

# Stone, Tile & Grout

## Cleaning & Maintenance Reference Guide



### INTRODUCTION

Congratulations on getting into the profitable world of hard surface floor care. Count on Hydro-Force for all the help you will need. If there is a question you can't answer using this guide, we have provided a list of additional resources at the end.



### STARTING OUT RIGHT

The need for stone or tile maintenance begins almost immediately after installation. New floors, countertops and other surfaces need to be sealed before they are put into use. Stains that penetrate into unsealed grout will be difficult or impossible to completely remove later on. Many common foods and beverages can etch or stain even seemingly impervious countertops.

If you are caring for a new floor, be sure to follow the information in the section on sealing floors.

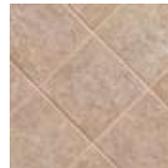


### TILE ID

Knowing the type of tile or stone you are working on can be very important, especially when doing restorative cleaning.

#### Ceramic Tile

Ceramic is a broad category that can include all tile that is made from clay and other non-metallic minerals. In general use, ceramic tile is used to describe tiles that don't fall into one of the other groups. Most ceramic tile goes through a process called "firing" at high temperatures.



A key advantage of ceramic flooring is its durability. Ceramic is resistant to alkaline, acids and solvent used in cleaning. Ceramic's abrasion resistance keeps it from being scratched by gritty soil under foot if the grade of tile matches the situation in which it is used. Ceramic flooring is available in a wide variety of styles, colors and patterns

#### Porcelain

Porcelain is a high density ceramic tile made from special clays fired at high temperatures making it highly resistant to abrasion. One qualification to be called porcelain is that the tile must absorb less than .5% of its weight in water.



#### Quarry Tile

Quarry tile is fired at 2000°F or higher. The common dark red color comes from the minerals in the clay body. Other colors can be



produced by selection of clay or adding pigments. Normally there is no glazing or pattern added.

Brick pavers are another type of clay tile similar to quarry tile. They have a rougher texture and often are cut to size so that the floor looks as if it was paved with bricks.

#### Saltillo

True Saltillo tile is produced from clay that is found only in Saltillo, Mexico. Similar tile that is produced elsewhere will be called "Mexican" or "Saltillo style" tile. This tile is made with a low degree of automation. As a consequence, the tiles may not be exactly square or flat. There will be variation in color. Some tiles may exhibit chipped or uneven edges, craters on the surface or even animal footprints.



### STONE ID

**Sedimentary Stone** is formed of small bits of weathered stone, marine organisms or minerals dissolved in water that form layers and under pressure become sedimentary stone.

**Metamorphic Stone** has been changed from one form into another. The change comes from increased heat and pressure as well as the introduction of new minerals into the mixture. The color may change. The texture may change. Under sufficient pressure the mineral can take on a crystal structure. Diamond is carbon that has taken on a crystalline structure. The presence of other minerals is responsible for variations in color.

Formed by molten material deep in the earth known as magma, **Igneous Stones** are classified in one of two groupings.

**Extrusive Rock** starts as magma that exits from the surface of the earth, comes in contact with cool ground and much cooler air. The stone hardens quickly leaving little time for crystals to form. Extrusive igneous rock exhibits small crystals.

**Intrusive Rock** is formed when the magma is trapped below the surface of the ground. It cools more slowly and forms larger crystals. Most igneous stone used as flooring material is the intrusive variety.

**Flagstone** is a general term that can include several types of stone, usually sedimentary varieties.



**Sandstone** is a sedimentary rock formed by particles of weathered rock and sand.

**Limestone** is a sedimentary rock containing calcium carbonate. It is commonly finished to a smooth but dull surface by honing.

**Travertine** is similar to limestone in that it is sedimentary and is largely calcium. However, travertine contains voids in the surface that may be filled by plastic resins or grout. Over time such fillers may come out allowing the voids to be filled with soil.



**Marble** is metamorphic stone that contains calcium carbonate. It can often be identified by veins of color running through the stone. Marble will take a high polish resulting in a highly reflective shine. Marble may also be finished by honing to a flat dull shine or tumbling to a soft finish with worn and rounded edges.



