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U.S. General Services Administration

Poulticing Copper/Bronze Stains from Brick Masonry

Procedure code:

421106S

Source:

Tech Notes on Brick Construction

Division:

Masonry

Section:

Brick Unit Masonry

Last Modified:

01/03/2018

PREFACE: The cleaning or removal of stains from masonry may involve the use of liquids, detergents or solvents which may run off on adjacent material, discolor the masonry or drive the stains deeper into porous masonry. Use the products and techniques described here only for the combinations of dirt/stain and masonry specified.

PART 1---GENERAL

1.01 SUMMARY

- A. This procedure includes guidance on removing copper/bronze stains from brick masonry.
- B. See "General Project Guidelines" 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 MATERIALS

NOTE: Chemical products are sometimes sold under a common name. This usually means that the substance is not as pure as the same chemical sold under its chemical name. The grade of purity of common name substances, however, is usually adequate for stain removal work, and these products should be purchased when available, as they tend to be less expensive. Common names are indicated below by an asterisk (*).

A. Ammonium Chloride - salt-like substance (NH₄Cl):

1. A white crystalline volatile salt that is used in dry cells and as an expectorant.:
2. Other chemical or common names include Ammonium hydrochloride; Chloride of Ammonia*; Hydrochloride of Ammonia*; Muriate of Ammonia*; Sal Ammoniac*.
3. Potential hazards: TOXIC; CORROSIVE TO FLESH; CORROSIVE TO CONCRETE, STEEL, WOOD OR GLASS.
4. Available from chemical supply house, dry cleaning supply distributor, drugstore or pharmaceutical supply distributor, or hardware store.

-OR-

Aluminum Chloride: Available from chemical supply house, drugstore or pharmaceutical supply distributor.

B. Ammonia water:

CAUTION: DO NOT MIX AMMONIA WITH CHLORINE BLEACHES, A POISONOUS GAS WILL RESULT! DO NOT USE BLEACH ON BIRD DROPPINGS.

1. A weak basic compound that is formed when ammonia dissolves in water and that exists only in solution.
2. Other chemical or common names include Ammonium Hydroxide; Aqua ammonia*; Household ammonia*.
3. Potential hazards: TOXIC; MAY IRRITATE THE EYES.
4. Available from chemical supply house, grocery store or pharmaceutical supply distributor, or hardware store.

C. Powdered talc

D. Plastic sheeting

E. Clean, potable water

F. Mineral water

2.02 EQUIPMENT

A. Glass or ceramic container for mixing the solution

B. Wooden utensil for stirring the ingredients

C. Wood or plastic spatula

D. Stiff bristle brush (non-metallic)

PART 3---EXECUTION

3.01 ERECTION, INSTALLATION, APPLICATION

- A. Thoroughly rinse the area to be treated with mineral water.
- B. Mix 1 part ammonium chloride or aluminum chloride with 4 parts powdered talc.
- C. Add ammonia water and stir to achieve a thick paste.
- D. Spread the paste over the affected area with a wood or plastic spatula to a thickness of about 1/4".
- E. Cover the area with plastic sheeting and allow to soak for three days.
- F. Remove the plastic and allow the poultice to dry.
- G. Remove the dried poultice with a wood or plastic spatula and a stiff bristle brush.
- H. Thoroughly rinse the surface with clean, clear water and allow to dry.
- I. Repeat as necessary to achieve the desired level of cleanliness.

Last Reviewed: 2018-10-25