

# Cleaning and care

## General information on cleaning and care

With ceramic floors a distinction should be made between post-installation, maintenance and basic cleaning.

### Post-installation cleaning

On completion of the tiling work building dirt and cement film must be removed with a suitable cleaning agent.

The application of suitable stain-removing cleaning agents may be necessary for other types of soiling at the construction site, such as paint stains.

### Maintenance cleaning

The tiles can be swept, vacuumed or wiped with a damp cloth, using a suitable cleaning agent.

### Basic cleaning

Serves to remove heavy soiling that accumulated during day-to-day use and cannot be removed through maintenance cleaning.

## Cleaning methods

### Two methods are customarily used:

- Manual cleaning using a broom, scrubbing brush, rubber squeegee or wiping mop.
- Machine cleaning using a single-disc machine, scrubbing suction machine or high-pressure cleaner with spray injection.

The procedure to be used will depend on the space available, the size of the area to be cleaned, the type of dirt and the surfaces to be cleaned (e.g. slip-resistant and textured surfaces) and on the chemical properties of the cleaning agent.

Manual cleaning is advisable where there is only little dirt. When machines are used, single-disc, three-disc machines or brush/scrubber suction machines have proved most effective for this purpose.

When using disc machines, suitable pads must be used, particularly on slip-resistant tile coverings in order to prevent cleaning from impairing the slip resistance.

High-pressure cleaners with spray injection are particularly suitable for very dirty slipresistant surfaces.

With high-pressure cleaners there is a slight danger of washing out and destroying cement joints if the machine is not used correctly (pressure too high because water jet is too close to surface). This effect is exacerbated through the use of unsuitable cleaning agents, e.g. acidic cleaners for maintenance cleaning.

Irrespective of the method chosen, care must be taken that the dirt is removed and not simply allowed to dry onto the surface. The most economical and reliable method is to use a powerful water suction machine.

The tiled surface should be dry after completing the cleaning process.

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## Cleaning agents

The type and chemical composition of the appropriate cleaning agent is determined by the type of soiling to be removed and the type of surface to be cleaned (material).

The pH value of the cleaning agent is of particular importance as it reveals whether it is alkaline, neutral or acidic.

The pH scale ranges from 0-14 (see the following table).

Values of individual types of cleaning agent	pH-value of concentrate in the range of
Strongly alkaline cleaner, e.g. with sodium or potassium hydroxide solution base	> 10,5
Weakly alkaline cleaner	8,0 to ≤ 10,5
So-called neutral cleaners	6,0 to ≤ 8,0
Weakly acidic cleaner, e.g. with citric acid base	3,0 to ≤ 6,0
Strongly acidic cleaner, e.g. with hydrochloric, phosphoric or sulphuric acid base	< 3,0
The concentration specified on the container in which the agents are supplied must be observed precisely!	

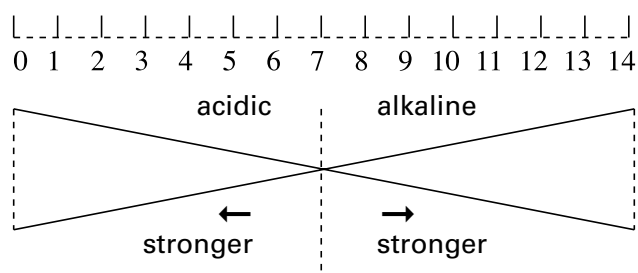


Fig. 1: pH values of cleaning agent groups in accordance with the information leaflet „Hygiene, cleaning and disinfection in pools“ by the German Association for the Recreational and Medicinal Bath Industry.

**Strong alkaline cleaning agents** are not used for regular cleaning. If such cleaners are left for long periods on aluminium, glass or plastics, they may attack and destroy the surfaces. Painted surfaces are attacked even more quickly; such surfaces or inserts must be masked.

### Weak alkaline cleaning agents

These are mainly employed for cleaning sanitary areas, showers, etc.. Correctly diluted with water, they will remove body fats, cosmetics, grease and dirt deposits.

