



# Tile Care, Maintenance and Slip Resistance Information

## Cleaning after installation

Initial cleaning after the tiles have been laid and grouted is essential; they must be thoroughly cleaned of all cement and grout residues, silicone leaching and soils after a few days with a pH neutral cleaning solution. Operate in 10m<sup>2</sup> sections to ensure greater control over the finished result.

1. Sweep floor to remove all loose debris.
2. Saturate the grout joints with water.
3. Dilute pH neutral cleaning solution with warm to hot water according to chemical manufacturer's instructions and apply solution to the floor to be cleaned. Allow solution to work on the tiles for 5-6 minutes to break down excess grout, dirt and grease on the tile surface.

### **Do not allow the solution to dry – add more water if necessary**

4. Scrub tiles with a brush or mechanical scrubbing machine (suction facility switched off) to lift the dirt.
5. Remove dirt with wet vacuum cleaner or scrubbing machine (suction facility switched on).
6. Re pass again with clean solution if necessary.
7. Finally, before allowing the area to dry, rinse thoroughly several times, with cold clean water, agitating with the scrubbing brush or with the scrubbing machine (suction facility switched off) to ensure complete removal before using wet-vac to remove excess water from the surface.

**NOTE: If the surface is inadequately rinsed or dried up before rinsing, an off-white deposit or precipitate may be left on the tile and it will become more difficult to remove than the original deposit.**

8. Dilute cleaning detergent according to chemical manufacturer's instructions for high concentrations in warm water and apply using a mechanical scrubbing machine (suction facility switched off) or manually with a heavy scrubbing brush. The water/detergent mixture must be allowed to remain on the floor for sufficient time (5-15 minutes) to allow it to penetrate and emulsify the dirt. It is important that the cleaning detergent is completely removed by a final rinsing with clean water. Remove excess water from the surface with a wet-vac or mechanical scrubbing machine (drying facility switched on).

### **It is the rinsing process that removes the dirt.**

9. Repeat procedure (9) weekly or as required to prevent soil build up on the tiles.
10. Dilute cleaning detergent according to chemical manufacturers instructions for lower concentration in warm water and apply using a mechanical scrubbing machine or manually with a clean mop and bucket. It is important that the cleaning detergent is completely removed either by a final rinsing with clean water or by the squeegee vacuum action of a mechanical cleaner.
11. Spillage of oil, fat or material likely to stain or cause a slipping hazard should be removed immediately by using detergent and hot water, followed by rinsing with clean water.

## Polished Tiles

When cleaning polished tiles, it is recommended to sweep or vacuum the floor of all loose dirt, sand and other foreign materials prior to cleaning.

- Mop the floor with a mild cleaning solution and water, use 50% less detergent concentrate than one would use on an unpolished floor.
- Use a damp mop with clean, clear water to clean off any cleaning solution, finally dry the floor thoroughly with a soft cloth or buffing pad to increase the shine and prevent water spots.

## Unpolished, Matt and Honed Tiles

When cleaning unpolished, matt or honed tiles it is recommended to sweep or vacuum the floor of all loose dirt, sand and other foreign materials prior to cleaning. If there are contaminants on the surface of the tile that are difficult to remove, it is important to firstly identify the specific spill or contaminant and different surface contaminants required different cleaning methods and chemicals.

However, the general recommendations are:

- Saturate the floor with a mild cleaning solution and water, and allow it to stand for 5 – 10 minutes. Do not allow the cleaning solution to dry, add more water if necessary. It may be best to complete small areas at a time.
- Remove the dirty cleaning solution and rinse the surface with clean, clear water and buff with a dry mop or towel.
- For the contaminants that are difficult to remove, scrub the cleaning solution with a floor machine equipped with a nylon pad or bristle brush. For residential applications and small areas a hand brush or nylon pad can be used. Remove the dirty cleaning solution and rinse the surface with clean, clear water.
- Powder cleaners should **not** be used as undissolved particles might remain and develop a haze distracting from the naturalness and beauty of unglazed or terracotta tiles.

