

## **GALVANIZING**

### **SURFACE PREPARATION**

Prior to being incorporated into an assembled product, steel plates 3/4 inches or more in thickness may require blast cleaning to remove rolled-in mill scale, impurities and non-metallic foreign materials. After assembly, all weld flux shall be mechanically removed.

The iron or steel product is degreased by immersion in an agitated 4.5%-6% concentrated caustic solution elevated to a temperature ranging from 150°F-180°F. It is then pickled by immersion in a heated sulfuric acid solution of 10%-12% concentration, controlling the temperature between 150°F-160°F. It is next rinsed clean from any residual effects of the caustic or acid solutions by immersion in a circulating fresh water bath.

Final preparation is done by immersion in a concentrated zinc ammonium chloride flux solution heated to 170°F. The solution's acidity content is maintained between 4.5-5.0 pH.

### **ZINC COATING**

The product is hot-dip galvanized to the requirements of either ASTM A123 (fabricated products) or ASTM A153 (hardware items) by immersion in a molten bath of prime western grade zinc maintained between 810°F-850°F. Maximum aluminum content of the bath is controlled to 0.01%. Flux ash is skimmed from the bath surface prior to immersion and extraction of the product to assure a debris free zinc coating.

## **POWDER FINISH COAT**

### **SURFACE PREPARATION**

The exterior steel surface is blast cleaned to Steel Structures Painting Council Surface Preparation Specification No. 6 (SSPC-SP6) requirements utilizing cast steel abrasives conforming to the Society of Automotive Engineers (SAE) Recommended Practice J827. The blast method used is a re-circulating, closed cycle centrifugal wheel system with abrasive conforming to SAE Shot Number S280.

### **INTERIOR COATING**

Interior surfaces (pole shafts only) at the base end for a length of approximately 2.0' are mechanically cleaned and coated with a zinc rich epoxy powder. The coating is electrostatically applied and cured in a gas fired convection oven by heating the steel substrate to a minimum of 350°F and a maximum of 400°F.

### **EXTERIOR COATING**

All exterior surfaces are coated with either Urethane or Triglycidyl Isocyanurate (TGIC) Polyester Powder to a minimum dry film thickness of 2.0 mils (0.002") for urethane powder or 3.0 mils (0.003") for TGIC powder. The coating is electrostatically applied and cured in a gas fired convection oven by heating the steel substrate to a minimum of 350°F and a maximum of 400°F.

### **QUALITY**

Thermosetting powder resin provides both intracoat as well as substrate fusing adhesion that meets 5A or 5B classifications (most stringent) of ASTM D3359. Prior to shipment small poles are wrapped in .188" thick ultraviolet inhibiting plastic backed foam. Larger poles are cradled in a 1.0" rubberized foam base.

## **POWDER PRIME COAT**

### **SURFACE PREPARATION**

The exterior steel surface is blast cleaned to Steel Structures Painting Council Surface Preparation Specification No.6 (SSPC-SP6) requirements utilizing cast steel abrasives conforming to the Society of Automotive Engineers (SAE) Recommended Practice J827. The blast method used is a re-circulating, closed cycle centrifugal wheel system with abrasive conforming to SAE Shot Number S280.

### **INTERIOR COATING**

Interior surfaces (pole shafts only) at the base end for a length of approximately 2.0' are mechanically cleaned and coated with a zinc rich epoxy powder. The coating is electrostatically applied and cured in a gas fired convection oven by heating the steel substrate to a minimum of 350°F and a maximum of 400°F.

### **EXTERIOR COATING**

All exterior surfaces are coated with a Urethane Polyester Powder to a minimum dry film thickness of 2.0 mils (0.002"). The coating is electrostatically applied and cured in a gas fired convection oven by heating the steel substrate to a minimum of 350°F and a maximum of 400°F.

### **QUALITY**

Thermosetting powder resin provides both intracoat as well as substrate fusing adhesion that meets 5A or 5B classifications (most stringent) of ASTM D3359.

## **FIELD-APPLIED TOP COATING RECOMMENDATIONS**

Top coats known to be compatible with the exterior coating are TNEMEC's Series 70 through 75 (or equal) two-component Aliphatic Polyurethane Enamels\*. Prior to application, the exterior surfaces must be free of any contaminants such as grease, oil, dirt, etc. Appropriate solvents can be used to remove specific contaminants. Light sanding of exterior surfaces further enhance adhesion of the top coat.

\*Other generic top coats must be field tested for compatibility.