



# FINISHES

## ZINC COATING

PHD offers 3 basic forms of zinc coating on its products:

- 1) **Electro-Galvanized** (Electro-Plated Zinc)
- 2) **Pre-Galvanized**
- 3) **Hot Dipped Galvanized**

For best results, a zinc rich paint should be applied to field cuts. The zinc rich paint will provide immediate protection for these areas and eliminate the short time period for galvanic action to “heal” the damaged coating.

*Note: The corrosion resistance of zinc is based on its thickness, the environment, and the coating process used. The acceptability of galvanized coatings at temperatures above 450°F is at the discretion of the end user.*

**Zinc offers two types of protection:**

- **Barrier:** The zinc coating protects the steel substrate from direct contact with the environment
- **Sacrificial:** The zinc coating will protect scratches, cut edges, etc... through an anodic sacrificial process.

### Electro-Galvanized “EG” (ASTM B633 SC1 & SC3)

This type of coating is recommended for use indoors in relatively dry areas. The steel is submerged in a bath of zinc salts, through the process of elec-trolysis, a coating of pure zinc adheres to the steel with a molecular bond. A maximum of 0.5 mils of zinc per side can be applied using this method.

SC1 (Mild) is the standard finish thickness which has a Zinc coating of 0.2 mils per side. SC3 (Severe) has a Zinc coating of 0.5 mils per side.

### Pre-Galvanized “PG” (ASTM A653 COATING G90)

This type of coating is suitable for extended exposure in dry or mildly cor-rosive atmospheres but not generally recommended for use outdoors in industrial environments. Also known as “mill galvanized” or “hot-dipped mill galvanized” pre-galvanized zinc coatings are produced by rolling the steel coils or sheets through molten zinc, at the steel mill, the material is then cut or slit to size. Zinc near the uncoated edges or weld areas becomes a sacrificial anode which protects the bare areas.

The pre-galvanized material conforms to ASTM A653 with a G90 zinc coating. The zinc thickness per side is nominally 0.75 mils thick or 0.45 oz /sq ft.

### Hot-Dip Galvanized “HDG” (ASTM A123)

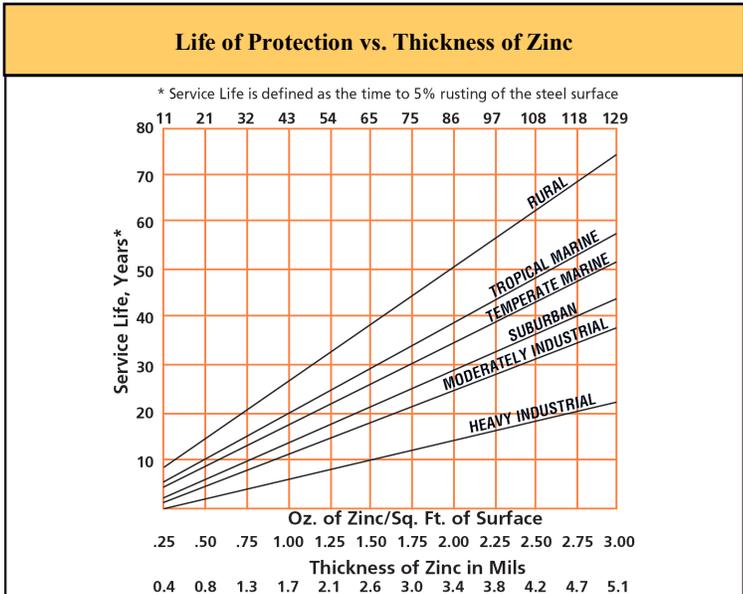
Recommended for prolonged outdoor exposure and will usually protect steel in most atmospheric environments. After fabrication the part is im-mersed in a bath of molten zinc. A metallurgical bond is formed resulting in a zinc coating that coats all surfaces including edges. Please note that some items cannot be hot-dipped galvanized due to design, tolerances, or threaded components. Check with the PHD factory or your local representa-tive when questionable.

Threaded components on hot dipped galvanized products will be electro-plated.

The hot-dip galvanized coating is typically 2.6 mils or 1.5 oz/sq ft per side.

As shown in the graph, when the zinc coating is double, the service life is double under most conditions.

Comparison of Zinc Finishing	
Finish	Zinc Thickness (mils)
Hot-Dip Galvanized	2.6
Pre-Galvanized	0.75
Electro-Galvanized (SC1)	0.2
Electro-Galvanized (SC3)	0.5



# FINISHES



Plain finish designation means that the channel retains the oiled surface applied to the raw steel during the rolling process. The fittings have the original oiled surface of the bar-stock material.

**PLAIN "PL"**

PHD offers a polyester powder coating that utilizes powder material conforming to ASTM D3451. It is applied by means of an electrostatic spray at ambient temperature.

**POWDER COATING  
"PTD"**

PVC coating helps reduce noise and protect the pipe or tubing from the metal surface of the hanger. Corrosion resistance protection is minimal.

**PVC COATING "PVC"**

Designed for use with copper tubing. This coating provides a better level of corrosion resistance than the traditional copper plated finish. It also acts as a protective barrier, avoiding contact between dissimilar metals. The copper color epoxy powder is applied by an electrostatic method, and the coated parts are baked at 180 degrees for 20 minutes.

**COPPER COLOR  
EPOXY FINISH  
"CCEF"**

Unless otherwise specified, all dimensions on drawings and in charts are in inches and dimensions shown in parentheses are in millimeters.