

SITE GUIDE

MORTAR

SITE GUIDE No 10: MASONRY CLEANING

INTRODUCTION

To ensure that both the brick units and mortar within a structure are free of surface contamination, such as building dirt, efflorescence & lime bloom, which produces a poor aesthetic appearance.

PROPOSED EQUIPMENT

- Proprietary brick cleaning organic agent, **Oscrete Osrel Brick Wash**, a non-Hydrochloric acid (HCl) base, provides effective controlled cleaning beyond that of standard acid-based alternatives.
- Suitable measuring container for accurate dilution.
- Plastic/rubber bucket.
- Soft bristled brush.
- Low pressure washer (≤ 250 psi or 17 bar)
- 2 x Plastic wash bottles, approx. 250ml – ideal for applying water & cleaning agent for small localised applications.
- Clean cold tap water.
- Protective clothing, goggles & gloves.

RECOMMENDATIONS

Location of an area or areas is normally decided as you walk round the site or construction. It must be accessed prior to the cleaning/treatment process if the affected area is accessible. Areas of masonry to be cleaned must have been constructed a minimum of 28 days prior. It must also be considered that it is important to allow time for masonry to dry out before cleaning/treatment – this may take several months. If the masonry is not reasonably dry, further stains may appear after treatment.

In all circumstance the initial cleaning/treatment must

be carried out on a trial area, ideally situated in an inconspicuous location to ensure that the process and brick cleaning solution do not adversely affect the masonry's finish.

It is also important that the brick manufacturers advice and instruction are followed.

Follow these simple guidelines to remove cementitious mortar, bloom or white staining from masonry:

- Using the organic based proprietary brick cleaning agent, **Osrel Brick Wash**, then taking care, dilute accordingly depending on the degree of surface contamination present upon the masonry to be cleaned as per table 1 below.

Table 1 - Dilution rates

Surface Contamination	Recommended Dilution Rates* (Typical applications)	
	Osrel Brick Wash	Clean Water
Light	1	4
Medium	1	2
Heavy	1	1

***NOTE: Standard safe working practise of adding 'acid to water' must be followed. Add the proprietary cleaning agent into a known volume of water when diluting.**

- Agree on the initial area, apply liberally, clean water onto the affected area until absorption is reduced. This will prevent the proprietary premixed cleaning agent from being absorbed or having an adverse reaction with the mortar itself.

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REMEMBER we only want to remove the salts and contamination on the surface of the joints or bricks and do not want to adversely affect the masonry's durability or aesthetic appearance.

- Immediately apply by brush or spray the premixed cleaning agent running horizontally across each joint starting from top of the brick panel working down. The method of application for both clean water and premixed cleaning agent can be tailored as deemed appropriate for the situation. However, adherence to restricting the pressure of pressurised washer lances must be followed in line with this guidance.
- If the cleaner 'fizzes' or 'foams' as it is applied, then salts (bloom) are present, and they will be removed.
- Continually feed the joints with the cleaner till the reaction stops. This should take no more than 2-3 minutes. Dragging your finger across each joint once may also help. If no reaction is experienced, then no salts are present.
- Once the reaction stops, leave the cleaner on for a further 2 minutes, and then wash the brickwork liberally with water using the same process as for the acid or a low-pressure wash.
- The cleaner should be removed after about 3-4 washes of the same area. Avoid over saturating the brickwork with water, as this will allow excessive water to be absorbed back into the mortar, and potentially re-promoting any efflorescence or bloom issues.

NOTES & CONSIDERATION

Discussions should be conducted to highlight any masonry units that are sensitive to brick cleaning solution, such as types of stonework. The way forward should then be discussed with the masonry unit manufacturer.

Efflorescence (usually 'fluffy' deposit) caused by soluble salts from many clay bricks is best removed by dry brushing. In all cases, prevention is better than cure – protect units and masonry.

NOTE: Be aware of blue engineering bricks as these may stain with the cleaner, ensure a test area is conducted.

Be aware of windows or other materials (e.g. concrete copings) directly below or surrounding any areas that are to be cleaned.

Be aware that Osrel Brick Wash is corrosive towards zinc and aluminium.

Be aware of workers below where you are applying the cleaner.

Be aware of the differing proprietary cleaning agents available, Osrel Brick Wash is a specially formulated and safer alternative to hydrochloric acid.

Be aware of the differing dilution rates, Tarmac suggests for all general applications a dilution rate of 1-part Osrel Brick Wash to 4-parts clean water, refer to Table 1. Increasing concentration will risk damaging both the brick and the mortar.

Be aware not to focus the pressure wash water jet too close onto the mortar and brick surface, this will cause damage. The spray nozzle must be more than 300 mm or 12 inches away from the surface of the masonry at any point.

If the masonry is to be cleaned in order to overcome a colour variation, then if possible, always choose an area at a point where there is a clearly defined colour differences (e.g. light to dark) so any changes will stand out clearly after the brickwork has dried out, confirming a successful outcome. A distinct band of lighter mortar immediately gives lime bloom away.

You may need a soft scrubbing brush. Sometimes the action of the cleaner itself will remove the salts, but the brush can be used to remove more stubborn stains, for example lime staining or mortar spots/staining on brickwork. In all cases the brush must be used **LIGHTLY** with little force. In exceptional circumstances, the brush may be used horizontally across the joints, **being careful not to remove the actual surface of the mortar or damage the brick face.**

Building standards advise that low-pressure water-based cleaning methods can be used to remove loosely adherent deposits with light brushing using a soft brush, if required.

*A proprietary brick cleaning agent should be used to remove mature deposits followed by a **LOW-PRESSURE** rinse with clean water.*

Low Pressure ≤ 250 psi or 17 bar

FREQUENCY

Repeat if required, however if the above instruction is followed correctly then this should not be necessary.

SAFE HANDLING PROCEDURE

Refer to the preparatory brick cleaning solution safety datasheet.