**Serpentine** is sometimes classed as marble because of the high shine it can take on. However, it is actually an igneous stone and does not contain calcium. Serpentine often has a green or bluish green coloration predominating.



**Slate** is a colorful metamorphic stone showing a fine grained structure containing tiny crystals. It is composed of shales and clays rather than calcium carbonate. Slate has a sheet-like or layered appearance known as foliated.



**Granite** is an igneous stone and the hardest commonly used stone for flooring and is also popular for countertops. A wide variety of colors and patterns is possible. Some patterns have prominent veins of colors while other varieties show little or no veining. Differences in porosity and thus ease of staining also exist.



## TYPES OF GROUT

The most common grout used for man-made tiles is sanded grout. This is a blend of Portland cement and sand. The presence of the sand helps identify this type of grout. The width of the grout line also aids in identifying the type of grout. Normally sanded grout is used when grout lines are 3/16" or wider.

**Unsanded grout** is commonly used with natural stone flooring. There are two reasons for this. First as grout wears, particles of sand could scratch and abrade stone surfaces. Second, the unsanded grout is better suited to filling narrow grout lines found in stone installations.

**Epoxy grout**, although not common, resists staining and soil. It can be identified by a plastic like appearance that is frequently rounded on top. NOTE: Cementitious grout with epoxy added is not the same as epoxy grout.

Grouts may contain additives to provide color, make cleaning easier or extend the life of the grout.

Your initial inspection of a job should include examining the grout. Cracks may be present due to movement of the substrate, installation and mixing issues or rarely the quality of the grout itself.

Sections of grout that have broken loose due to these cracks can be blasted out by high pressure cleaning and vacuum. Clients should be advised of this possibility.

# CLEANING PROCEDURES

Preventive Maintenance - Regular use of walk off mats reduces tracking of soils from outside. Mats can remove abrasive grit from shoes that is especially harmful to most stone surfaces.

## ROUTINE DAILY OR PERIODIC MAINTENANCE FOR TILE AND STONE

1. Sweep or vacuum floor to remove particle soils. An untreated microfiber dust mop is suggested.
2. Mix Spinery SR or Spinergy 7 according to label directions. Spinergy 7 can be used on any hard surface floor. Spinergy SR is formulated specifically for stone surfaces. It does not contain many of the mineral dissolving agents commonly found in off the shelf consumer products.
3. Apply with mop. A Microfiber mop or a rayon mop with looped ends and sewn tail band is suggested.
4. Heavily soiled areas may be agitated with grout brush or floor machine, but this is seldom necessary with regular maintenance.
5. Extract cleaning solution and soil with wet vacuum or clean mop.



## RESTORATIVE CLEANING FOR TILE AND STONE FLOORS AND WALLS

Used for heavier build-up of soil, especially greasy or oily soils, when more than routine cleaning is required.

1. Sweep or vacuum floor to remove particle soils. An untreated microfiber dust mop is suggested.
2. Protect surfaces not being cleaned so that they are not damaged by splashes or spills.
3. Mix Viper Venom according to label directions. Dilution should be adjusted according to the degree of soiling. Apply with sprayer or mop. Allow several minutes dwell time, but do not allow solution to dry on the floor.
4. Grout lines may need to be agitated with a grout brush.
5. Use SX-12 to agitate, rinse and extract dirty solution all in one step. The SX-7 or the Gekko line of accessories will be helpful when cleaning countertops, walls, along edges and in tight places.
6. After the floor has dried, proceed to instructions for sealing and protecting the surface.



## ACID CLEANING FOR TILE & GROUT

**CAUTION!** This process should not be used on any stone floors containing calcium. Acids can etch limestone, travertine, marble and other stone containing calcium. Acid cleaning removes mineral deposits, soap scum, hard water deposits, urine stains, efflorescence and rust. It can also remove other stubborn stains from grout by actually removing a microscopic layer of the grout. Acid cleaning is most effective when it follows the restorative cleaning process described above.

