

## TECHNICAL BULLETIN

**Maintenance of Brass and Bronze Metal Finishes**

Brass and Bronze are copper alloys and, as a result, will discolor, corrode, stain, and/or tarnish (oxidize). This oxidation may take place rapidly or slowly, depending upon conditions to which the material has been subjected during shipping, storage, installation, and while in place. Such factors as atmospheric conditions, air pollution, and salt and acid from finger and hand prints have a dramatic affect on the presence and rate of oxidation. In addition, fumes from, and contact with many chemicals, cleaning agents, paints, and other liquids commonly found on jobsites and in commercial buildings can accelerate oxidation. Such characteristic reaction, whether occurring over time or when first received by buyer, irrespective of protective coverings or coatings, are considered natural and not cause for rejection. Periodic cleaning and maintenance of such metals will be necessary. VGP does not warrant against oxidation, or the presence of polished or bright spots on statuary or oil rubbed finishes.

To protect the metal finish of brass and bronze clad door rails and framing we fabricate and ship the material with a removable vinyl wrapper. The vinyl is not applied to protect the metal from oxidizing, although it does retard the process somewhat. The vinyl has been applied to help guard against scratching. This protective layer of plastic should be removed as soon as possible and the metal cleaned immediately due to uneven oxidizing that may have taken place beneath the protective vinyl. In rare cases contact with jobsite chemicals may break down the adhesive backing on the protective vinyl resulting in some adhesive remaining on the metal after the removal of the vinyl. When this occurs it is necessary to remove the adhesive before attempting to clean and polish the metal.

**Cleaning—**

As brass and bronze will discolor, corrode, stain, or tarnish from various causes periodic cleaning of the metal will be necessary. Maintenance of this material is unique in that these metals can be restored to their original appearance even after years of neglect. The more time that passes, however, the more effort will be required to achieve their original finish. VGP strongly recommends that cleaning be performed within a few days after installation. VGP also recommends that the material not be stored for a long period of time before installation.

VGP recommends that brass and bronze be cleaned with a non-abrasive, commercial metal cleaner. The cleaner should be applied in the direction of the grain of the metal with a soft cloth. Rub until the cleaner has removed the layer of oxidized material. Polish with a soft, dry cloth. If the metal has a satin finish a ScotchBrite pad can be used, in the direction of the grain, to clean the metal's crevices as a cloth might not reach all of the surface. Do not use such a pad on high or mirror polished surfaces. Should it be necessary to remove a dried-on liquid (e.g. paint or adhesive) a stronger solution designed specifically for this purpose may be used. Following contact with this solution, however, it will be necessary to make sure all remnants of the solution are thoroughly removed from the metal surface before attempting to polish the metal. Extra precautions should be exercised to make sure the solution is not trapped in any adjacent pockets or cavities as fumes from these may cause residual oxidizing. Wax or lacquer can be applied after cleaning to help retard the oxidation process, though this will not prevent oxidation.

Statuary or oil rubbed finishes are copper alloys that have been subjected to controlled oxidation to achieve a weathered or aged appearance, and then layered with either oil or wax to slow further oxidation. These finishes require much higher maintenance than standard brass or bronze and VGP recommends the use of a professional metal restoration service. (Refer to Technical Bulletin TGD-7, *Oxidized and Oil Rubbed Finishes*, for further information.)

**Samples—**

It is important to understand that brass and bronze alloy samples may darken over time and may not accurately represent the exact shade of the production material, especially when dealing with light, medium, and dark oil-rubbed bronze.