

## TECHNICAL BULLETIN

**Oxidized and Oil Rubbed Finishes**

Statuary or oil rubbed finishes, such as US10B, 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. This finish is very delicate and susceptible to changes in appearance from the slightest contact with any object. In addition, it is an expensive metal that needs protection during shipping from the possibility of normal handling scratches. Therefore, every effort is made to protect the finish and metal by wrapping or covering the hardware or door rails in preparation for shipping so they are not damaged in transit or while unloading. Unfortunately, the same packaging materials that are designed to protect them may also cause slight discolorations in the oxidized finish. Packaging materials, while in transit, will vibrate or move across the metal surface ever so slightly. This movement, regardless of how small or light, is similar in result to polishing the metal surface. Where brass or bronze is concerned the result usually goes unnoticed because the metal is already cleaned and polished. This is not the case with an oxidized finish.

By design US10B has been chemically oxidized or tarnished, so any contact with packaging materials will result in the lightening of the oxidized or tarnished surface of the cladding. This is simply the nature of the product. If allowed to naturally oxidize after installation the lighter areas of the surface will eventually take on a darker finish and blend more homogeneously with their surroundings.

It is also important to note that during the normal course of a door's usage items will inevitably come in contact with the metal finish on the door rails and handles, and each contact will also act to polish or remove oxidation, thus lightening the finish in areas of contact. Nowhere is this more noticeable than where a person's hands come in contact with bronze push or pull bars that have been oxidized. Usually the metal finish in this area has been "polished" to a shiny bronze appearance, in sharp contrast to the surrounding areas that have darkened through oxidation.

These characteristics of US10B finish are not considered a defect or reason to reject the item. These finishes require much higher maintenance than standard brass or bronze and VGP recommends the use of a professional metal restoration service.

Any additional costs incurred to refinish the metal, either due to packaging for transport or through daily usage of the final product, will have to be at the expense of those other than Virginia Glass Products Corp.

Refer to Technical Bulletin TGD-2, *Maintenance of Brass and Bronze Metal Finishes*, for further information.