1. Sweep or vacuum floor to remove particle soils. An untreated microfiber dust mop is suggested.
2. Protect surfaces not being cleaned so that they are not damaged by splashes or spills. Metal surfaces, especially stainless steel may be etched by contact with acid solution.
3. Mix Viper Renew with equal parts HOT water. Apply with sprayer. Allow several minutes dwell time, but do not allow solution to dry on the floor.
4. Grout lines may need to be agitated with a grout brush.
5. Use SX-12 to agitate, rinse and extract dirty solution all in one step. The SX-7 or the Gekko line of accessories will be helpful when cleaning countertops, walls, along edges and in tight places.
6. Spray on a solution of Viper Venom diluted at 1 to 32. This step is important to neutralize acid residues.
7. After the floor has dried, proceed to instructions for sealing and protecting the surface.



## MAINTENANCE FOR COUNTERTOPS

A safe, gentle process for removing everyday soil and grime while also protecting the surface and rejuvenating and preserving the high shine

1. Spray the surface with a Spinergy SR mixed according to label directions.
2. Wipe and clean the surface with a clean, white cotton cloth.
3. Buff to a high shine with a clean dry cloth.



## SEALING PROCEDURES

All stone, grout and porous tile should be sealed using an impregnating sealer to protect the surfaces while preserving the natural appearance.

1. Sweep or vacuum floor to remove particle soils. An untreated microfiber dust mop is suggested.
2. Protect surfaces not being sealed.
3. For stone floors or porous tiles, apply an even coat of Premium Stone & Grout Sealer using a slightly damp rayon mop, a roller or sprayer.  
For porcelain, glazed ceramic or other non-porous tiles, apply Premium Stone & Grout Sealer to the grout lines only. There are a variety of tools to help you in this task. Any sealer that gets on the tile should be wiped off before it dries.  
For large areas of tile, spread the sealer using a clean moss rubber squeegee. This can be followed by a rotary floor machine fitted with a white pad. This will remove excess sealer and polish the tile.
4. An optional second coat may be applied to porous stone after the first coat has dried.



## STAINS AND SPECIAL ISSUES

**Efflorescence** – Efflorescence is a white crystalline or powdery deposit on grout lines, stone or porous tile. It's caused by water traveling through the floor. The water dissolves salts and minerals in concrete or grout, then evaporates leaving the salt on the surface.

1. Light deposits can be removed with a stiff brush or agitation by white or beige pad under a rotary floor machine. They may wear off over time with foot traffic.
2. Heavier deposits, especially with a crystalline appearance, must be dissolved using Viper Renew or Spinergy 2. Be sure to protect surfaces not being treated. Use proper personal protective equipment.
3. Wipe this onto the effected surface using a sponge, brush or strip washer.
4. Rinse and extract. Use a minimum amount of moisture, as excess moisture can start the formation of efflorescence



again. On small areas this may be as simple as wiping with a damp towel.

**Sealer Haze** – Grout and stone will not hold an unlimited amount of sealer. When more sealer is applied than the material can contain, there will be excess sealer on the surface. This can appear as a smooth milky white haze. Sealer haze on the surface of stone or tile will be worn off with traffic. Sealer haze on depressed grout lines can be removed by wiping with a towel saturated with fresh sealer. This will dissolve the excess which can then be wiped away. In extreme conditions, excess sealer can be stripped off the floor using Viper Venom and a rotary floor machine.

**Oil Stains** – Oil can penetrate deeply into porous grout and stone. The protection provided by applying and maintaining a good sealer is the best prevention. When oil or grease stains occur that are not removed by normal cleaning, they can be

removed with a poultice.

1. Apply Stonetech Oil Stain Remover about ¼” thick over the stained area and extending ½” to 1” beyond the stain.
2. Allow 24 hours for Oil Stain Remover to emulsify the oils and draw it into the poultice.
3. Remove dried material by sweeping or vacuuming.
4. A second application may be required for heavy deposits.

**Rust Stains** – Surface rust stains can be removed with the restorative cleaning procedures above. Deeper rust stains will respond to the acid cleaning procedures above. Acid cleaning is not appropriate for many types of stone. For rust stains on limestone, marble or travertine, polishing or grinding process may be required.

