

# Brick Cleaning Recommendations

## General

An important phase of constructing a masonry wall is the cleaning phase. It is this phase that determines the final appearance of the masonry. Many times walls are determined unacceptable because of poor cleaning. Failure to properly clean the brick after construction can cause many problems. Mortar smear, white scum, efflorescence, green stain, etched mortar joints, discolored masonry, acid burn, corrosion of reinforcing, pitting of window frames, and metal staining of the masonry are a few of the common problems associated with poor cleaning.

The intent of this bulletin is to provide general brick cleaning guidelines that, when followed, will reduce or eliminate the problems mentioned above. Although Sure Klean® products are identified in this bulletin, it does not preclude the use of other acceptable brick cleaning products.

## Methods

There are three acceptable methods for cleaning brick recommended by the Brick Institute of America (BIA). These are (1) Bucket and Brush Hand Cleaning or Low Pressure Water, (2) High Pressure Water, and (3) Sand Blasting. **Interstate Brick**, and **H.C. Muddox** recommend that sandblasting be reserved for only those projects in which the other methods have failed to properly clean the masonry.

## Products

Pre-mixed commercial cleaners are recommended over job blended mixtures of acids and detergents. Pre-blended cleaners reduce the risk of acid burn, metal staining, scum, corrosion, and etching.

Not all cleaning agents react the same on all brick and mortar. Some products are formulated to control manganese, iron, vanadium, and other metals found in brick. Use caution when specifying commercial cleaners to insure compatibility with the brick, mortar, and surrounding materials.

Use **Sure Klean®** product **600 Detergent** or **Vana Trol®** as defined in the following table titled "Recommended Cleaners" or an approved equivalent.

1. 600 Detergent is a safe, effective general purpose cleaner formulated of surface acting acids, chelating and wetting agents to clean excess mortar grout and job dirt. When properly applied, this product will not discolor or damage the surface.
2. Vana Trol® is a blend of organic and inorganic acids with special inhibitors which control oxidation of vanadium, manganese, molybdenum and other metallic salts common

in most light colored brick. Vana Trol® removes mortar and grout stains, efflorescence and other new construction stains. Vana Trol® is also recommended for colored mortars as it will not bleach the mortar.

## Limitations

1. Brick cleaning should not be performed on wall surfaces in which the ambient air temperature falls below 40° F (Fahrenheit degrees).
2. *High-pressure* pre-wetting and rinsing is not recommended for all brick surfaces and may cause damage. Where a high-pressure sprayer is used, the masonry wall shall be allowed to cure for 14 days prior to washing. High-pressure application of the cleaning solution shall not be permitted.
3. Using low-pressure, the bucket and brush method can be used on shiny or sand coated brick. Low pressure water is also acceptable, with low pressure being defined as 50 p.s.i. or lower.

## During Construction

1. Proper care should be taken during construction to keep the wall free of mortar and grout smears. Grout left on the wall for even short periods of time become difficult to remove. Use a soft bristle brush immediately after tooling to remove excessive mortar. Avoid cleaning motions that press the mortar and grout into the face.
2. Cover the wall at the end of each working day. Failure to prevent moisture from entering the wall may result in efflorescence and other leaching problems.
3. Protect the wall from dirt and mortar splatter.
4. Store brick above the ground to protect from soil contamination.

## Application

1. The cleaning operation should be undertaken within 2 to 4 weeks from masonry construction. Cleaning before the wall has properly cured may weaken the masonry. Prolonged curing prior to cleaning may create more permanent stains which may become difficult to remove.
2. Test a small area of wall in an inconspicuous location using the cleaning mixture specified. A 16 sq. foot area may be sufficient. Where field panels are required, they should be cleaned using the product and procedures specified for the project. This can alert the owners representative and contractor of any adverse reactions prior to cleaning the wall. Allow the test area to dry for one week prior to evaluating the effectiveness of the solution. The architect or owners' representative shall evaluate and approve the test area prior to cleaning the remainder of the wall. If the cleaning procedure is not effective, contact the manufacturer of the cleaner for further recommendations.

*Continued on next page*



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# Brick Cleaning Recommendations

- Mask or protect metal, glass, wood and other materials that may be adversely effected by the cleaning solution.
- Saturate the area of wall to be cleaned and the area directly below. This will prevent absorption of the dissolved particles into the brick.
- Using a soft-fibered brush or a low pressure spray, apply the cleaning solution. **DO NOT USE HIGH-PRESSURE SPRAY.** Allow the solution to remain on the wall for 1 to 3 minutes. Immediately reapply cleaning solution and remove heavy buildups of mortar and grout. **DO NOT ALLOW THE CLEANING SOLUTION TO DRY ON THE BRICK.**
- Rinse thoroughly with clean water. Remove all cleaning solution from the area cleaned and any rundown. Failure to remove all cleaning solution may result in streaking, staining, and scumming.

## Coverage

**600 Detergent:** Dilute one part concentrate to 6 to 12 parts water.

**Vana Trol®:** Dilute one part concentrate to 4 to 8 parts water.

*The test panel will help to identify the actual coverage rate required.*

## Precautions

Masonry cleaners are acidic and should be handled with caution. Applicators should wear goggles, rubber gloves, suits, etc. to avoid contact with the skin. To remove special stains refer to the *BLA Technical Notes #20-R* for additional brick cleaning recommendations.

### Recommended Cleaners

Brick Color	Sure Klean® Cleaner
<b>H.C. Muddox</b>	
Tumbleweed	Vana Trol®
Burnt Rose	Vana Trol®
Carob	Vana Trol®
Dusty Rose	Vana Trol®
Ebony	Vana Trol®
Frosted Almond	Vana Trol®
Iron Spot	Vana Trol®
Monterey Bay Flashed	Vana Trol®
Mountain Rose	Vana Trol®
Old Sacramento Blend	Vana Trol®
Old Town Red	Vana Trol®
Railroad Blend	Vana Trol®
Sierra Slate	Vana Trol®
Spanish Moss	Vana Trol®
Summer Wheat	Vana Trol®
Sutter Gold	Vana Trol®
<b>Interstate Brick</b>	
Arctic White	Vana Trol®
Baja Brown	600 Detergent
Bronzestone	Vana Trol®
Canyon Rose	Vana Trol®
Copperstone	600 Detergent
Desert Sand	Vana Trol®
Goldenbuff	Vana Trol®
Ironstone	600 Detergent
Manhattan Rose	Vana Trol®
Midnight Black	Vana Trol®
Mission San Jose	600 Detergent
Monterey	600 Detergent
Moroccan Brown	Vana Trol®
Mountain Red	600 Detergent
Park Rose	Vana Trol®
Platinum	Vana Trol®
Slatestone	Vana Trol®
Smokey Mountain	Vana Trol®
Sunset	600 Detergent
Tumbleweed	Vana Trol®
Valley Tan	Vana Trol®

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Nothing Else Stacks Up