## Glazed tiles

When cleaning glazed tiles, a damp cloth is usually all it takes to bring back the gloss of the tiles.

A routine clean with window cleaner may remove moderate stains and a stronger solution is necessary for heavily soiled surfaces. A milk solution of hot water and all-purpose liquid cleaner or a soap less detergent is excellent for cleaning walls, floors and counter tops.

**When cleaning it is important to remember:**

- Do not use powder-based cleaners that may scratch the surface
- Do not use soap to clean as it leaves a film which can dull the gloss of glazed tiles and also encourages the growth of bacteria and mould in damp areas
- All cleaning solution must be thoroughly removed for the tiles by rinsing with clean water
- To clean grouting, a plastic bristle brush is recommended. Steel wool pads should not be used as they leave steel particles, which may later rust leaving brown stains.

Due to the constant use of shower areas, tiles surfaces need a different cleaning procedure to remove the hard water deposits, soap scum and body oils that build up.

To avoid extra heavy cleaning, weekly cleaning is advised to maintain the level of hygiene and to remove dirt before it builds up into hard deposits. Routine build up can be removed with most all-purpose cleaners while hard water deposits can be eliminated by a solution of white vinegar and water. A plastic scouring pad is most useful for this kind of cleaning.

With the damp nature of shower recesses, bacteria and mould can develop where there is little ventilation. This can be removed by spraying or wiping with chlorine bleach such as White King. This should be allowed to stand for 5 minutes and later rinsed with clear water. Caution should be taken when using bleach and it should never be mixed with ammonia.

## Natural Stone

Natural Stone Products should not be cleaned with acid or acid based industrial cleaners. It is recommended that you seek professional written advice from the chemical manufacturer as to the suitability, application and frequency of use of their product on Natural Stone.

It is recommended that Natural Stone products are sealed. ColorTile recommends that you seek professional advice on pre-sealing and sealing aspects of Natural Stone.

## Maintenance of Public Areas

### Small Areas

Small public areas such as lobbies and corridors can be easily cleaned by a daily mopping with warm water and all-purpose liquid cleaner, either neutral or mildly alkaline, i.e. pH 7-9.

### Large Areas

Large public areas such as shopping centres, malls and auditoriums may be cleaned with self propelled scrubbing machines using detergents as follows:

1. For daily cleaning, a detergent with a pH in the range of 7-9 should be used.
2. For heavy cleaning, an organic acid cleaner with a pH about 2, but containing no mineral acids, or an alkaline cleaner with a pH of up to 11 may be used provided its sodium or potassium hydroxide content is less than 0.01% when diluted. Both should be diluted with water as recommended by the chemical manufacturer. The cleaner should be liberally applied and quickly removed from the floor by squeegee and suction as recommended by the chemical manufacturer.
3. For heavy duty scrubbing of small areas higher alkaline cleaners up to pH 13.5 may be used provided the sodium or potassium hydroxide content is less than 2% in the concentrate and is diluted to at least 100:1 with water, but they should be removed from the surface with copious quantities of water. They should not be used in a routine daily maintenance as residual cleaner will attack the tile surface and cause the grout to blacken.

Before using these products (1, 2 & 3) get professional written advice from the chemical manufacturer as to the suitability, application and frequency of use of their product on the surface being cleaned.

## Tile Care

Group	Stain Type	Recommendation
Food	Soy Sauce, Coke, Coffee, Tea, Juice, Beer, Wine, Ice Cream, Tomato Sauce	Alkaline based detergent
Oil and Grease	Vegetable, Mineral, Petroleum	Alkaline based detergent
	Wax, Rubber	Scrape off then use solvent Turpentine followed by alkaline based detergent
	Lipstick, Shoe polish	Alkaline based detergent
	Paint (oil based), Ink	Solvent such as Turpentine or Thinner
	Mortar	Acidic based detergent
	Rust stains	Diluted Hydrochloric acid or acidic based detergent
Marker	Felt Pen	Thinner
	Methylene Blue	Alkaline based detergent
	Crayon	Scrape off then use solvent Turpentine followed by alkaline based detergent
Tile Grout	Cement	Diluted Hydrochloride acid
	Latex or Polymer	Solvent such as Turpentine or Thinner
	Epoxy	Scraper to scrape it off