**Food Stains** – for coffee, wine, mustard and many other food and beverage stains.

1. Saturate grout with 3% Stain Zone.
2. Apply Stonetech Oil Stain Remover as described above under Oil Stains.



**Topical Coatings** –Floors may have a build-up of topical coatings or finishes. Stone, porous tile and grout should be treated with penetrating finishes rather than topical coatings.

1. Sweep or vacuum floor to remove particle soils. An untreated microfiber dust mop is suggested.
2. Protect surfaces not being cleaned so that they are not damaged by splashes or spills.
3. Mix Viper Venom 4:1 Apply liberally. Allow 10 minutes dwell time.
4. Grout lines may need to be agitated with a grout brush.
5. Use rotary floor machine with appropriate brush or stripping pad to loosen and emulsify finish.
6. Remover slurry and rinse. This may be done with squeegee and mop or by machine.
7. Heavy coatings may require a second cleaning.



## PRODUCT REVIEW

### Alkaline Cleaners



#### Viper Venom

The industry's best selling tile & grout cleaner is loaded with surfactants, solvents and builders to blast through built up grease, oil and filth.

CR22GL



#### Spinerger 11

Spinerger 11 can melt away grease, stains and soil from man-made tiles without the use of solvents or caustic builders. A safer alkaline cleaner.

CH43GL

### Acid Cleaners



#### Viper Renew

The last resort for stubborn stains, soap scum, mineral deposits or efflorescence. It works by removing a very thin layer of grout or stone.

CH49GL



#### Spinerger 2

Use to remove mineral deposits and soap scum from ceramic, porcelain or quarry tiles. Contains no solvents. The formula is designed to reduce irritation from inhalation.

CH42GL

## Rinse Agents and Maintenance Cleaners



### Spinerger 7

Excellent for routine maintenance of hard surfaces or as a rinse to neutralize floors after alkaline or acid cleaning.

CH45GL



### Green Balance All Purpose HS Cleaner

Heavy duty cleaner for regular maintenance of almost all hard surfaces – floors, walls, appliances and counters. An environmentally preferred cleaner ideal for those with allergies or chemical sensitivities.

CH44GL



### Spinerger SR

Gentle cleaning agents safely remove the daily build-up of soil then special sealers rejuvenate the shine and restore protection. Safe for any stone surface including limestone, sandstone, marble, slate, travertine and terrazzo.

CH46GL

## Stain Removers



### Stonetech Oil Stain Remover

This poultice pulls out deep, set-in oil stains grout and is excellent for use on natural stone such as marble, granite, limestone, travertine, slate, terrazzo and sandstone — will not discolor stone, leaves no residue and is easy to use without messy plastic wrap.

CH531SA 3 oz. Can  
CH531PT 1 Pint Can

## Sealers



### Premium Grout and Stone Sealer

Truly a premium penetrating sealer for all types of stone, grout and porous tile. Durable protection against water and oil stains.

CH06GL



### Grout Sealer

Offers the benefits of solvent based sealers in a water based product. Resists, soils and stains and even efflorescence. Vapor permeable sealer lets water vapor out without allowing liquid water in.

CH05GL



### Solvent Based Grout Sealer

This low-odor solvent fluorochemical resists oil, water and dry soils. Use solvents when minimizing water use to prevent efflorescence. Dries in 6 hours.

CH04QT



### Clear Grout Sealers and Dyes

Add a 2 oz bottle of color to 14 oz bottle of Clear grout Sealer to color seal your customer's grout making it look like new.

CH08A

## Stone, Tile & Grout Cleaning Tools



### Hydro-Force SX-12 Hard Surface Tool

The SX-12 lets you do an amazing job of cleaning tile, grout, smooth concrete and even smooth or rough stone floors with your truckmount or high pressure portable. You'll see the soil disappear from tile and grout lines like magic!

The secret is the rotary arm that spins inside the tool to create amazing soil blasting power working from 700 to 2,000 PSI.

The SX-12 has ergonomic, comfortable hand grips, an easy-pull trigger and a high-grade ceramic swivel. Lightweight yet durable, it glides easily over floors in both front-to-back and side-to-side motions for almost fatigue-free operation every time!

