



CHEM PROCESSING, INC.

Platings & Coatings for Industry

Electroless Nickel

Electroless Nickel (EN) is the deposition of a Nickel alloy without the use of an electrical current. EN utilizes an autocatalytic chemical reaction to deposit a reliable, repeatable coating of uniform thickness. EN demonstrates excellent corrosion protection, with similar lubricity properties to electroplated chromium. EN effectively coats parts with sharp edges, deep recesses, seams, threads, and complex geometries. Variations of EN bath chemistry include: High Phosphorus (10% to 13%) for applications that need superior corrosion protection, Medium Phosphorus (5% to 9%) for general-use applications, Low Phosphorus (<5%), for applications that need a hard, wear and alkaline resistant coating and Nickel Teflon™ for increased lubricity. EN can also be rendered non-magnetic, making it the optimal choice for electromagnetic shielding.

Chem Processing Inc. Electroless Nickel Plating Capabilities:

- **Plating thickness range of 0.0001 to 0.0050 in.** (For information on plating over 0.0020 in., please contact Chem Processing, Inc.)
- **Rack and Barrel plating available**
- **Available masking for selective surface plating**
- **Salt Spray Corrosion Test** (1000 hours for high phos; 250 hours for mid-phos)
- **Baking after plating can result in hardness as high as 70 Rc**
- **Hydrogen Embrittlement Relief Bake** (Parts with a hardness of 40 Rc or greater will be baked a minimum of 3 hours at 375° F to relieve entrapped hydrogen)
- **Thickness Analysis on a Fischer Technology XDL-B X-Ray Fluorescent Spec**

Applicable Specifications:

MIL-C-26074	MIL-STD-171 (1.4.3)	AMS 2404
MIL-F-14072 (M265)	ASTM B733	ASTM B656
AMS 2405	ISO 4527	

Common Applications of Electroless Nickel Coatings:

- **Electrical Equipment:** Due to solderability and conductivity properties.
- **Packaging & Handling Machinery:** Due to wear resistance, cleanliness and attractive finish.
- **Chemical Equipment:** Due to chemical resistance.
- **Molds & Dies:** Due to a lubricity that minimizes erosion and abrasion.
- **Food Service Equipment:** For superior corrosion and wear resistance, attractive finish and cleanliness.
- **Salvage:** For restoration of parts to their original dimensions.

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.