

# 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 water, a broom, scrubbing brush and rubber squeegee.
- Machine cleaning using a scrubbing suction machine or high-pressure cleaner with spray injection.

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

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.

High-pressure cleaners with spray injection are particularly suitable for very dirty slip-resistant surfaces. This is also the most rational method for such 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. acid cleansers for regular 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.

# Cleaning and care

## 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!**

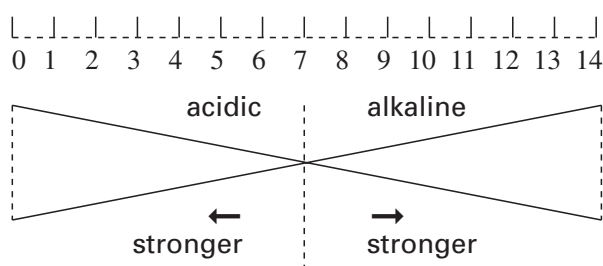


Fig. : pH values of cleaning agent groups in accordance with the information leaflet from the "Deutsche Gesellschaft für das Badewesen" ("German Association for the Recreational and Medicinal Bath Industry"): "Hygiene, cleaning and disinfection in pools".

**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 initial 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 initial 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 Deutsche Gesellschaft für das Badewesen.

# Cleaning and care:

## Nonvitreous tiles and nonvitreous tiles with ceramicplus

**Group B III** - Dry-pressed ceramic tiles and slabs with high water absorption E > 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

Type of dirt	Product and dosage	Procedure
It is generally sufficient to clean with water and a soft or non-scratch sponge or cloth		
Normal degree of soiling, such as dust, light dirt	Neutral cleaning agent etc. Buzil G 481 Blitz-Citro	Wipe the surfaces with a micro-fibre mop or cloth Dosage: 50ml / 10l cold water
Lime scale deposits	Weakly acidic cleaning agent etc. Buzil G 463 Bucasan clear Dosage: 50ml / 10l cold water	Wipe the surfaces with a micro-fibre mop or cloth
Grease, oils, waxes, cosmetics	Weakly alkaline cleaning agent etc. Buzil G 433 Active Dosage: 50ml / 10l cold water	Wipe the surfaces with a micro-fibre mop or cloth

*Details relating to cleaning agent manufacturers are provided on page 291*

**Alternative cleaning agents to the ones listed above can also be used.**

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

A sealant is applied to the surfaces of the matt and rough-polished vitreous tiles at the factory, leading to a marked improvement in resistance to staining

and soiling; 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

Post-installation / basic cleaning	Procedure	Product and dosage
Loose dirt	Sweeping or vacuum cleaning	
Cement film, mineral soiling, such as lime scale deposits, soap residue	1. First wet the covering and joints with water 2. Apply cleaning agent and wipe with a micro-fibre mop with short fibres 3. Remove the dirty water 4. Rinse tiles with a lot of water	Acidic cleaning agents, incl.: - INOLIT, CC Dr. Schutz - Buzil G 491 EROLCid, Dosage: 500 ml / 10 l cold water
Grease, oils, waxes, cosmetics, shoe marks	1. Apply cleaning agent and wipe with a micro-fibre mop with short fibres 2. Remove the dirty water 3. Rinse tiles with a lot of water	Alkaline cleaning agents, incl.: - Buzil G 490 EROL Dosage: 500 ml / 10 l cold water
<b>Maintenance cleaning</b>		
Normal dirt, such as dust, light dirt, street dirt	Apply cleaning agent and wipe with a micro-fibre mop / cloth (e.g. White Magic from VERMOP - <a href="http://www.vermop.com">www.vermop.com</a> )	Neutral cleaning agent, e.g.: - Buzil G 481 Blitz-Citro Dosage: 50 ml / 10 l cold water

*Details relating to cleaning agent manufacturers are provided on page 291*

**Alternative cleaning agents to the ones listed above can also be used.**

# 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

A sealant is applied to the surfaces of the matt and rough-polished vitreous tiles at the factory, leading to a marked improvement in resistance to staining and

soiling; Villeroy & Boch does not recommend subsequent treatment with impregnating agents.

