting products for cleaning and maintaining your tile and grout.

General maintenance and cleaning of porcelain tile will vary depending on the surface texture and soil load. General cleaning should be performed first by sweeping or vacuuming to remove loose soil or other surface contaminants. Depending on the soil load, a more tailored cleaning process may be required. Select the type of cleaner based on the type of soil on the floor.

After using a cleaning solution follow with a thorough rinsing. Refer to the Cleaning Chart on page 6 for suggested cleaners/ detergents.

There are six steps that are critical and should always be remembered for the successful maintenance of porcelain tiles:

1. All spills should be cleaned as quickly as possible. Use damp mopping to clean up spills. Damp mopping uses approximately 1 gallon of cleaning solution (mixture of water and detergent) per 600 square feet. An easy way to prepare for damp mopping is to wring out the mop prior to use.
2. Use wet mopping daily to clean the floors. Wet mopping uses approximately 1 gallon of cleaning solution (mixture of water and detergent) per 300 square feet. An easy way to prepare for wet mopping is to NOT wring out the mop prior to use.
3. Use only the recommended dilution of detergent. More is not always better; higher concentrations of detergent in the cleaning solution will only make it more difficult to rinse.
4. Allow the proper dwell (remain on the floor) time. The detergent solution must be given time to act on the soil load. Generally 5-10 minutes is sufficient.
5. Always agitate the floor when wet mopping to ensure soils are removed. Use a nylon pad, bristle brush, or deck brush after the cleaning solution has been applied.
6. Rinse thoroughly with clean, clear water to remove the dirty detergent solution and emulsified soil. Rinsing is a critical step in the maintenance procedure. Remove the rinse water with a wet vacuum, dry mop or toweling. If dirty detergent solution is not removed and is allowed to dry on the surface, a coating will form which is very difficult to remove.

### **RECOMMEND DAILY MAINTENANCE BY SURFACE TEXTURE**

In addition to the above steps, slightly different cleaning techniques should be administered for different surface textures. The use of auto-scrubbers and/or wet extraction machinery can make routine cleaning easier and more efficient.





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### **UNPOLISHED AND MATTE FINISH TILES**

The following represents a simple procedure for maintaining unpolished matte finish tile floors with a moderate soil load.

For best results:

1. Sweep or vacuum the floor of all loose dirt and other foreign materials.
2. Saturate the floor with a mild cleaning solution and hot water, agitate, and allow it to dwell (remain on the floor) 5-10 minutes. Do not allow cleaning solutions to dry. It may be best to complete small areas at a time.
3. Remove the dirty cleaning solution and rinse the surface with clean, clear water.
4. Buff with a dry mop or towel.

If the product is extremely dirty, a more aggressive cleaning method may be necessary:

1. Sweep or vacuum the floor of dirt and other foreign material.
2. If there are difficult-to-remove contaminants on the surface of the tile, first attempt to identify the specific spill or contaminant. Different surface contaminants require different cleaning methods and chemicals (see chart).
3. Saturate the floor with cleaning solution and hot water, agitate, and allow it to dwell (remain on the floor) 5-10 minutes. After the dwell time, scrub the cleaning solution with a floor machine equipped with a nylon pad or bristle brush. For residential applications and small areas, use a hand brush or nylon pad.
4. Remove the dirty cleaning solution and rinse the surface with clean, clear water. This can be accomplished with a mop or a wet vacuum. It may be necessary to rinse the tile several times to thoroughly remove the cleaning agent from the surface.

### **POLISHED TILES**

For polished porcelain tiles, please follow these instructions for general cleaning:

1. Sweep or vacuum the floor of loose dirt. An untreated, dry dust mop may be more effective than a soft-bristle broom.
2. Mop with a mild cleaning solution. Use 50% less detergent concentrate than one would use on an unpolished floor.

3. Rinse the floor thoroughly with clean, clear water.
4. Dry thoroughly with a soft or buffing pad cloth to increase the shine and prevent water spots.

### **GRIP FINISH TILES**

When public safety and insurance factors are a concern, grip finish porcelain tiles are recommended for improved slip resistance. While these tiles are adeptly suited for their requirements, it is necessary to pay additional attention and take adequate care when cleaning these textures. The undulation of the surface makes it necessary to clean the entire surface, including the low points, which necessitates some additional, practical dirt removal procedures. Standard damp-mopping may not effectively clean these finishes. Also, it is necessary to thoroughly rinse the tile to completely remove all dirty cleaning solution.

