

## **FIELD REPAINTING OF FACTORY-PRIMED GALVANIZED STEEL DOORS AND FRAMES**

Galvanized steel doors and frames are typically primed in the factory using a modified polyester primer applied by reverse roll-coat method in a very thin film thickness. It is not unusual for the factory-applied primers to be applied in thicknesses ranging from 0.15 to 0.25 mils dry film thickness. For comparison, a typical field-applied primer usually is applied at 1.5 to 2.0 mils dry film thickness.

Component manufacturers will generally recommend using a field-applied latex topcoat or an epoxy/polyurethane enamel system on these elements. Solvent-based alkyd topcoats can strike through the factory-applied primers and make contact with the alkaline zinc galvanized steel. The fatty acids of the alkyd resins undergo hydrolysis and a "soap" is formed. This process is called saponification.

When saponification occurs, a thin layer of soap is formed at the interface of the factory primer and the alkyd topcoat. Complete loss of adhesion between the alkyd topcoat and the primer can follow. To correct this condition, remove all delaminated areas of the topcoats as well as all traces of soapy residue from the exposed galvanized surface. Commercial degreasers have been used successfully. Multiple treatments may be required. Apply and remove the degreasers as directed by label directions. If spot rusting has occurred, remove all rust using hand tools or power tools. Remove all dust, dirt and other contaminants, and allow surfaces to dry.

Apply the new latex acrylic topcoat to the cleaned area. Allow to fully dry, then test for adhesion prior to completing the full application. Use Flex Bon PREMIUM #99 Series Exterior-Interior 100% Acrylic Latex Gloss Enamel for a high gloss and VOC finish. Apply in 2 coats.

For greater durability and longer term performance in an exterior service condition, use an epoxy/polyurethane enamel system, such as Marine-Industrial Coatings #P-12 Pure Epoxy with Marine-Industrial #TPU-188 FB Duraplate Acrylic Urethane as a topcoat. Apply the epoxy base coat to the cleaned, degreased galvanized surface as directed by the label instructions. After the epoxy basecoat has reached a dry-to-recoat condition, apply a topcoat of the acrylic urethane enamel for maximum corrosion and abrasion resistance. Apply the epoxy and acrylic urethane enamel according to the directions on the label.