

Easy Guide to Brick Cleaning

INFORMATION SHEET

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This information is designed to help you avoid many of the pitfalls and mistakes that can occur when cleaning clay brickwork. Please read carefully before starting.

CAUTION:

- The use of high pressure water cleaning is NOT recommended as it may damage the face of brickwork or window frames and erode mortar joints.
- If unsure of the cleaning chemical to use, speak to a chemical supplier or try it first on a small inconspicuous area to ensure it works thoroughly, and does not aggravate the situation.

Mortar Stains

BEFORE attempting to clean the wall, **thoroughly hose down the wall and saturate the brickwork.** Then totally remove all mortar dags using a scraper (a piece of hard wood can be used if you do not have a metal scraper handy). Assuming that your wall is finished, it is at least seven days old and that all large mortar droppings have been removed, then you are ready to clean the wall using the conventional method. This means brushing on a mixture of hydrochloric acid (spirit of salts) and water. Hydrochloric acid for brick cleaning is available from hardware outlets.

The wall MUST be thoroughly saturated, and remember, no matter how dirty the wall is NEVER use more than 1 part of hydrochloric acid to 10 parts of water. It helps to start by using 1 part acid to 15 parts water mixture. Only increase the strength where absolutely necessary.

Additional problems will be caused by using too much acid.

DANGER – When using any type of acid, always wear rubber gloves, protective glasses and protective clothing, and avoid breathing the vapours.

It should be remembered that hydrochloric acid is extremely corrosive and, if you are using it inside a building, keep all doors and windows open. Avoid splashing the acid mixture on any areas surrounding the brickwork, such as electrical switches.

ALWAYS START AT THE TOP – never at the bottom. Do not leave the ladder or scaffold work until last, because all the sludge you clean off will run down and onto the work that has been cleaned.

Clean small areas at a time, a metre strip is ideal.

Use a proper spirit brush. It is a good idea to tie a piece of string around the bristles half way down. This is not only more efficient but it helps in the scrubbing action and also lengthens the life of the brush.

Hose off as you proceed. Do not allow the brickwork to dry out with the acid solution still on the bricks. For cleaning red bricks laid with a cream or white joint, additional effort is required. The brickwork needs to be scrubbed whilst hosing off the acid and sludge. A broom with dense, stiff bristles is ideal. If necessary the treatment may be repeated, but allow the brickwork to dry out thoroughly before starting again – this will highlight any mortar smears that may not have been seen when the wall was wet.

After completing the cleaning procedures for external and internal brickwork, apply a solution of "NEUTRA" as a dilution of 1 part "NEUTRA" to 9 parts water. After allowing contact with the wall for 30 minutes, wash the walls down with water. "NEUTRA" neutralises any residual acid in the brickwork and is highly recommended for use indoors. If you have followed these instructions, you should now have removed all normal brickwork smudges.

Efflorescence

Occasionally various types of stains and blemishes may become visible after the normal cleaning is finished and a white powdery substance called efflorescence may appear. This is a powdery deposit that forms on the surfaces of porous building materials such as bricks, mortar and concrete and is often caused by using too much acid. It is usually white and is

not harmful. The temporary appearance of efflorescence is common on all new brickwork and usually, in time, it will be washed from external walls by the action of rain. The process can be accelerated by frequent damp sponging. Efflorescence on new brickwork may be unsightly, but is unlikely to cause damage. Persistent efflorescence should be taken as a warning that water is entering the wall through faulty damp courses, flashings or pipes. The salts that appear as efflorescence can enter the wall in various ways. Cement, lime or sand may all contain salts, the atmosphere may carry sea spray in coastal areas, or garden fertilisers may be drawn into the bricks. If damp-proof courses are faulty or not installed, salts from the ground waters may pass into higher levels in the wall.