*N.b. Further professional advice should be obtained before taking any action based upon the information provided. No responsibility will be accepted for the performance of cleaning products and any consequential damages arising from the use of these products, since the quality control and application is outside of the control of ColorTile.*

## Cleaning Products

### Phosphoric Acid Cleaner

This is a phosphoric based acid cleaner containing detergent properties for the removal of excess grouting and cement smears, usually used diluted with water in a ration of 1 part acid to 10 parts water for final clean-up of excess grout from tiles.

NOTE: Acid cleaner must be handled with care and protective clothing and goggles must be worn. Read safety instructions before opening and applying.

### Sodium Bicarbonate

A 5-10% solution may be used to neutralise the acids used in grout removal. After reacting, the materials should be washed off with copious amount of water.

### Cleaning Detergents

These vary dependent upon the application as follows:

- **Post phosphoric acid cleaner:**

To clean up after phosphoric acid, the most suitable is a neutral to slightly alkaline cleanser pH 7 to 9 designed to neutralise the phosphoric acid and maintain tiles in a clean condition.

- **Daily cleaning:**

For daily cleaning, a detergent with a pH in the range of 7-9 should be used.

- **Heavy cleaning:**

For heavy cleaning, an organic acid cleaner with a pH of 2, but no mineral acid content or an alkaline cleaner with a pH of up to 11 may be used provided its sodium or potassium hydroxide content is no more than 0.01% in the liquid used.

- **Heavy duty scrubbing:**

For heavy duty scrubbing of small areas higher alkaline cleaners up to pH 13.5 may be used provided the sodium or potassium hydroxide content is less than 2% in the concentrate and is diluted to at least 100:1 with water, but they should be removed from the surface with copious quantities of water. They should not be used in a routine daily maintenance as residual cleaner will attack the tile surface and cause the grout to blacken.

Before using these products (1, 2 & 3) get professional written advice from the chemical manufacturer as to the suitability, application and frequency of use of their product on the surface being cleaned.

### Water

Clean water is the big secret in cleaning; it should be used to flush all detergents and acids used in cleaning.

- **Manual Cleaning**

Mop and bucket, nylon or natural bristle scrubber.

- **Mechanical Cleaning**

Large areas of plain or textured surface tiles are most readily cleaned with rotary cylindrical or reversing mechanical scrubbing machines. The scrubbing machine speed ideally should be 150 to 250 rpm. Brushes used should be selected so that they effectively clean the tiles but does not damage the tile surface in any way. Scrubbing machines should be provided with a suction drying facility.

- **High Velocity Water Jets**

High velocity water jets are sometimes available for general use and/or for removal of stubborn dirt. These will not damage the tiles, but may erode the grout in the joints if used regularly. Check with the equipment manufacturer before using. If oil or grease is present, use the jet with warm or hot water and with neutral detergent.

## Basic Rules & Recommendations

Whatever method is chosen, remember the three golden rules of cleaning:

- Rule A:** Try a small inconspicuous area first  
**Rule B:** Rinse off well with clean water afterwards  
**Rule C:** Avoid high concentration of cleaners for prolonged periods of time.