For cleaning grip finish surfaces, please follow these instructions (this procedure is also applicable to any other heavily textured porcelain tile products):

1. Sweep or vacuum floor debris. If sweeping, use a soft-bristle broom. Sweep in two directions. First, follow the direction of the tile, then sweep diagonally to the tile to ensure complete removal of all foreign material.
2. Saturate the surface with a neutral detergent cleaning solution and hot water and agitate. Looped-end, tail-banded mops are the most durable for textured surface tile. Allow the cleaning solution to remain on the floor for 5-10 minutes. Scrub the floor with a brush in a circular motion. Dual-surface floor scrub brushes with side bristles are ideal for cleaning textured floor tile and cove base.
3. Rinse the floor with clean, clear water to suspend contaminants and completely remove any soiled cleaning solution.
4. Remove rinse water with a wet vacuum or dry toweling.

In high-traffic areas, or areas where the surface is exposed to a heavy soil load, it may be necessary to scrub the floor once a day and damp-mop at intervals during the business day.

When occasional deep cleaning is required for particularly dirty or stained areas, the use of a wet vacuum in conjunction with a stiff bristled deck brush is recommended.

There is also an array of power washing and auto scrubbing equipment by that can greatly improve the speed and efficiency of cleaning large commercial, exterior or transitional surface areas.

### SUGGESTED CLEANERS FOR PROBLEM STAINS

	STAIN	FILA	CUSTOM	AQUA MIX	MIRACLE SEALANTS	COMMON
<b>Food Groups</b>	Mustard Ketchup Mayonnaise Tea Bags Ice Cream Beer/Wine Orange Juice Grape Juice Coffee Coke Soy Sauce	Fila PS87 or Fila SR95	TileLab Grout & Tile Cleaner	Concentrated Stone & Tile Cleaner or Grout Deep Clean	Porcelain and Ceramic Tile Cleaner or Tile & Stone Cleaner or Liquid Poultice or Finish Sealer Stripper	Mr. Clean® Neutral Floor Cleaner® 409® Spic and Span® Fantastic® Comet® Windex® Lysol® Soft Scrub® Mr. Clean Magic Eraser® Bar Keepers Friend®
<b>Oil &amp; Grease</b>	Vegetable Mineral Petroleum Wax Sealer Meat Grease Hydraulic Oil Trans. Fluid Linseed Oil Lipstick Rubber Shoe Polish Paint (Oil Based)	Fila PS87 or Fila No Spot     - Fila No Paint Star Fila PS87 or Fila No Paint Star	TileLab Heavy Duty Stripper & Cleaner	Heavy-Duty Tile & Grout Cleaner	Porcelain and Ceramic Tile Cleaner or Tile & Stone Cleaner or Liquid Poultice or Finish Sealer Stripper	Mr. Clean Neutral Floor Cleaner 409 Spic and Span Fantastic Comet Windex Lysol Soft Scrub Mr. Clean Magic Eraser Bar Keepers Friend®
<b>Markers/Graffiti</b>	Felt Tip Ink Water Marker Permanent Fluorescent Crayon	Fila PS87 or Fila SR95   - Fila PS87	TileLab Heavy Duty Stripper & Cleaner	Sealer & Coating Remover	Porcelain and Ceramic Tile Cleaner or Mira Strip or Tile Restor or Finish Sealer Stripper	Comet Soft Scrub Mr. Clean Neutral Floor Cleaner ZUD Mr. Clean Magic Eraser Bar Keepers Friend®
<b>Water-Based Agents</b>	Water Base Paint or Stain	Fila PS87 or Deterdek	TileLab Heavy Duty Stripper & Cleaner	Sealer & Coating Remover	Porcelain and Ceramic Tile Cleaner or Finish Sealer Stripper or Tile & Stone Cleaner	Mr. Clean Neutral Floor Cleaner Comet Mr. Clean Magic Eraser Bar Keepers Friend®
<b>Tile Grout</b>	Cement Latex Polymer   Epoxy	Deterdek or Fila PS87   - Fila CR10	TileLab Sulfamic Acid Cleaner or Grout Haze Remover	Sulfamic Acid Crystals or Phosphoric Acid Substitute or Grout Haze Clean-Up*	Heavy Duty Acid Cleaner (HDAC) or Phosphoric Acid or Finish Sealer  - Epoxy Grout Film Remover	White Vinegar Lime-A-Way Mr. Clean Magic Eraser Bar Keepers Friend®