**Neutral cleaning agents**, are suitable for regular cleaning of dry areas (standard use ceramic floors, WC installations, changing rooms, etc.). Their grease-removing potential is limited.

**Weak acidic cleaning agents** remove limescale deposits (e.g. calcium scale), urine deposits and other mineral precipitates and deposits. They are also used for basic cleaning to remove cement film remaining after grouting. If used over long periods they will attack cement joints. To prevent this, the surfaces should be thoroughly wetted before cleaning in order to reduce absorption by the joints. The effectiveness of weak acidic cleaning agents also depends on the hardness of the water.

**Strong acidic cleaning agents** are only recommended for basic cleaning where there is a lot of cement film; the surfaces should be covered with water beforehand and neutralised after cleaning with a weak alkaline product.

**Cleaning agents containing hydrofluoric acid must not be used as ceramic materials, are attacked rapidly and massively and will be permanently damaged!**

Film-forming cleaning agents should not be used as they can considerably reduce or even neutralise the slip resistance of ceramic coverings, and can also produce unsightly effects (e.g. smearing) or cause cleaning problems.

Please observe the manufacturers' instructions carefully, as incorrect application of cleaning agents may attack and damage the tile covering, joints and elastic sealants.

Where underfloor heating systems are installed, it is particularly important to ensure that the detached dirt (dirty water) is removed before it is able to dry again.

A continuously updated and extended list of suitable tested cleaning agents for ceramic surfaces in swimming pools, the so-called "Liste RK", is provided by the German Association for the Recreational and Medicinal Bath Industry.

# Cleaning and care

## Nonvitreous tiles and nonvitreous tiles with CeramicPlus

**Group BIII** - Dry-pressed ceramic tiles and slabs with high water absorption  $E_b > 10\%$

The composition of the **CeramicPlus** surface makes it much easier to clean. This, however, does not remove the need for cleaning.

### Post-installation cleaning / basic cleaning

The cement film is reduced on **CeramicPlus** tiles due to the reduced surface energy and the associated hydrophobic (water repellent) property.

Directly after jointing, cement film can be generally removed from nonvitreous and **CeramicPlus** tiles with water. More stubborn residues of cement film can be removed using a weakly acidic cement film remover and a sponge

or cloth. The cleaning agent should then be rinsed off with enough clear water until all traces of the basic cleaning agent have been completely removed.

Tiles bearing the symbol “▲” precious metal plating, not scratchproof” should be cleaned with water and a neutral cleaning agent.

### Routine cleaning

Final cleaning after tiling/ Basic cleaning	Product and dosage	Cleaning equipment
It is generally sufficient to clean with water and a soft or non-scratch sponge or cloth		
Normal dirt, such as dust, light dirt	Neutral cleaning agents (available from specialist retailers)	Microfibre cloth or sponge
Limescale deposits and cement film	Weakly acidic cleaning agent (available from specialist retailers)	Microfibre cloth or sponge
Grease, oils, waxes, cosmetics, shoe marks	Weakly alkaline cleaning agent (available from specialist retailers)	Microfibre cloth or sponge

Please note: All of the information we provide about cleaning, care and removing stains from ceramic tiles is based on the latest knowledge and material research. It is, however, of a general nature and cannot cover every single eventuality. Therefore, please observe the instructions provided by the cleaning agent manufacturer.

*Details relating to cleaning agent manufacturers are provided on page 369.*

**Strongly alkaline or strongly acidic cleaning agents can attack or destroy the surface of nonvitreous tiles and joints and must therefore not be used!**

Abrasive cleaning agents and sponges can impair the surface properties and damage the glaze.

# Cleaning and care

## VilboStone - porcelain stoneware (also polished and rough-polished surface) glazed vitreous and porcelain stoneware tiles

### General

On account of their properties, tiles are considered to be easy to clean. The cleaning methods and cleaning agents must, however, be adapted to the type of floor and local conditions.