## Post-installation / basic cleaning

<b>Tiles: R9 – R11 / Barefoot A – C</b>	<b>Dry area: incl. Display, entrance, sanitary area</b>		<b>Wet area: incl. Sanitary and changing areas / shower cubicles / swimming pools</b>	
pH - range	acidic	alkaline	acidic	
Mineral dirt: cement film, lime scale, lime soap, rust	Buzil G 491 EROLCid Dosage: 1 l / 10 l cold water		- INOLIT, CC Dr. Schutz - Buzil G 491 EROLCid Dosage: 1 l / 10 l cold water	
Grease and oil dirt, proteins		Buzil G 490 EROL Dosage: 1-3 l / 10 l cold water		
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: R9 – R13 / V4 – V8</b>	<b>Food area: large kitchens, food industry</b>		<b>Industry: workshops, working pits, wash rooms, grinding shops</b>	
pH - range	acidic	alkaline	acidic	alkaline
Mineral dirt: cement film, lime scale, lime soap, rust	- INOLIT, CC Dr. Schutz - Buzil G 491 EROLCid Dosage: 1 l / 10 l cold water		- INOLIT, CC Dr. Schutz - Buzil G 491 EROLCid Dosage: 1 l / 10 l cold water	
Grease and oil dirt, proteins		Buzil G 490 EROL Dosage: 1-3 l / 10 l cold water		Buzil G 490 EROL Dosage: 1-3 l / 10 l cold water
Procedure:	Wet covering (joints!) Apply cleaning agent and wipe with a micro-fibre pad single-disc machine. Suck up dirty water. Rinse tiles with lots of water.	Apply cleaning agent and wipe with a micro-fibre pad 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 single-disc machine. Suck up dirty water. Rinse tiles with lots of water.	Apply cleaning agent and wipe with a micro-fibre pad 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 cleaning agent: incl. Buzil G 481 Blitz Citro / Dosage: 50 ml / 10 l cold water / mechanical: 100 ml / 10 l cold water
Lime scale deposits	Acidic cleaner: incl. Buzil G 491 EROLCid / Dosage: 50 – 100 ml / 10 l cold water / mechanical: 100 – 200 ml / 10 l cold water
Grease and oil dirt	Alkaline cleaner: incl. Buzil G 490 EROL / Dosage: 50 – 100 ml / 10 l cold water / mechanical: 100 – 200 ml / 10 l cold water
Procedure:	Clean floor covering using a cleaning agent in a two-stage mopping process with a microfibre short-hair mop (e.g. Blue, White Magic by VERMOP - www.vermop.com). With larger areas, a cleaning machine with microfibre pad is recommended.

**Alternative cleaning agents to the ones listed above can also be used.**

## Note – swimming-pool area

The information in the leaflet “Bodenbeläge für nass-belastete Barfußbereiche” (“Floor coverings for wet barefoot areas”) – GUV-I 8527, July 1999 edition (previously GUV 26.17), published by: Bundesverband der Unfallkassen, Munich

The information in the leaflet “Hygiene, Reinigung

und Desinfektion in Bädern” (“Hygiene, cleaning and disinfection in baths”) published by Deutsche Gesellschaft für das Badewesen

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 · 87527 Sonthofen  
Tel 08321-66890 · www.alpin-chemie.com

BUZIL-Werk Wagner GmbH & Co.KG · Fraunhoferstraße 17 · D-87700 Memmingen  
Tel. 08331-9306 · www.buzil.com

CC-Dr. Schutz GmbH · Holbeinstrasse 17 · D-53175 Bonn  
Tel. 05152-97790 · www.dr-schutz.com

FECO-Nova Handelsges. · Textilstraße 14 · D-48465 Schüttorf  
Tel. 05923-99360 · www.eco-nova.de

Henkel Ecolab Deutschland GmbH · Postfach 130406 · D-40554 Düsseldorf  
Tel. 0211-98930 · www.ecolab.com

Lithofin Produkte GmbH · Postfach 1134 · D-73240 Wendlingen  
Tel. 07024-9403-0 · www.lithofin.com

Tana Chemie GmbH · Ingelheimerstr. 1-3 · D-55120 Mainz  
Tel. 06131-96403 · www.tana.de

Fila Deutschland Vertriebs GmbH · Augsburgener Straße 17 · D-89312 Günzburg  
Tel. 08221-2068314 · www.filachim.com