



Tips and Advices for Cleaning of ceramic linings **STEULER-KCH POOL CONSTRUCTION**

General Details about the quality and low-maintenance of ceramic linings

A) GENERAL DETAILS ABOUT CERAMICS Market research, examinations and practical experiences show that ceramics compare excellently with other lining materials. Particularly durability aesthetics and low-maintenance are the decisive criteria.

Tiles are high-quality materials. All glazed and unglazed materials feature surfaces with best characteristics for easy cleaning.

Ceramics are resistant to acids, alkalis and solvents. Therefore all standard cleaning agents can be used to remove the results of daily use with low effort.

Exception: Hydrofluoric acid attacks glass and thus also ceramic glazes!

Therefore, do not use cleaning agents on base of hydrofluoric acid or its compounds. **Please observe for all cleaning agents the correspondent instruction sheet and safety remarks of the manufacturer. You may understand that we cannot assume a liability for damages which result from non-observance of these instructions and remarks.**

For detailed recommendations, please refer to the following pages. We offer these instructions for cleaning of ceramic linings as **service** to our partners and customers, i.e. to architects, planners, operators and cleaning companies.

We do not offer only products and solutions, but through our partners also applied services.

B) NOT ONLY CLEAN, BUT PURE ! Tiles create ideal conditions for hygienic cleanliness. Using ceramic linings, you can prevent oversensitive reactions and the increasing number of allergies.

Tiles are proven products, for example in medical facilities and other rooms with special requirements. The properties of tiles ensure that harmful germs or bacteria have no chance and a hygienically immaculate condition can be maintained without great effort.

C) HOW TO CLEAN CORRECTLY? It is commonplace knowledge, but still true: Best to keep the dirt outside! Grills and doormats in the entrance area keep away a lot of dirt. They allow the cleaning which is already easy to be simplified even more and help further to maintain the aesthetic properties. For a correct cleaning, the type and extent of the soiling should be clarified, since unfortunately no universal cleaner exists which could be generally recommended.

For the cleaning process itself the following principles are applicable:

- 1. Allow the cleaner to react for some time** to detach the dirt.
- 2. Support this process mechanically:** brushing or wiping in an adequate way; do not use so-called pads or brushes with abrasive grain addition!
- 3. Gather up thoroughly diluted dirt** – the specialist calls it „emulsified dirt“. The dirt can be gathered up e.g. with a rag, vacuum-cleaned or, if gullies exist, flushed away. If this is not executed in the correct manner, you only „smudge uniformly“ and the result is correspondingly unsatisfying.

The cleaning effort of ceramic linings in comparison to the aesthetics will always be irrelevant!

Types and intervals of cleaning

D) FIRST CLEANING This is the so-called hand-over-cleaning, immediately after the termination of the lining. After sweeping off solid dirt, the thorough cleaning is made adding neutral or alkaline cleaner.

- **Industrial Areas and Swimming Pools:** Cleaning acc. to Cleaning Advice

- **Living Quarters:** Usual household-cleaning agents or tile cleaning agents.

- **Cement residues:** Residues of hydraulically-setting bedding and jointing cements can be removed with acid cleaning agents, e.g. Cement-Residue-remover FIXWEG from AGROB-WESSEL-SERVAIS. Acid cleaners are corrosive. Therefore avoid contact with skin and clothing, wear protective rubber gloves and observe the Safety Instructions for the manufacturer. Also important: Every ceramic lining includes joints. Aggressive acid cleaners attack joints. Therefore protect them with suitable measures, e.g. pre-wetting, and rinse thoroughly afterwards.

E) MAINTENANCE CLEANING The „everyday cleaning“ is easy and will be necessary – depending on the amount of dirt and use – in different intervals: weekly, daily, in case of very intensive use several times a day.

In general, for the maintenance cleaning of the tiles warm water with usual cleaners is sufficient. Combination products cleaning and caring at the same time, are not required and may be even detrimental: „sticky“ fat-, wax or plastic coats may form on the lining and thus have negative effects on the appearance, the hygiene and the cleaning.

F) BASIC CLEANING REMOVAL OF STAINS

The basic cleaning is a sort of "spring-cleaning", i.e. an intensive intermedium cleaning to remove soil marks and stains, especially on unglazed and non-skid linings. On unglazed architectural ceramics, this process can be supported mechanically by a controlled use of abrasive powder.

For removal of the most frequent stains, the following agents are suitable:

Calcifications and Rust stains

Similar as with cement residues: use acid cleaning agents, protect joints by pre-wetting and take precautious measures against the corrosive effect.

Tar and bitumen, paint blots, residues of expansion joints and synthetic resin loaded products

In this case, organic solvents, such as benzine, acetone or so-called pickling-pastes, are most suitable. Do not wipe contaminated solvent into the joints! Due to the narcotic effect, ensure good ventilation. Attention: Solvents of this sort are highly flammable!

Epoxy resins

In this case, the only remedy is a special pickling media.

Oils, fats, waxes

These media can be removed easily from glazed ceramics. Due to the very dense surface they cannot penetrate and stay on the surface. From unglazed linings without surface protection (factory-made sealing or subsequent impregnation) the removal of such stains is possible only if the residence time has been short. We recommend special solvents or very alkaline cleaning agents. As already mentioned, on unglazed material the use of abrasive powder as mechanical support cannot be harmful. For protection of unglazed products which are not sealed, an impregnation is advisable.

Specific Recommendations

G) WIPE MAINTENANCE If you want to give special care to the ceramic flooring, in certain intervals – depending on the requirement and the use – a wipe-maintenance can be performed. Thus, marks of use can be alleviated and an optical „refreshment“ be obtained. Wiping is also suitable as protective measure for intensely frequented floors. It facilitates the care and reduces a premature wear.

Please observe: This surface treatment causes a modification of the non-skid properties. Therefore we recommend to check if the compliance with possible non-skid-regulations can still be guaranteed. Our laboratory will be pleased to advise you individually for your particular application.

H) UNGLAZED CERAMIC LININGS Unglazed ceramics should be impregnated preventively, if the exposure to coloured liquids, oils, fats, waxes, etc. is to be expected. We recommend the impregnation immediately after the Basic Cleaning, assuming that the area to be treated is clean and dry. An impregnation impedes the penetration of soils and deepens the colour effect. The typical unglazed-appearance remains.

I) NON-SKID CERAMIC LININGS Ceramic manufacturers offer a wide range of non-skid glazed and unglazed series. These products are „customised“ for the use in **Industry/public areas** and so-called "**wet barefoot areas**", such as swimming pools, showers, saunas etc. They have even or, depending on the application, variably rough or moulded surfaces. Examples for such special solutions are the non-slip (NOS)-glazes and safety (SAF)-glazes, which exhibit a micro-rough surface.

Non-skid ceramics naturally fall into the category industrial cleaning. Usually the cleaning is made mechanically, e.g. with brushes, high-pressure-vacuum-cleaners and similar equipment. Therefore, in these areas an acid-resistant jointing, e.g. on base of epoxy resin, is highly recommended. Compared with a cement-bound joint it is mechanically much more resistant.

For the industrial cleaning the profitability plays a decisive role. Ceramics lays the best foundations for this. Independent of this it is here also necessary that cleaning agent, equipment and workflow are co-ordinated.

Specific Recommendations

Important Principles:

Do not use so-called pads or brushes with abrasive grain-addition, which do not gather up the dirt, but only levigate it over the lining and into the joints. Furthermore, the intended rough surfaces will be ground away and thus the non-skid-properties are put at risk!

For all non-skid-linings it is especially important to gather up the dissolved dirt by vacuum-cleaning, flushing or other suitable measures – otherwise residues of soap and/or cleaning agent will make the floor slippery.

In this context: film-producing agents are out of place since they have negative effects on the non-skid-properties.

For the maintenance cleaning especially of wet barefoot-areas a list of proven cleaning agents for ceramic linings in swimming pools is available. Additionally, such areas require in certain intervals a basic cleaning with acid cleaning agents to remove calcifications and the like.

***For further technical questions, please contact our department Pool Construction,
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