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Removing Copper-Based Stains from Brick, Concrete and Limestone

Procedure code:

420007S

Source:

National Capitol Region Specifications - Cohen Building

Division:

Masonry

Section:

Unit Masonry

Last Modified:

08/12/2016

PART 1--- GENERAL

1.01 SUMMARY

A. This specification provides guidance on removing copper staining on exterior brick, concrete and limestone.

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. Read "General Project Guidelines" along with this specification. 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). The 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)

PART 2---PRODUCTS

2.01 MANUFACTURERS

A. K&E Chemical Company, Inc

Cleveland, OH

1-800- 331-1696

B. ProSoCo, Inc.

Lawrence, KS 66117

1-[800-255-4255](tel:8002554255)

2.02 MATERIALS

- A. Copper stain removing poultice specifically designed to remove green copper stains from masonry surfaces, such as "Copper Stain Poultice"(K&E Chemical Co., 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. Plastic material for covering poultice.
- D. Water: Potable, non-staining and free of oils, acids, alkalis and organic matter.

2.03 EQUIPMENT

- A. Nylon bristle brushes. The use of wire brushes or steel wool is not permitted.
- B. Floating trowel made of a non-ferrous material, such as stainless steel.
- C. Wood or plastic scraper.

PART 3---EXECUTION

3.01 PREPARATION

- A. Protection: Protect from run-off the surfaces below the sections of masonry to be cleaned of copper-based stains using liquid strippable masking agent.
- B. Surface Preparation:
 1. Filter water with a 5 micron particulate filter placed in line with the water supply. Replace the filter as needed

during the work.

2. Clean dirt or dust from surface being treated prior to application of poultice.
3. See the following specifications for guidance on cleaning particular masonry surfaces:
 - a. "Removing Surface Dirt from Concrete"
 - b. "General Cleaning of Exterior Brick Masonry"
 - c. "General Cleaning of Exterior Limestone"
4. Cleaning and stain removal treatment shall proceed from the top of the wall downward. Work shall not be considered complete until the Contracting Officer of designated representative has so notified the Contractor in writing.

3.02 ERECTION, INSTALLATION, APPLICATION

- A. Commence copper-based stain removal immediately after cleaning of masonry.
- B. Pre-wet masonry and apply a thick layer of poultice to the stained surface using non-ferrous trowel.
- C. Cover the poultice with a plastic membrane and allow to dry completely. This may take 8 to 24 hours, depending on test samples.
- D. Scrape the poultice from the masonry with a non-metallic scraper and scrub with water and a fiber bristle brush.
- E. Rinse all traces of chemical residue with pressurized cold water. Rinse water pressure shall not exceed 300 psi, and shall be sprayed through nozzles fitted with 15 to 20 wide 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.
- F. Repeat procedure if necessary to remove all traces of copper staining.

Last Reviewed: 2018-10-25