product data sheet

cleaning concrete masonry

Good Practice

Professional cleaners are the recommended option. If professional cleaners are not being used the first question to be asked is what stains am I trying to remove and is the use of a chemical necessary. Select a small test area and always start off with the weakest solution of chemicals in most cases this will be 10 parts water to one part chemical. Always follow chemical and product manufacturer directions.

CAUTION. High-pressure water cleaning may damage masonry. Use with caution and only with experienced operators.

Safety Precautions
Care must be taken to avoid damage to adjacent materials. To avoid personal injury wear protective clothing. Always pour chemicals into water. Obtain a copy of any Material Safety Data Sheet available from the relevant chemical supplier for reference.

Mortar Smears

Mortar smears should be cleaned off before they set. If this does not occur one of the following treatments will be necessary. Mortar dags should be removed by rubbing with a piece of the brick or block. Water and a stiff-bristle brush will remove most mortar stains after initial mortar cure (12 hours in normal conditions). Proprietary chemicals that will remove stubborn mortar stains are: TR50 (Applied Chemicals 07 3390 7522) and ANTI EFF (Mcquire Corporation 1800 819 939).

Stains

General
For general stains, oxalic acid is an effective cleaning agent and has the benefit of not attacking the masonry itself.

Iron Oxide Stains
These stains are frequently caused by the incorrect use of hydrochloric acid. The so-called rust stain can be a reaction between the acid and the iron oxides in the masonry products and/or the mortar sand. Light to medium iron oxide stains may be removed by the use of phosphoric acid. A solution of 1 part acid to 4 parts water is applied to the dry wall and allowed to stand until the stain disappears. This is usually about 30 minutes. The acid is then neutralized with a solution of 20 g to 40 g bicarbonate of soda in one litre of water. This solution should be left to remain on the product.
Note: Phosphoric acid can fade products coloured with metal oxides.

Hardwood Timber
These may be removed by the liberal application of strong household bleach (a chlorine generator) onto dry surface. Reapply as necessary.

Softwood Timber
A solution of 250 grams of oxalic acid dissolved in 4 litres of hot water should be applied liberally to dry surface using a soft brush, allowed to soak for 1 hour and then washed off. Repeat as necessary.

Clay or Loam Stains
These may be removed with a solution of 50 ml household detergent, plus 500 grams of oxalic acid dissolved in 4 litres of warm water. Lightly wet and apply the solution with a stiff nylon brush. Wash off and repeat as necessary. Using washed pit sand in the mortar mix will reduce staining of this kind.

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Mosses, Moulds and Lichens

These appear either as black stain or like a green carpet. Algae will appear as a green area often with a hair-like growth, around taps, gutter overflow areas, etc. Apply a strong solution of a chlorine generator (swimming pool chlorine or strong household bleach) to the surface. Agitating with a stiff brush will speed up the removal. Leave 24 hours and repeat as necessary.

Effloresence

Depending on the extent and solubility of the effloresence to be removed, the following cleaning options can be applied. To get detailed information about what effloresence is and how to reduce its occurrence, see our "Managing Effloresence" data sheet.

Abrasion

The surface of the affected masonry can be lightly sandblasted or scrubbed with a stiff bristle or wire brush. This is the most preferred option because the only effloresence to be removed is that which is on the surface of the masonry. The effloresence that has formed in the tiny pores of the masonry is left to plug the pores and will stop the movement of water to the surface. This as we know is the main reason effloresence occurs in the first place.

Proprietary Chemicals

There are a number of proprietary chemicals on the market such as TR 50 (Applied Chemicals 07 3390 7522) and ANTI EFF (McGuire Corporation 1800 819 939) that are designed to remove heavy deposits of effloresence (calcium carbonate). Before applying the solution wet the area of masonry to be treated thoroughly. After putting on rubber gloves and suitable eye protection apply the solution to the surface of the masonry with a brush or piece of sponge. Different masonry may be effected in different ways so it is wise to trial the solution on an inconspicuous area to see how the solution works. If it works to your satisfaction proceed to clean the rest of the area. These chemicals are applied at full strength and left to stand for five minutes. A scrubbing brush is used to apply more chemical and the effected area is scrubbed vigorously. The chemical is then neutralised with a solution of 20g to 40g bicarbonate of soda in 1 litre of water. This solution should be left to remain on the product.

Hydrochloric Acid

Also known as ***spirit of salts*** and ***muriatic acid***, these acids are extremely corrosive and their use is not generally recommended for the cleaning of concrete masonry. If they are used for whatever reason, ensure the following procedure is adhered to:

1/ Saturate with clean water all areas (unless otherwise stated) to be cleaned as well as the masonry below to the extent that the suction of the masonry product is exhausted.
2/ Apply a solution with the ratio of 1 part acid and 10-15 parts water to the wet surface with a stiff brush, vigorously scrubbing the affected area.
3/ Allow a standing time of 1–2 minutes. Do not allow to dry out. Keep it moist throughout the cleansing process.
4/ Flush the treated surface thoroughly with water, to neutralise the acid whilst again scrubbing with a stiff brush. Allow the surface to dry.
5/ If the affected area is not completely cleaned, repeat the above steps with a stronger dilution (strength to suit the application).
6/ If acid salts (white bloom) are left on the surface, repeat the process with a weak dilution and ensure the whole surface is vigorously scrubbed whilst applying the agent and flushing off with water.

The acid is then neutralised with a solution of 20g to 40g bicarbonate of soda in 1 litre of water. This solution should be left to remain on the product.