AW104

### Gekko Hand Tool

This hand tool is ideal for blasting dirt, stains and build up from grout lines as well as for cleaning countertops, around toilets, shower stalls or any tight or hard to reach area. Use at pressures up to 2,600 PSI.

AR52



### Hydro-force SX-7 Tile & Grout Tool

The SX-7 is a 7" version of the SX-12 and comes in a hand held and a stand up version. The SX-7 operates just like the SX-12 but concentrates extra power into a smaller area for extreme cleaning situations. This SX-7 hand held unit is perfect for tiled walls and showers, bath tubs, countertops and tight areas that a smaller tool can more easily reach.

AW101



### Gekko Tile and Grout Tool

This extremely versatile tool works with any truckmount or high-pressure portable extractor to provide outstanding results on tile and grout cleaning jobs. It concentrates all the water pressure through an amazing new spray jet that creates extreme force for cleaning severely soiled grout.

AR54



### Gekko 14" Brush Head

For smoother hard surfaces where brush agitation is needed.

AR54H



### Gekko Edge/corner/coving Tool

Cleans corners, edges and coving with one easy stroke. Or, install the coving cover (included) and just clean the edge of the floor.

AR54C



### Gekko 14" Squeegee Head

For uneven surfaces or where exceptional water removal is required.

AR54E



### SX7 Head

Use this head to create a stand up SX7 for tight areas or the most challenging cleaning situations.

AR54G



### Gekko 5 1/2" Original Head

Perfect for edging, tight spots or where extra cleaning power is required on heavily stained or soiled grout.

AR54D



## Brushes and Wands



### Premium Grout Brush

This new premium grout brush has stiffer bristles in a tapered configuration that allows you to brush hard into the smallest crevices with greater control and speed. It's more aggressive than our AB36 brush. The nine inch brush block fits on a threaded handle. Use with Viper Venom or Viper Renew for incredible results.

AB35 Grout Brush

AB18M Metal Handle



### Corner and Edge Brush

No more scrubbing tight spots on your hands and knees — this triangular shaped brush with side-mounted bristles is designed to both easily and effectively clean along baseboards, tile coving, under equipment and in tight corners. Includes fiber core pole with a non-slip grip.

AB40 Corner/Edge Brush



### Grout Stick

Seal and stain four times faster all while staying off your knees! Use this versatile grout stick to apply color, solvent and water based sealers to grout. It's economical because the grout sealers go on to the grout, not the tile. Includes 3 different sized brushes and a clean-up sponge.

AR56 Grout Stick



### Hydro Stick

Some grout sealing situations require the control of doing the work on hands and knees and that's where the Hydro Stick comes into play. For use with clear or colored sealers and can be used with solvent or water-based sealers. Comes as a set of two containers with four brushes.

AR55 Hydro Stick



### Grout Wand

This is a great tool that applies the proper amount of grout sealer in one application with professional results all from a standing position! Simply push down and the sealer is applied — let up, and the flow of sealer stops. Used for water-based sealers only.

AR57 Grout Wand

AR57P Head Assembly



### Injectimate Grout Sealing Kit

This kit gives you total control over the amount of sealer applied — because the flow of sealer stops after each squeeze of the trigger! Simply use the 3' extension tube to apply sealer to floor grout (while standing) and the 4" tube to apply sealer to wall and counter grout.

AC13 Injectimate

## Ready To Expand Your Business?



### Accelerated Stone, Tile and Grout Cleaning Program

Enjoy this easy-to-follow program that takes you and your techs through every step of the cleaning and sealing process. You'll learn everything you need to get into this lucrative business. Learn stone and tile identification, grout composition, chemical preparations, cleaning and sealing, detail work and more. Both English and Spanish programs included.

JS090 Tile and Grout Cleaning Program



### Business-Building Postcards and Brochures

Let your carpet cleaning customers know about the tile and grout cleaning services you offer. Build your business — take advantage of our highly affordable and customizable 4-color postcards and brochures!

LP36 Postcard

LB115 Brochure

Available at your local Hydro-Force Distributor: