

## General

Industrial floors, types of contamination, requirements on hygiene standards etc. will vary according to the branch of industry. The food processing industry, for example, has different floors and types of contamination than are found in the metalworking industry or for exhibitions.

Even within a particular branch of industry there are a number of different applications which require various cleaning methods.

The size of the surface area is normally the deciding factor in whether cleaning is performed manually or by machine. The cleaning methods applied are influenced by

- the nature of that particular industry;
- use within such a branch of industry;
- the size of the area to be cleaned;
- the condition of the industrial floor;
- types of contamination;
- the level of contamination;
- the accessibility of the area to be cleaned;
- the hygiene requirements.

## Cleaning agents

The choice of cleaner and cleaning method depends primarily on the nature of the contamination. Essentially, all alkaline cleaning agents are suitable, regardless of whether they are sodium or potassium hydroxide-based. Tensides and hypochlorite additives do not normally have any negative effect on Silikal methacrylic resin coatings.

To remove lime blast, salic acid or acetic acid (max. 10%) can be used, for instance. However, subsequent rinsing with clear water is essential.

High concentrations of cleaning agent, e. g. ammonia solution or of nitric acid, can lead to turbidity or discolouration in the floor, but without attacking it.

Methacrylic systems react sensitively to alcohols. Caution must also be exercised with all organic solvents. Aromatic and halogenized hydrocarbons must not be used (→ see also the data sheet entitled “**Chemical resistance**”).

## Cleaning equipment

Combination scrub-and-pick-up machines are increasingly being used in the wet cleaning of large areas. They replace time-consuming wet wiping with a bucket, mop and press or wet scrubbing with a disk machine and water suction device. Scrub-and-pick-up machines can be differentiated into

- push-along machines,
- stand-in machines,
- and ride-on machines.

These cleaning machines are available in a variety of widths, convenience options and price levels.

Contra-rotating three-disk machines have proven to be useful for this purpose. The constant change in the angle of incidence of each and every bristle means that all uneven areas and deeper structures are cleaned from all sides, instead of just two as in the conventional technique.

However, a device with a rotary nozzle is recommended. These devices are height-adjustable, enabling an optimal result to be achieved by adapting the height to the roughness.

Properly sealed and undamaged surfaces can normally resist the stresses even of a high-pressure jet (operating pressure approx. 100 – 130 bar). The actual pressure of the water jet on the floor naturally depends on the jet form that is set and the distance from which the surface is sprayed, and in usual practice is much less than the operating pressure.

Care must be taken with edges and at joins!

## Example of a cleaning concept

When it comes to cleaning industrial floors, you must distinguish between maintenance cleaning and primary cleaning.

### New floors

Before being used for the first time, newly laid Silikal floors should be cleaned thoroughly with an alkaline primary cleaner. A protective film that is appropriate to the use and based on a self-drying wax emulsion can then be applied. This protective film ensures that the industrial floor coating is not directly attacked by contamination. In addition, such protective films are also available in slip-resistant formulations, allowing them also to be used in wet areas.

### Floors already in use

Floors already in use should be subjected to regular maintenance cleaning, e. g. using a cleaning machine. In the event of heavy contamination, an alkaline primary cleaner can also be used for interim cleaning.

### Heavily contaminated floors

These normally require intensive primary cleaning with an alkaline primary cleaner. The dosage of the primary cleaner will depend on the particular level of contamination. Floors that have been primary cleaned should then be covered with a new protective film.

Silikal industrial floor coatings have been subjected to intensive testing by a variety of cleaning agent manufacturers. The tested cleaning concept described below is given by way of example.

### Primary cleaning

In the case of heavily contaminated floors, primary cleaning with **SILIKAL® Topclean** is required. The dosage depends on the amount of contamination. The topping must then be rinsed thoroughly with clear water.

### Protective film

Whether or not a protective film is laid down depends, among other factors, on the surface structure. If a coating is required, **SILIKAL® Protect** must be used in two coats, and each coat must be thoroughly dry.

## Tyre abrasion

Tyre abrasion, e. g. caused by fork-lift truck traffic, is normally unavoidable. How the fork-lift trucks are handled and driven, and the type of tyres, have a critical influence on the level of tyre abrasion. In most cases minor tyre marks can be removed using the primary cleaner. A stain remover, e. g. **Buzil® G 502**, can be used for the partial cleaning of stubborn tyre marks. Since these cleaners contain solvents, you must take greater care when handling them (limit the exposure time; rinse thoroughly with clear water).

In addition to cleaning agents, there are ways of avoiding such contamination by using special types of tyre which prevent black tyre marks from appearing in the first place.

The advice on use outlined above is based on laboratory and practical analyses. Because of the diversity of possible contamination and conditions of use, this information is not binding. We recommend that you consult the manufacturer of the cleaning agent on a case-by-case basis. It is absolutely essential that cleaning agents are tested for suitability.