- The sooner the cleaning is carried out, the easier the stain can be removed.
- Protect the floor if decorating, construction or overhead work is taking place.
- Locations which are permanently wet (e.g. swimming pools, showers etc.) may attract a build-up of body fat, oils, soap residue, hard water deposits and in humid conditions organic growth (algae). To remove this, a more acidic cleaning agent used regularly is preferable because alkaline cleaners can react with body fats to make surfaces slippery. A plastic scouring pad is the most useful device for this type of cleaning. Before using these products get professional written advice from the chemical manufacturer as to the suitability, application and frequency of use of their product on the surface being cleaned.
- Powder cleansers should not be used as undissolved particles may remain and develop a haze distracting from the naturalness and beauty of the tiles.
- Steel wool pads should not be used as they leave steel particles, which may later rust leaving brown stains.
- One source of problems with unglazed tiles is regular cleaning with alkaline detergent of greater than pH 9 with high concentrate of sodium or potassium hydroxide. These should not be used unless the residue can be neutralised and thoroughly rinsed away with clean water, otherwise reaction can cause a glossy and potentially slippery surface.
- The pH of the material is the measure of acidity or alkalinity. It is a logarithmic scale and pH 7 is the neutral point. Below pH 7, the material is progressively more acidic and above pH 7, more alkaline (i.e. pH 8 is 10 x more alkaline than pH 7).
- The regular use of detergents and other cleaning agents which are excessively acidic or alkaline with excess sodium or potassium hydroxide can cause irreversible damage to the tile surface. Acidity being less damaging than alkalinity. All products used must be recommended by the chemical manufacturer.
- Many degreasing agents which contain wax, sodium, silicate or other additives which leave a sticky deposit on the floor and thus retain dirt on the surface must also be avoided. Like any material tiles tend to become slippery when wet. We recommend that care be taken to keep the surface dry.
- The Australian Standard for tiles which are suitable for wet areas in commercial amenities usage must meet the coefficient of friction test of at least R10.
- Please always refer to the chemical manufacturer's instructions when using any cleaning agent. If you need more information about the use of cleaning products and the manufacturing agents in your state, please contact the Technical Services Department of the chemical manufacturers.
- Detergents build up with prolonged use and if not properly rinsed. This build-up of detergents will hold in dirt, make the tile look dirty and make it slippery.
- Signage must be adequately displayed when cleaning tiles to warn the public or other users of the area that the tiles are wet and care should be taken.
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Before using these products, get professional written advice from the chemical manufacturer as to the suitability, application and frequency of use of their product on the surface being cleaned.

*This 'Tile Care & Maintenance guide' was derived from various sources and was believed to be correct when published. The information is advisory, it is provided in good faith and without prejudice and not claimed to be an exhaustive treatment of the relevant subject. Further professional advice might need to be obtained before taking any action based upon the information provided. No responsibility will be accepted for the performance of cleaning products and any consequential damages arising from the use of these products, since the quality control and application is outside of the control of ColorTile.*

## Slip resistance of tiles

Please note the following information when reviewing slip reports provided by ColorTile:

### Slip Resistance

While the tiles tested may achieve an acceptable rating in a laboratory test, it is quite probable that the performance in situ will be less than expected due to grouting, wear and tear, build-up of residue or unforeseen circumstances. Test results should therefore be seen as a relative guide to estimate merits of one tile versus another and should be used in conjunction with the Australian Building Code and the relevant Australian Standards. Further information on slip resistance is provided in the Australian Standards HB197:1999 and HB198:2014 – An Introductory guide to the slip resistance of pedestrian surface materials.

As there are many variables which are beyond the control of the supplier which can affect the level of slip resistance of tiles. In addition to the suitability of tiles for a location, factors such as floor levels, water, fat, oil and other contaminants can also variously impact the slip resistance of the tile. As a consequence, ColorTile cannot provide any warranty or accept liability for personal injury or accidents arising from slipping or falling.

### Classes of Use

The classification has taken into account the recommendations of the Australian Standards; however, they are given for general guidance only. They are valid for the given application under NORMAL CONDITIONS and should not be taken to provide accurate product specifications for specific requirements. Other standards and building code requirements may affect your selection of tiles.

Consideration should be given to the footwear, type of pedestrian traffic and cleaning methods expected. Floors should be adequately protected against soiling from following trades during installation; they should be protected against scratching dirt at the entrances to building by interposing footwear cleaning devices. For example, mats, shoe scrapers, static devices etc.