



Connecticut Galvanizing

PAINT OR POWDER COATING OVER HOT DIP GALVANIZED STEEL



DUPLEX SYSTEMS Protecting Steel for Generations

For years, protecting steel from corrosion typically involves either the use of hot dip galvanizing or a barrier system such as painting or powder coating. However, more and more corrosion specialists are utilizing both methods of corrosion protection in what is commonly referred to as a duplex system.

A duplex system is simply painting or powder coating steel that has been hot dip galvanized. When paint and galvanized steel are used together, the corrosion protection is superior to either protection system used alone. You will have superior corrosion protection and a wide variety of colors for your application. Connecticut Galvanizing exceeds all requirements of ASTM A123 for galvanizing and ASTM 6386-99 for paint.



WHY USE A DUPLEX SYSTEM

(Paint or Powder Coating over Hot Dip Galvanized Steel)



There is a wide array of reasons for using a duplex system, ranging from financial benefits to safety. Each individual project raises unique reasons why a duplex system should be utilized.

Extended Corrosion Resistance — The most obvious, and most important, reason for using a duplex system is the added corrosion protection. No single corrosion protection system can match the corrosion resistance afforded for most applications by painting over hot dip galvanized steel.

Aesthetics — Galvanizing has an attractive gray, metallic appearance suitable for a myriad of applications. However, painting the galvanized coating provides an alternative aesthetic appearance. For example, galvanized parts could be painted to match a specific environment, such as at a stadium, a theme park or a natural habitat.

Synergistic Effect — It is typical for a duplex system to provide corrosion protection 1.5 to 2.5 times longer than the sum of the lifetimes of zinc and paint used individually. For example, if a galvanized coating is expected to last 40 years and a paint system is expected to last 10 years, galvanizing and paint together should last 75 years with needed maintenance, or 1.5 times the sum of both systems.

Economic Benefits — Because duplex systems greatly extend the service life of a product, maintenance costs are significantly decreased. Additionally, a product lasts longer before it must be replaced, thus decreasing the life-cycle cost. The cost of a product, which has been protected by galvanizing and painting, is lower over the entire life of the product than most single system methods of corrosion protection.

Safety Marking & Color Coding — The use of duplex systems allows galvanized steel to be painted in order to conform with safety color regulations. Painting over galvanized steel also increases safety in many environments by commonly color coding gas, steam or chemical pipes; identifying hazardous work areas and walkways; and marking high voltage electrical lines.

Ease of Repainting — As the paint film weathers, the zinc in the galvanized coating is present to provide both cathodic and barrier protection until the structure is repainted. The exposed zinc surface then can be repainted with minimal surface preparation.



239 Commerce Street
P.O. Box 358
Glastonbury, CT 06033-0358

Phone: (860) 659-4330
Toll Free: (800) 266-4258
Fax (860) 659-9561
Web site: <http://ctgalv.com>