Remedy

Efflorescence can be minimised by laying dry bricks and by providing good ventilation to speed up the drying process after the bricks have been laid. The salts that cause efflorescence are soluble in water and will be washed from external walls by rain, however damp sponging affected surfaces at intervals will speed this process. When using a damp sponge it is important to carefully control the moisture content of the sponge. If the sponge is too wet, the salts go back into the wall and the effort is wasted. Sweeping the salt off with a brush or broom can also have effects on removing efflorescence. On internal walls, follow a sequence of brushing and washing down with fresh water. Forced ventilation and heating of the premises may be necessary to ensure drying during cold winter months.

Acid or alkaline treatments do more harm

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than good because they add to the total salt content of the wall. The application of kerosene or oil does little or nothing to hide the efflorescent salts and prevents their subsequent removal by brushing and washing.

Vanadium

On occasion yellow/green staining may appear on cream coloured clay bricks or pavers. This is known as vanadium staining. This staining is a natural by-product of clay products and is not harmful. Typically the stain will appear if excessive acid is used in the cleaning process. Over time they will disappear through natural means if exposed to the elements.

Remedy

Stains can be removed by using products such as "White King" bleach or liquid swimming pool chlorine diluted with 3 parts water. Or prepare a solution of caustic soda – mixture of 100 gms of caustic soda diluted in 1 litre of water – and apply by brushing on to the affected area. This will usually prove effective. On grey bricks, vanadium occasionally manifests itself as a brown coloured stain. This can be removed by using a solution of oxalic acid and water. It is important to always follow the safety instructions and warnings on any labels of chemicals used. Please refer to the warning section for further information.

Bore water stains – red (iron) or white (calcium)

Treat as recommended for Efflorescence using "RANEX" or "GEOCLENE" on the red (iron) deposits or strap stains. Where the strap marks are severe, rub the mark with a piece of brick (of the same brick type) whilst running water over the brick being rubbed. Then use "RANEX" or "GEOCLENE" to remove the residue off the rust mark.

Timber stains

Timber stains can be cleaned off with a solution of 20 gms oxalic acid per litre of water. Timber stains that resist oxalic acid may respond to treatment with a household bleach based on sodium hydrochlorite (such as "White King"), or liquid pool chlorine.

Wash down the walls with water after treatment. Timber stains should be removed as soon as they occur. If left, they oxidise and become impossible to remove with chemicals. In this case the bricks may have to be replaced.

Wax crayon

Remove with a solvent cleaner called "MARCMOVE". Some liquid clothes washing detergents are able to remove light wax crayon stains.

Rubber tyre stains

Remove with a solvent cleaner called "MARCMOVE" or a proprietary paint stripper. Scrub it with a stiff nylon brush and while scrubbing, wash it off with water.

Moss and mould on walls and paving

Remove excess deposits and treat the affected area with "White King" bleach or liquid swimming pool chlorine diluted 2-3 parts with water. Use a stiff nylon brush to assist the process. After this treatment, wash the area down with water.

Mortar scum and insoluble white deposits

Hard white deposits that are insoluble in water may sometimes occur. Vigorous treatment is required to remove them. Most commonly, this insoluble form of staining arises from lime leached out of concrete elements such as sills, lintels, copings, or cement rendered areas.

The lime is deposited on the face of the bricks where it combines with carbon dioxide from the atmosphere to give an insoluble white deposit of calcium carbonate.

Remedy

Consult a professional brick cleaner to remove these deposits.

Smoke and soot stains

Stains caused by soot and smoke are not uncommon around brick fireplaces.

Remedy

Use a liquid clothes washing detergent and/or treat with a 5% aqueous solution of sodium carbonate. Wash down after treatment with water. Sealing with a silicone solution makes removal of smoke stains easier for any future attacks. Apply the sealer after the brickwork is thoroughly dried out.

Paint graffiti

Normal paint remover should work, but wet the wall first.

WARNING

All chemicals mentioned in this leaflet are poisonous and dangerous, therefore they should be handled with extreme care. Follow the safety instructions on any labels of chemicals used. Adequate personal protective equipment, safety glasses, gloves, clothing, footwear and masks must be worn. For further information and full safety instructions, please speak to a chemical supplier.



Calmarc Chemicals – Bayswater Phone 08 9378 2022 (WA) www.calmarc.com

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