

CLEANING MASONRY JOINTS

1. CHOOSE THE RIGHT CLEANING METHOD

The correct cleaning methods must be chosen for cleaning. Cleaning incorrectly or with the wrong tools can deteriorate the appearance of the wall.

Basically, either mechanical cleaning or (and) liquid washing should be used. Regardless of the cleaning method, loose dirt (dust) must be removed first. Protective equipment (gloves, safety glasses) must be used when working.

2. MECHANICAL CLEANING

Surface dirt can be removed by brushing or scraping.

The surface to be cleaned must be dry.

A stiff-bristled brush is suitable for brushing, and a wooden scraper is suitable for scraping.

3. LIQUID WASHING

Liquid washing of the joints of exterior walls is done in spring or summer with either clean water or a hydrochloric acid solution.

When washing with liquid, make sure that the joints are completely hardened!

Dry the joints with a clean cloth or let them air dry. Check that all stains have been removed, repeat the procedure if necessary.

4. TYPES OF DIRT AND THEIR REMOVAL

4.1. Soluble salts (efflorescence)

Efflorescence may appear on the surface of the masonry. The same thing happens indoors when construction has stopped in the fall and the wall has gotten wet. Efflorescence is caused by approximately 95% water-soluble salts from cement, which remain on the wall surface when it dries. Salts usually disappear from new brick facades by themselves due to the combined effects of wind, sun, and rain. However, salt stains can remain under window sills, eaves, and other protruding parts for a couple of years. To remove salts more quickly, they can be wiped off the wall with a dry brush or with a little water and a brush. You shouldn't rush cleaning, but let the walls dry and allow the salts to come to the surface as much as possible. If the stains do not come off with clean water, they are lime or mortar stains. If they do not come off by brushing or scraping, a hydrochloric acid wash (dilution 1:10) will help. The wall must be thoroughly wetted and rinsed thoroughly with water after washing, as residual acid will damage the joints.

Efflorescence mainly appears in the first spring after or during construction, and the main construction techniques to prevent it are:

- *using ready-made dry mixes with low salt content,
- *preventing the wall from getting wet,
- *proper moisture barrier and moisture removal,
- *the possibility of the formation of efflorescence is increased by the antifreeze additives in the mortar.

4.2. Lime and mortar stains

When laying masonry, it is important to keep the stones clean. Any mortar that gets on the stone should be removed immediately.

4.3. Traces of water marks

To clean, the surface must first be brushed, then washed with a hydrochloric acid solution.

4.4. Soot

Soot marks can form above stove, fireplace and oven doors, soot doors, etc. openings. The first step is wet brushing with detergent. For stronger stains, turpentine, white spirit, and other organic solvents will help.

4.5. Oil, bitumen, pitch

Bitumen and pitch stains are easily removed when cold. Organic solvents such as turpentine, kerosene, white spirit, etc. are used for soaking. The surface must be cleaned more widely; spot-wetting dilutes the dirt and spreads it over a wider area.

4.6. Vegetation

Vegetation (mosses, lichens) grows in those parts of the building where there is sunlight and moisture. First remove the vegetation mechanically and then treat the surfaces with 5% formalin, 2–3% copper sulphate solution or formaldehyde. Special moss killers (Sammalpois) are also available. Surfaces must be washed with a large amount of water before treatment to prevent toxic chemicals from seeping deep into the wall.

4.7. Rust

Rust marks are mainly caused by the water dripping onto the wall from rusted structures. These marks will disappear on their own over time once the cause of the rust has been removed. Rust marks can be removed with water with detergent added.

Note! It is easier to prevent the causes than to deal with the consequences – proper building design solution, careful construction, and proper maintenance reduce the need for cleaning walls later.