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U.S. General Services Administration

# Removal of Ferrous Staining from Brick, Granite, Concrete and Limestone

**Procedure code:**

420008S

**Source:**

National Capitol Region specifications for Cohen Building

**Division:**

Masonry

**Section:**

Unit Masonry

**Last Modified:**

01/04/2018

## REMOVAL OF FERROUS STAINING FROM BRICK, CONCRETE AND LIMESTONE

### PART 1--- GENERAL

#### 1.01 SUMMARY

A. This procedure includes guidance on removing ferrous staining from exterior brick, concrete and limestone surfaces.

1. Remove soiling, stains and crusts from the limestone and granite without damaging underlying material and to give all stone a clean, uniform appearance without blotches, streaks or other irregularities. Use the gentlest means to meet the cleaning objective.

2. If the exterior masonry has been previously subjected to inappropriately harsh and uneven cleaning, it is expected that the cleaning will reveal the original colors and textures of the brick, but that it will not completely correct the differential effects of the previous cleaning. Clean brick to remove soiling, stains and crusts to the extent feasible without further damaging the brick.

B. See 01100-07-S for general project guidelines to be reviewed along with this procedure. These guidelines cover the following sections:

1. Safety Precautions

2. Historic Structures Precautions

3. Submittals
4. Quality Assurance
5. Delivery, Storage and Handling
6. Project/Site Conditions
7. Sequencing and Scheduling
8. General Protection (Surface and Surrounding)

These guidelines should be reviewed prior to performing this procedure and should be followed, when applicable, along with recommendations from the Regional Historic Preservation Officer (RHPO).

## PART 2---PRODUCTS

### 2.01 MANUFACTURERS

- A. Diedrich Technologies, Inc.
- B. ProSoCo, Inc.

### 2.02 MATERIALS

- A. Ferrous-Based Stain Remover: Commercially available liquid stain removing compound made up of blended organic acids in combination with special chelating and wetting agents specifically formulated for treatment and removal of metallic oxides from masonry, such as "Sure Klean Ferrous Stain Remover" (ProSoCo, Inc.), or approved equal.
- B. Liquid Strippable Masking Agent: Manufacturer's standard liquid, film forming, strippable masking material for protecting glass, metal and polished stone surfaces from damaging effect of acidic and alkaline masonry cleaners, such as "Sure Klean Strippable Masking" (ProSoCo, Inc.), or approved equal.
- C. Water: Potable, non-staining and free of oils, acids, alkalis and organic matter.

### 2.03 EQUIPMENT

- A. Brushes: Natural fiber bristle only. The use of wire brushes or steel wool is not permitted.

## PART 3---EXECUTION

### 3.01 PREPARATION

- A. Protection: Protect the surfaces below the sections of masonry to be cleaned of ferrous stains from run-off using liquid strippable masking agent.

## B. Surface Preparation:

1. Commence ferrous stain removal immediately after general cleaning of masonry (see 03710-15-R, 04211-04-R, and 04460-03-R for guidance on the general cleaning of concrete, brick and limestone respectively).
2. Proceed from the top of the wall downward. Work shall not be considered complete until the Contracting Officer's representative has so notified the Contractor in writing.
3. Filter the water with a 5 micron particulate filter placed in line with the water supply. Replace the filter as needed during the work.

## 3.02 ERECTION, INSTALLATION, APPLICATION

- A. Prewet wall with clean, clear water immediately before applying ferrous-based stain remover.
- B. Apply ferrous-based stain remover with natural fiber bristle brush. Allow to dwell on the surface for three to five minutes.
- C. Rinse all traces of chemical and residue with pressurized cold water. Repeat procedure if necessary. Rinse water pressure shall not exceed 300 psi, and shall be sprayed through nozzles fitted with 15 to 20 wide nozzle tips. Nozzles shall be held perpendicular to the surface at a working distance of 1.5 to 2.5 feet. All pressure pumps shall be equipped with working pressure gauges.
- D. Repeat procedure if necessary to remove all traces of ferrous stain.

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