CLEANING OF BRICKWORK
GENERAL PRECAUTIONS

Staining can mar the appearance of brickwork, but incorrect cleaning can cause permanent damage. Therefore, any method of cleaning should be tested in a small unobtrusive area and left for as long as possible, but at least a week, to see the results before the whole job is tackled.

These techniques are intended for ‘do-it-yourself’ work in removing relatively small areas of staining. A specialist contractor should be engaged for cleaning large areas of brickwork, for example cleaning industrial grime from a building.

Preferably use wooden scrapers and stiff fibre brushes to avoid damaging the bricks. Where chemicals are used, the brickwork should be thoroughly wetted with clean water to prevent it from absorbing the chemicals, and then 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 chemicals.

In places that are not possible to make a mess or where the stain is very localised, most of the cleaning liquids can be applied as a poultice by thickening them with an inert filler such as talc, bentonite or powdered chalk.

Many of the recommended chemicals are caustic or poisonous. Therefore every precaution should be taken, with protective clothing and goggles worn. Volatile solvents should only be used indoors under conditions with good ventilation.

Cleaning techniques may differ for clay and calcium silicate bricks. It is therefore, important to identify the brick in question and the type of stain or deposit before any cleaning is undertaken.

CLAY BRICKWORK

Remember to thoroughly wet the brickwork with clean water before applying any chemical, and wash down with clean water afterwards.

LICHENS & MOSSES

These can be killed with a solution of copper sulphate (1kg to 10 litres water), or alternatively, a proprietary weed killer. Vegetable growth is mostly indicative of damp brickwork and will usually reappear if this basic cause is not cured. (Green staining that does not respond to this treatment is likely due to vanadium salts from within the bricks.)

LIME BLOOM

Lime bloom streaks may arise from the autoclaving process, and will tend to mask the colour of the brick. The recommended cleaning process is as follows:

- Wet 1-2m² of brickwork with clean water.
- Scrub wetted area thoroughly with a diluted solution of a proprietary acid cleaner (1 part cleaner : 20 parts water).
- Then immediately wash down with clean water

LIMES & MOSSES

These can be killed with a 10% copper sulphate/water solution, or a proprietary weed killer. There will usually be an obvious black residue of dead material which should be removed by scrubbing with water. Vegetable growth is generally indicative of damp brickwork and may reappear if this basic cause is not cured.

PAINT

Apply commercial paint remover or a solution of trisodium phosphate (1 part to 5 parts water by mass). Allow the paint to soften and remove with a scraper. Wash the wall with soapy water and rinse with clean water

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Apply commercial paint remover or a solution of trisodium phosphate (1 part to 5 parts water by mass). Allow the paint to soften and remove with a scraper. Wash the wall with soapy water and rinse with clean water. In very bad cases, it may be necessary to grind off the face of the brickwork in affected areas.

OIL

Sponge or poultice with white spirits, carbon tetrachloride or trichlorethylene. Good ventilation is essential indoors.

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Scrub with an oil emulsifying detergent in water. Dry thoroughly. If necessary, poultice with white spirits, carbon tetrachloride or trichlorethylene. Good ventilation is essential indoors.
CHECK LIST

DO  Protect bricks and unfinished brickwork from becoming saturated during construction.

DO  Ensure that all safety measures are taken when handling and using chemicals, with first-aid measures immediately available.

DO  Identify the nature of the masonry to be cleaned and type of stain / deposit to be removed.

DO  Carry out trials on small areas of masonry, well before the main cleaning operation starts.

DO  Ensure that the masonry is adequately wetted before surface application of chemicals, and unless stated to the contrary, remove all traces of the chemical afterwards.

DO  Allow efflorescence to disappear naturally whenever possible.

DO  Ensure a high level of ventilation when chemicals are used in a confined space.

DO  Protect vulnerable metalwork and other materials and plants from chemical liquids, fumes and spray.

DO NOT  Clean brickwork exposed to hot sunlight.

DO NOT  Use wire brushes or other abrasive methods on brick faces.

DO NOT  Allow chemicals and / or washings to contaminate surrounding areas.

CLAY BRICKWORK

RUST OR IRON
Wash down with a solution of oxalic acid (1 part to 10 parts water by mass). (Brown staining that does not respond to this treatment, particularly at the junction of the brick and mortar, is likely due to manganese).

SMOKE & SOOT
Scrub with a household detergent. Stubborn patches can be removed from the brick pores using a poultice based on trichlorethylene. Good ventilation is essential indoors.

TAR
Except where bricks are liable to surface damage, remove excess with a scraper. Scrub with water and an emulsifying detergent. Allow to dry, then, if necessary, poultice with paraffin. Do not wet brickwork first.

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.

WATER
Water running frequently down a brick surface produces pattern staining. This can be removed by scrubbing after wetting with a high pressure mist spray of cold water. If this is not effective, the treatment recommended for mortar should be followed.

CALCIUM SILICATE BRICKWORK

RUST
Wash down with a solution of oxalic acid (1 part to 10 parts of water by mass).

SMOKE & SOOT
Scrub with a household detergent. Stubborn patches can be removed from the brick pores using a poultice based on trichlorethylene. Good ventilation is essential indoors.

TAR
As much as possible should be removed, first by scraping, then by scrubbing with water and an emulsifying detergent. Allow to dry, then, if necessary, poultice with paraffin. Do not wet brickwork first.

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WATER
Water running frequently down a brick surface produces pattern staining. This can be removed by scrubbing after wetting with a high pressure mist spray of cold water. If this is not effective, the treatment for mortar should be followed.

Disclaimer: The use of this information is based on recognised principles of design and construction and is at the discretion of the respective builder, contractor and end-user. ClayBrick.org is neither able to warrant the suitability of workmanship and the performance of any building material in a particular environment and does not accept responsibility for any claims arising from this information.