

CLEANING OF CLAY BRICK

GENERAL PRECAUTIONS

Staining can mar the appearance of brickwork, but incorrect cleaning techniques can cause permanent damage. Any proposed method of cleaning should be tested in a small unobtrusive area and left for at least a week to judge the results before work starts. The techniques given here are intended for DIY work in removing relatively small areas of staining. A specialist contractor should be engaged for cleaning large areas of brickwork. Use wooden scrapers and stiff fibre brushes to avoid damaging the bricks; but where chemicals are used, the brickwork should be thoroughly wetted with clean water to prevent it absorbing the chemicals and rinsed thoroughly with clean water afterwards. Adjacent features, such as metal windows and the area at the foot of the wall, should be protected from splashing from the chemicals. Many of the chemicals recommended are caustic, acidic or poisonous, so care should be taken and protective clothing and goggles should be worn. Volatile solvents should only be used indoors under conditions of good ventilation. It is essential to identify the type of stain or deposit before any cleaning operations are undertaken.

NOTE: Metal scrapers, brushes and the like should not be used on brickwork as it may cause damage.

PREVENTION IS BETTER THAN CURE

Cover face brickwork during building or renovating operations to prevent mortar and paint stains.

PREPARATION

Remember to thoroughly wet the brickwork with clean water before applying any chemical and wash down with clean water afterwards. The main area of unsightly staining arises from the operation of laying the bricks in mortar and the related quality of workmanship and management of the operation.

MORTAR AND MORTAR SMEAR

1. Where possible, remove large pieces of mortar with a wooden or nylon scraper (not metal).
2. Wet the brickwork thoroughly with water, starting at the top and working down.
3. Wash the wall down with a diluted solution of a proprietary mortar cleaner, used as per the manufacturer's instructions. Scrub brickwork using a stiff fibre brush (not metal).
4. Never allow the mortar cleaner to dry on the brickwork. After scrubbing for a few minutes the wall must be thoroughly washed with clean water to remove any acid residue.
5. Cleaning should be done in small areas at a time working from top to bottom.
6. Should the mortar stain still be visible once the brickwork has dried out, steps 2 to 5 should be repeated.

EFFLORESCENCE – WHITE CRYSTALS OR WHITE FURRY DEPOSIT

Efflorescence is a usually harmless and does not require chemical cleaning. It's usually washed away by wind and rain. Dry brushing or damp sponging, where there is maximum efflorescence, will also help. The salts brushed off should not be allowed to accumulate at the base of the wall, because they may be carried back into the brickwork by subsequent rain.

LICHENS AND MOSSES

These can be killed with a solution of copper sulphate (1kg to 10 litres of water) or, alternatively, a proprietary weed killer. Vegetable growth is generally indicative of damp brickwork and will usually reappear if this basic cause is not cured. (Green staining, which does not respond to this treatment, is probably due to Vanadium salts from within the bricks). Boiling water or steam is effective in cleaning mosses.

LIME AND LIME BLOOM

Follow treatment for 'Mortar and Mortar Smear'. Lime staining in older brickwork, originating from the reinforced concrete structure, can be particularly difficult to remove. It is important to stop the flow of moisture through the structure to overcome the problem.

MANGANESE (DARK BROWN)

Brush the stain with a solution of 1 part acetic acid and 1 part hydrogen peroxide in six parts of water.

PAINT

Apply commercial paint remover or a solution of trisodium phosphate (1 part to 5 parts of water by mass). Allow the paint to soften, and remove with a suitable scraper (not metal). Wash the wall with soapy water and rinse with clean water.

RUNNING WATER

Water running regularly down the surface of brickwork produces pattern staining and this can be removed by scrubbing after wetting with a high pressure mist spray of cold water. If this is not effective, follow treatment for 'Mortar and Mortar Smear'.

RUST OR IRON

Wash down with a solution of oxalic acid (1 part to 10 parts of water by mass). Brown staining which does not respond to this treatment, particularly at the junction of the brick and mortar, is probably due to 'Manganese'.

SMOKE AND SOOT

Scrub with a household detergent.

NOTE: SPECIAL PRECAUTIONS - LIGHT COLOURED CLAY BRICKS

Yellow, buff and cream coloured bricks contain vanadium salts. Under certain conditions light coloured bricks are susceptible to vanadium staining, some more than others. To avoid this it is important to use the correct cleaning materials and methods. Please see "Vanadium" below.

TIMBER (BROWN OR GREY)

These stains are due to water spreading tannin or resin from the timber across the bricks and mortar, and can normally be removed by scrubbing with a 1:40 solution of oxalic acid in hot water.

VANADIUM (GENERALLY GREEN/YELLOW IN COLOUR)

Wash down with a 20% solution of potassium hydroxide. Scrubbing isn't necessary. Do not wash the wall with clean water afterwards. Hydrochloric acid should never be used on vanadium stains since it 'fixes' them and turns them brown.

VARIOUS OILS

Sponge with white spirit or carbon tetrachloride. Good ventilation is essential indoors when using these chemicals.