

Applying a Protective Coating to Brass-Plate and Solid Brass

Procedure code: 501012S
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Division: Metals
Section: Metal Materials
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PREFACE

All cleaning removes some surface metal and patina. Therefore, use caution, as excessive cleaning can remove the texture and finish of the metal.

The cleaning or stripping of metals may involve the use of abrasives, liquids or solvents which may splash or run off onto adjacent materials. Take special care to protect all adjacent materials, and do not use this procedure on metals other than those specified in the summary.

PART 1---GENERAL

1.01 SUMMARY

A. The procedure described in this specification should only be undertaken following thorough cleaning of the brass.

B. For additional guidance relating to cleaning and maintaining brass, see also:

1. "Cleaning and Polishing Brass-Plate"
2. "Cleaning and Polishing Solid Brass"
3. "Removing Old Lacquer or Paint from Solid Brass or Brass-Plate"
4. "Removing Patina or Tarnish from Solid Brass"

C. Brass is an alloy of copper and zinc. Brass-plate is a thin layer of brass bonded to steel. Solid brass is more durable than brass-plate and, therefore, can withstand more rigorous methods of cleaning.

D. Brass may be unfinished or lacquered. Architectural brass hardware and trim is generally maintained in a highly polished, "bright" finish.

1. Unfinished brass MUST be polished frequently in order to maintain its luster. All polishing, however, removes some brass.
2. Lacquered brass will usually last about 10 years and does NOT require frequent polishing.
3. Lacquer protects the brass finish from deterioration, though some brilliance of its

surface characteristics is sacrificed. Removal and reapplication of the lacquer, however, will not harm the brass surface.

E. Read "General Project Guidelines". 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 include 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. Picreator Enterprises Ltd.

London

44 (0)208 202 8972

B. StanChem, Inc.

East Berlin, CT

860-828-0571

2.02 MATERIALS

A. Air-drying clear acrylic lacquer such as Incralac (StanChem, Inc.), or approved equal

-OR-

A wax polish such as Renaissance Micro-Crystalline Wax Polish (Picreator Enterprises Ltd), or approved equal

-OR-

Tung oil

-OR-

A lubricant containing silicone.

B. Clean, potable water.

C. Clean, soft cloths.

2.03 EQUIPMENT

- A. Eye and skin protection.
- B. Heavy gloves and protective gear.
- C. Soft natural bristle brushes.

PART 3---EXECUTION

3.01 EXAMINATION

Before proceeding with steps to clean brass, examine the surface(s) to determine the extent of the work required. Look for:

- A. Broken, cracked, missing, distorted or loose parts.
- B. Coating failures such as chips, losses, peeling, cracks, bubbling and wear.
- C. Corrosion - caused by moisture, sea water and sea air, deicing salts, acids, soils, gypsum plasters, magnesium oxychloride cements, ashes, clinkers and sulfur components.

3.02 PREPARATION

A. Protection:

1. Comply with recommendations of manufacturers of cleaners, polishes and coatings for protecting building surfaces against damage from exposure to their products.
2. Protect adjacent surfaces from contact with chemical cleaners by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape. Apply masking agent to comply with manufacturer's recommendations. Do not apply liquid masking agent to porous surfaces.
3. Protect persons and surrounding surfaces of building where metal surfaces are being restored, from damage resulting from metal cleaning and refinishing work.
 - a. Prevent cleaning solutions and coatings from coming into contact with persons and other surfaces which could be damaged by such contact.
 - b. Erect temporary protection covers over walkways for persons who must be in area of operations during course of metal cleaning and refinishing work.
 - c. Provide ventilation to eliminate the spread of fumes to unaffected spaces.

B. Surface Preparation:

1. Before cleaning, determine if your brass surface is solid or plated:
 - a. A magnet will stick to the steel beneath brass plating; it will not stick to solid brass.
 - b. Solid brass can withstand much harsher treatment than brass plating can.

3.03 ERECTION, INSTALLATION, APPLICATION

NOTE: WHEN CLEANING, TRY TO RETAIN THE BRASS PATINA, AS THIS PROTECTS THE BRASS FROM FURTHER CORROSION.

A. Protecting Brass with Tung Oil:

1. If possible to remove piece, preheat oven to 150 degrees F and heat piece for 20

minutes.

2. Using a soft cloth apply tung oil, rubbing back and forth and in a figure 8 pattern until only a thin but even coat remains.
3. Dry for at least 4 hours before reinstalling.

B. Protecting Brass with Lacquer: Brass may either be dipped or sprayed. DO NOT BRUSH ON COATING.

1. Apply coating within 4 hours of cleaning.
2. Apply coatings evenly to cleaned and polished brass according to the coating manufacturer's written instructions.
3. For brass to be dipped: Dilute lacquer to a 50/50 solution with an appropriate lacquer thinner; dip or spray brass with dilute lacquer; hang it up to dry.
4. For brass to be sprayed: Use an automotive spray lacquer and apply in 2 to 3 thin coats, from a distance of about 8 inches.
5. See also "Repairing a Scratched or Worn Incralac Coating on Bronze" for additional guidance on applying a lacquer coating.

C. Protecting Brass with Wax Polish: If pieces cannot be removed, try using a commercial wax polish for metals, such as Renaissance Micro-Crystalline Wax Polish (Picreator Enterprises Ltd), or approved equal. Follow manufacturer's instructions.

3.04 ADJUSTING/CLEANING

- A. During the work, remove from the site discarded cleaning and coating materials, rubbish, cans and rags at end of each work day.
- B. Upon completion of coating work, remove all protective coverings and coatings, and clean window glass and other coating-spattered surfaces. Remove spattered coatings by proper methods as recommended by coating manufacturer, using care not to damage adjacent surfaces.

END OF SECTION