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CLEANING GUIDE

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 stronger solution is necessary for heavily soiled surfaces. A mild solution of hot water and all purpose liquid cleaner of a soapless detergent is excellent for cleaning walls, floors and counter tops.

Note: 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 from 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.

Shower Areas:
Due to the constant use of shower areas, tiled surfaces need different cleaning procedures 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 a chlorine bleach such as White King. This should be allowed to stand for 5 minutes and later rinsed with clean water. Caution should be taken when using bleach and it should never be mixed with ammonia.

UNGLAZED TILES

Cleaning recommendations for unglazed tiles are those of glazed tiles. 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.

Commercial 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.

Larger public areas such as shopping centres, malls and auditoriums may be cleaned with self propelled scrubbing machines using detergent 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, a higher alkaline cleaner 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 to 1 with water, but they should be removed from the surface with copious

quantities of water. They should not be used in routine daily maintenance as residual cleaner will attack the tile surface and cause the grout to discolour.

Before using these products (1, 2 & 3) get professional written advice from the manufacturer of the cleaning material as to the suitability of the application and frequency of use of their product on unglazed tiles.

Shower/Toilet:
Where hygiene is of paramount importance, such as in commercial showers and toilets, a commercial cleaner is the best application where cleaning should be performed daily. Organic acid cleaners that do not contain mineral acids may also be used here.

Kitchen:
For commercial kitchen areas where the grease build up is constant and oil spills occur, organic acid cleaners, pH about 2, dilution rates should be as specified by the chemical manufacturer. This method of cleaning is also appropriate for dining areas in fast food cafeterias and for food and beverage spills.

Exterior Areas:
Exterior tile surface can be washed with a soapless detergent in the pH range 7-11 and rinsed with fresh water. Where hard grime occurs, a soft bristle brush can remove build up.

Decks:
An occasional wash down with a hose spray eliminates normal build up on decks. If there is more stubborn build up then cleaners for kitchen and exterior areas may be used.

Swimming Pools:
Scum that develops along with the water line of the swimming pool can be removed with an all purpose cleaner and plastic scouring pad.

Note: Due to the nature of ceramic tiles, their surfaces, glazed or unglazed, are perfectly hygienic. They do not retain odours or absorb liquid, fumes or smoke. In this way, tiles are excellent for domestic applications where hygiene is essential and where dirt and hard wear are inevitable. Tiles are also an easy floor surface to clean. In commercial applications, this hygience is imperative for bathrooms, kitchens, hospitals and school toilet areas and their ease of maintenance, essential for lobbies, shopping malls, eating areas, building and industrial areas.

FULLY VITRIFIED PORCELAIN:

Adherence to the following cleaning procedures will ensure you to take maximum advantage of the properties of our floor tile range. The materials and methods recommended are the outcome of many years experience and, when used as part of a regular cleaning routine, will enable the floor to be maintained to high standard of cleanliness, slip resistance, hygiene and appearance. The speed and efficiency of cleaning depends on, among other things, the ease with which the cleaning agents can reach the stains. For this reason, tiles that have rough or uneven surface are at a disadvantage.

Suggested Cleaning Liquids:

1. Phosphoric Acid Cleaner

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

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

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

2. 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.

3. Cleaning Detergent

These vary dependant upon the application as follows;

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

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

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 to 1 with water, but they should be removed from the surface with copious quantities of water.

They should not be used in routine daily maintenance as residual cleaner will attack the tile surface and cause the grout to blacken.

Suggested Initial Cleaning Procedures:

Cleaning Liquids

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 fully vitrified porcelain tiles. Clean water is the key to effective cleaning and it should be used to flush all detergents and acids used.

Cleaning Equipment

- 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 rmp. Brushes used should be selected so that they effectively clean the tiles but do not damage the tiles surface in any way. Scrubbing machines should be provided with a suction drying facility.
- 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 neutral detergent.

Cleaning Process

Mechanical Cleaning - Once the tiles have been laid and grouted, they must be thoroughly cleaned of all residual cement and grout smear, silicone leaching and soils after a few days when both the flooring itself and the joints have completed their aging process.

- Operate in 10m2 sections to ensure greater control over the finished result.
- Sweep floor to remove all loose debris.
- Saturate the grout joints with water.
- Dilute phosphoric acid cleaner with warm to hot water according to chemical manufacturers instruction and apply solution to the floor to be cleaned. Allow solution to work on the tiles for 5 – 6 mins to break down excess grout, dirt and grease on the tile surface.
  Note: Do not allow the solution to dry – add more water if necessary.
- Scrub tiles with a brush or mechanical cleaner (suction facility switched off) to lift dirt.
- Remove dirt with wet vacuum cleaner or scrubbing machine (suction facility switched off).
- Re pass again with clean solution if necessary.
- Finally, before allowing the area to dry, rinse thoroughly several times, with cold 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 any surface is inadequately rinsed or dried 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.
- Dilute cleaning detergent according to chemical manufacturer's instruction for high concentration 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 a final rinsing with clean water. Remove excess water from the surface with a wet-vac or mechanical scrubbing machine (drying facility switched on) as it is the rinsing process that removes the dirt.
- Repeat procedure above weekly or as required to prevent soil build up on the ceramic tiles.

Routine Cleaning - 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.

General Remarks

Protect the floor if construction or overhead work is taking place to prevent marks or scratches. If spillages occur, the sooner the cleaning is carried out, the easier it is removed.

Whatever method is chosen, remember the three major points;

- Try a small inconspicuous area first.
- Rinse off well with clean water afterwards.
- Avoid high concentration of cleaners for prolonged periods.

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 used device for this type of cleaning.

Before using any products get professional written advice from the chemical manufacturer as to the suitability, application and frequency of use of their product on fully vitrified porcelain tiles. If you need more information about the use of the cleaning products and the manufacturing agents in your state, please contact the Technical Services Department of the chemical manufacturers.

Powder cleaners 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 also not be used, as they may leave steel particles which can rust and leave brown stains.

One source of problems with unglazed tiles is regular cleaning with alkaline detergent of greater than pH9 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 the material is progressively more acidic and above pH 7, more alkaline (i.e. pH 8 is 10 x more alkaline than pH 7).

Detergents will cause build up following prolonged use if not properly rinsed off, holding in dirt and making the tile look unclean and make it slippery. 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 with acidity being less damaging than alkalinity. Many degreasing agents which contain wax, sodium, silicate or other additives which leaves 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. 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.