

Technical Bulletin

FIELD PAINTING UNPAINTED GALVANIZED STEEL

From time to time there is a need or desire to field paint plain galvanized steel. This can be satisfactorily accomplished by following the procedure listed below:

1. If the panels have "white rust" on them, this "white rust" must be removed. Light white rust can usually be effectively removed without an appreciable loss of the zinc coating. Heavy white rust will require a more severe treatment and generally results in some loss of coating. Since white rust is a form of oxidation, it requires some type of abrasion to remove it. This abrasion can be either mechanical or chemical.

A mild mechanical abrasion is generally sufficient to remove light white rust. Scrubbing the affected areas with a household cleanser such as Ajax or Bon-Ami will usually remove the oxidation and almost completely restore the original brightness of the galvanized finish.

Heavy white rust will require a stronger treatment for its removal. Many products are available that claim to do the job. Two have been tested and found to be effective by a major producer of galvanized steel. One is a product known as "ICC-258". It comes as a powder and is mixed with water and applied directly to the affected area. It should be allowed to stand for approximately 30 seconds to as much as 30 minutes, depending on the severity of the white rust. Thorough rinsing with water is imperative to prevent further damage to the sheet.

The other product is "Deox Chemical Cleaner". It comes in a concentrated liquid form and is mixed with water. It can be applied by wiping, brushing, spraying or immersion methods. This product is quite acid and therefore requires adequate ventilation and proper protective clothing. Rubber gloves as well as eye protection should be worn.

Neither "ICC-258" nor "Deox" will completely restore the original luster or brightness and some of the zinc coating will have been removed. Both of them require thorough rinsing with water, preferably warm water. After rinsing, the sheets should be thoroughly dried. These products are available from the following sources:

ICC-258
Intercontinental Chemical Corporation
2706 Gilbert Avenue
Cincinnati, Ohio 45202

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Deox Chemical Cleaner
National Chemsearch Corporation

P.O. Box 2170
Irving TX
75060

P.O. Box 25
Monmouth Falls
08852

222 S. Central Av.
NJ St. Louis MO
63105

2. Clean the panels to be painted with a detergent such as Tide, etc. to remove all loose grime and dirt. Rinse the panels thoroughly with clear water and let dry.
3. For best results, a primer and finish is recommended. Although one coat will do the job, two coats are better.
 - a. **Primer Coat**
A "Metallic Zinc" paint is recommended as a primer. Either Type I or Type II can be used and it can be applied with either a brush, roller or sprayer. Many brand names of this paint are available, such as Sherwin-Williams Zinc Clad #5 or #7 which are zinc chromate primers. Consult your local paint store.
 - b. **Finish Coat**
A second coat of the primer can be used as a finish coat or a finish coat of a desired color can be used so long as the finish coat is compatible with the primer. Your local paint store can assist you in this matter.

Tests conducted by the American Iron and Steel Institute show that new galvanized steel can be field painted immediately without waiting for the material to weather and without any special treating of the surface before painting.