

## Overview

Beautiful masonry is occasionally marred by improper cleaning, which can be avoided. The purpose of cleaning new masonry is to remove excess mortar from the face of the brick. The sooner the brickwork is cleaned after installation, the easier it is to remove the mortar smears.

The easiest cleaning is accomplished shortly after laying, usually the same day, by wiping off the excess mortar using a bristle brush. The second easiest method is to wash down the wall the same or following day with only water and a brush. The third approach is to use chemical cleaners. The chemicals typically contain some form of acid for softening the mortar. These chemicals, while softening the mortar smears, can discolor the mortar and the brick and bring salts to the surface if improperly used. Hanson Brick recommends using ProsoCo\* or other professional/proprietary cleaning products.

The following guidelines are suggested for cleaning new masonry:

## Precautions to Minimize Cleaning

- Before installation, protect brick from water or dirt by placing brick on boards and covering with plastic.
- Scaffold should be set up approximately 2" (50mm) from the wall to allow mortar droppings to fall to the ground.
- At the end of each workday the boards on the scaffold closest to the wall should be removed or angled away from the wall to dump mortar droppings. This prevents rainfall from splashing mortar and dirt from the boards onto the newly laid masonry.
- After laying a brick, cut off the excess mortar with a forward lifting and rolling motion of trowel. This motion will collect mortar and prevent smearing back onto the brick face. Mortar should not be cut so that the surplus drops to base of the wall.
- After tooling, cut off the mortar tailings with a trowel and brush mortar burrs and dust from the face of the brick.
- At the wall base, place sand, straw, sawdust or plastic along the ground to prevent mud from splashing onto the brick.
- During work stoppages the top of the wall should be

covered to keep excessive water out of the wall in order to avoid efflorescence.

## Preparation Before Cleaning

- Cut out any defective mortar in exposed masonry and tuckpoint with mortar.
- Dry clean the wall first, removing blobs of mortar with a wooden paddle, a brick, a trowel or a metal hoe. Whatever tool is used, metal stains or surface texture damage is to be avoided. Cleaning solutions will only remove thin smears.
- Mask and protect adjacent metal, glass, or wood.

## Preliminary Cleaning, If Using Chemicals

- At least 7 days prior to regular cleaning, apply cleaning agent to sample wall area of 20 square feet (2m<sup>2</sup>) in a location acceptable to architect or owner. Allow test area to dry 3 to 7 days before inspection.
- DO NOT proceed with cleaning until sample area is approved by architect or owner.
- DO NOT proceed with cleaning if discoloration or efflorescence appears. Contact your brick supplier or manufacturer to request additional assistance.

## Cleaning Procedures

### Plain Water Cleaning

- If only using plain water to clean, it is most effective when performed within 24 hours from time of brick installation.
- For brick laid in the morning, clean the brick in the late afternoon. For brick laid in the afternoon clean the brick early the next morning.
- Starting at the top saturate the wall with clean water from a hose including all masonry areas below. Wet the wall until water "stands" or remains on the surface.
- Scrub only the brick face with a bristle brush.
- Rinse the wall thoroughly from top to bottom.

## Bucket and Brush Cleaning Using Chemicals

- Wait for mortar to set up before commencing cleaning. While industry standards generally require masonry to be 7 days old before cleaning, it is possible to start cleaning operations with chemicals 24 hours after completion of masonry work provided the mortar has hardened. However, if after cleaning commences the mortar paste in the joints begins to wash out, then cleaning should be stopped for several more days. For best results, cleaning should be carried out within 30 days after work is completed.
- Saturate the wall with clean water from a hose. These areas to be cleaned must be saturated as well as all masonry areas below. Those should be kept wet as cleaning proceeds above. A hose should be trained upon the wall until the bricks' thirst is completely satisfied. If wall appears to be drying on the surface, reapply water until workman is ready to apply cleaning solution.
- Clean small sections at a time. Follow recommendations of cleaning agent manufacturer for concentration and soaking time.
- Start cleaning at the top of the wall, working on small areas. Using a densely packed, soft fibered masonry washing brush, apply the cleaning solution to the saturated area. Allow solution to remain on wall 3 to 6 minutes (or as recommended on the cleaner label) as the workman scrapes and scrubs the brick vigorously, avoiding the joints. If the mortar does not dissolve or is not removed, then leave cleaner on an additional 1 or 2 minutes and continue scrubbing. Do not allow cleaner to dry into the masonry.
- Rinse thoroughly as the small areas are cleaned. To avoid evaporation of water on areas being cleaned, keep crew just ahead of sunshine. This permits ideal conditions for cleaning the walls and also allows walls to dry soon after being washed. This permits the crews to learn if all stains are being removed before going too far ahead.
- If staining or efflorescence develop after cleaning DO NOT reclean the masonry with the same cleaning agent until consulting with the brick representative. When recleaning is commenced, work on a sample wall area only in order to verify new cleaning procedure.

## High Pressure Water Cleaning Using Chemicals

- Wait for mortar to harden. Cleaning with high water pressure should not begin before mortar is 7 days old. For best results, cleaning should be carried out within 30 days after work is completed.
- Saturate the wall using the following pressures. DO NOT use "high pressure" spray to apply cleaning solution or rinsing down the walls. For rinsing the walls with water the maximum pressure should not exceed 700 psi (4850 kPa). Pressure in the range of 200 to 300 psi (1400-2100 kPa) is better. The water flow should be 4 to 6 gallons per minute (15-20 l/min). The spray nozzle should permit a 25 to 60 degree fan spray. If the wall appears to be drying on the surface, reapply water until workman is ready to apply cleaning solution.
- Clean small sections at a time. Follow recommendations of cleaning agent manufacturer for concentration and soaking time.
- Apply the cleaning solution to the saturated area, starting at the top of the wall. The solution may be applied with a masonry cleaning brush or low pressure sprayer. The pressure should NOT EXCEED 50 psi (350 kPa) (on porous surfaces, 30 psi (200kPa) or less). A 50 degree fan shaped spray tip should be used. Volume of cleaning compound going through the nozzle should be one gallon per minute (4 l/min) or less. Allow solution to remain on wall 3 to 6 minutes (or as recommended on the cleaner label) as the workman scrapes and scrubs the brick vigorously, avoiding the joints. If the mortar does not dissolve or is not removed, then leave cleaner on an additional 1 or 2 minutes and continue scrubbing. Do not allow cleaner to dry into the masonry.
- Rinse the wall with high pressure water from top to bottom so all dissolved mortar particles will be completely flushed from the wall surfaces. Again, pressure in the range of 200 to 300 psi (1400-2100 kPa) is best.
- If staining or efflorescence develop after cleaning, DO NOT reclean the masonry with the same cleaning agent until consulting with the brick representative. When recleaning is commenced, work on a sample wall area only in order to verify new cleaning procedure.

\*For more information on Prosoco cleaning products, visit their website at [www.prosoco.com](http://www.prosoco.com).