It should be noted that hydrofluoric acid and related substances are able to attack or destroy the surface of porcelain stoneware tiles and glazed vitreous and porcelain stoneware tiles.

**Consequently, no cleaning agents containing hydrofluoric acid are to be used!**

### VilbostonePlus

During the manufacturing process for coloured porcelain stoneware, the unglazed ceramic is provided with the **VilbostonePlus** finish, markedly reducing the tiles' susceptibility to staining and soiling. The porcelain stoneware produced with **VilbostonePlus** ensures high

resistance to mechanical strain, chemicals, wear and abrasion and is particularly easy-care. Villeroy & Boch does not recommend subsequent treatment with impregnating agents!

### Sealing – for polished porcelain stoneware tiles only!

The polished porcelain stoneware tiles are to be sealed with a suitable anti-staining agent after basic cleaning. We recommend using the Carrogard anti-staining agent.

Carrogard is an oil-, grease- and water-repellent, (solvent-containing) anti-staining agent that gives polished porcelain stoneware tiles lasting protection.

### Cleaning

Final cleaning after tiling / Basic cleaning	Product and dosage	Cleaning equipment
Loose dirt	-	Broom and vacuum cleaner
Cement film, mineral soiling, such as limescale deposits, soap residue	Acidic cleaner (available from specialist retailers)	Sponge, scrubbing brush, brush, cloth, microfibre cloth
Grease, oils, waxes, cosmetics, shoe marks	Alkaline cleaner (available from specialist retailers)	Sponge, scrubbing brush, brush, cloth, microfibre cloth
Routine cleaning		
Normal dirt, such as dust, light dirt, street dirt	Neutral cleaning agents (available from specialist retailers)	Broom and vacuum cleaner Sponge, scrubbing brush, brush, cloth, microfibre cloth

Please note: All of the information we provide about cleaning, care and removing stains from ceramic tiles is based on the latest knowledge and material research. It is, however, of a general nature and cannot cover every single eventuality. Therefore, please observe the instructions provided by the cleaning agent manufacturer.

*Details relating to cleaning agent manufacturers are provided on page 369.*

# Cleaning and care

## Slip-resistant tiles for commercially used and barefoot rooms

### General

On account of their properties, tiles are considered to be easy to clean. The cleaning methods and cleaning agents must, however, be adapted to the type of floor and local conditions.

Owing to their high resistance to chemicals and their pronounced wear resistance, porcelain stoneware tiles are predominantly used in areas subject to high levels of stress. Only hydrofluoric acid and related substances

are able to attack or destroy the surface of porcelain stoneware tiles and they may thus not be used on these surfaces!

The slip-resistant properties are achieved through the roughness of the tile's surface or by means of relief-type profiling. More extensive cleaning is thus required than for smooth, glazed surfaces.

### VilbostonePlus

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### Post-installation / basic cleaning

<b>Tiles:</b> <b>R9 – R11/Barefoot A – C</b>	<b>Dry area:</b> <b>incl. showroom, entrance, sanitary area</b>		<b>Wet area:</b> <b>incl. sanitary and changing areas/shower cubicles/swimming pools</b>
Mineral dirt: cement film, lime scale, lime soap, rust	Acidic cleaner (available from specialist retailers)		Acidic cleaner (available from specialist retailers)
Fett- und Ölverschmutzungen Eiweiße		Alkaline cleaner (available from specialist retailers)	
Procedure:	Wet covering (joints!) Apply cleaning agent and wipe with a micro-fibre pad and single-disc machine. Suck up dirty water. Rinse tiles with lots of water.	Apply cleaning agent and wipe with a micro-fibre pad and single-disc machine. Suck up dirty water. Rinse tiles with lots of water.	Wet covering (joints!) Apply cleaning agent and wipe with a micro-fibre pad and single-disc machine. Suck up dirty water. Rinse tiles with lots of water.

