



# CHEM PROCESSING, INC.

*Platings & Coatings for Industry*

## Cadmium Electroplating

Electroplated cadmium is a corrosion resistant cyanide coating. Cadmium is a soft white metal that functions as a "sacrificial coating" corroding before steel, cast iron, malleable iron, copper, and powdered metal. To enhance the corrosion protection of cadmium plating, Clear Hexavalent Chromium, Yellow Dichromate, and Zinc Phosphate seals can be added. Cadmium plating offers an exceptional bonding surface for adhesives, and is the preferred coating for salt-water environments. Additional advantages of Cadmium plating include: low electrical resistance; outstanding conductivity; superior solderability; and excellent natural lubricity, which results in prevention of galling and a low coefficient of friction. Due to Cadmium's toxic nature, it is strictly prohibited from all food-handling applications.

### **Chem Processing Inc. Cadmium Plating Capabilities:**

- **Plating Thickness Range of 0.0001 to 0.0010 in.**
- **Rack and Barrel Plating Available**
- **Clear Hexavalent Chromium and Yellow Dichromate Post-Treatment Seals**
- **Application of Zinc Phosphate as a Painting Pre-Treatment**
- **Available Masking for Selective Surface Plating**
- **Salt Spray Corrosion Test (480 hours to red rust)**
- **Thickness Analysis on a Fischer Technology XDL-B X-Ray Fluorescent Spec**
- **Adhesion Testing**

### **Applicable Specifications:**

AMS 2400

AMS 2401

ISO 4521

ASTM B766

ASTM A165

QQ-P-416

### **Typical Cadmium Applications:**

- **Transportation:** disc brake components, radiator hose fittings and door latches
- **Electronics:** connectors, relays and cassis
- **Consumer Products:** window hardware and home construction products
- **Formed Products:** shaped or formed pre-plated parts

### **Functional Properties: Cadmium vs. Zinc**

Cadmium retains its original appearance longer than zinc, and is superior to zinc in marine and industrial environments. Due to Cadmium's lubricity, it is also preferred for moving parts, as well as parts that are made out of cast iron.

**Chem Processing Inc.** is committed to excellence in metal finishing. Chem Processing Inc. uses their engineering expertise and computerized process controls to **exceed their customer's expectations** when adherence to strict thickness specifications is essential.