<b>Tiles:</b> <b>R9 – R13 / V4 – V8</b>	<b>Food area:</b> <b>large kitchens, food industry</b>		<b>Industry:</b> <b>workshops, working pits, wash rooms, grinding shops</b>	
Mineral dirt: cement film, lime scale, lime soap, rust	Acidic cleaner (available from specialist retailers)		Acidic cleaner (available from specialist retailers)	
Grease and oil dirt, proteins		Alkaline cleaner (available from specialist retailers)		Alkaline cleaner (available from specialist retailers)
Procedure:	Wet covering (joints!) Apply cleaning agent and wipe with a micro-fibre pad and single-disc machine. Suck up dirty water. Rinse tiles with lots of water.	Apply cleaning agent and wipe with a micro-fibre pad and single-disc machine. Suck up dirty water. Rinse tiles with lots of water.	Apply cleaning agent and wipe with a micro-fibre pad and single-disc machine. Suck up dirty water. Rinse tiles with lots of water.	Wet covering (joints!) Apply cleaning agent and wipe with a micro-fibre pad and single-disc machine. Suck up dirty water. Rinse tiles with lots of water.

# Cleaning and care

## Slip-resistant tiles for commercially used and barefoot rooms

### Routine cleaning

Normal surface soiling incl. dust	Neutral cleaner (available from specialist retailers)
Lime scale deposits	Acidic cleaner (available from specialist retailers)
Grease and oil dirt	Alkaline cleaner (available from specialist retailers)
Procedure	Clean floor covering using a cleaning agent in a two-stage mopping process with a microfibre short-hair mop. With larger areas, a cleaning machine with microfibre pad is recommended.

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### Note – swimming-pool area

The information in the leaflet „DGUV Information 207-006-Floor coverings for wet barefoot areas“ (previously BGI/GUV-I 8527, updated version of Mai 2020), published by the German Statutory Accident Insurance (DGUV).

The information in the leaflet „Cleaning, disinfection and hygiene in baths“ published by the German Association for the Recreational and Medicinal Bath Industry. Cleaning agents from the list „Approved cleaning agents for ceramic swimming pools“, the so-called „RK list“

### Manufacturers of cleaning agents:

The cleaning industry offers suitable cleaning agents for post-installation, basic and maintenance cleaning – the manufacturers' instructions must be observed.

For example:

Alpin Chemie GmbH · Hindelanger Straße 29 · D-87527 Sonthofen  
Tel. +49(0)8321/66890 · [www.alpin-chemie.com](http://www.alpin-chemie.com)

BUZIL-Werk Wagner GmbH & Co.KG · Fraunhoferstraße 17 · D-87700 Memmingen  
Tel. +49(0)8331/9306 · [www.buzil.com](http://www.buzil.com)

CC-Dr. Schutz GmbH · Holbeinstrasse 17 · D-53175 Bonn  
Tel. +49(0)5152-9779/0 · [www.dr-schutz.com](http://www.dr-schutz.com)

Eco-Nova Deutschland GmbH · Textilstraße 14 · D-48465 Schüttorf  
Tel. +49(0)5923/99360 · [www.eco-nova.de](http://www.eco-nova.de)

Firma Ecolab Deutschland GmbH · Ecolab-Allee 1 · D-40789 Mohnheim am Rhein  
Tel. +49(0)2173/5590 · [www.ecolab.com](http://www.ecolab.com)

Lithofin AG · Heinrich-Otto-Straße 42 · D-73240 Wendlingen  
Tel. +49(0)7024/9403-0 · [www.lithofin.com](http://www.lithofin.com)

Tana Chemie GmbH · Rheinallee 96 · D-55120 Mainz  
Tel. +49(0)6131/96403 · [www.tana.de](http://www.tana.de)

Fila Deutschland Vertriebs GmbH · Augsburger Straße 17 · D-89312 Günzburg  
Tel. +49(0)8221/2068314 · [www.filachim.com](http://www.filachim.com)