

# BTR Plating Resources

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## Products & Services

**BTR-Plating Resources** offers efficient and cost effective solutions for all of your industrial metal finishing needs. We provide anodizing services, electroplating, **electroless plating**, e-coat painting, industrial hard chrome plating, powder coat painting, passivation, polymer coatings and industrial top-coat painting to a variety of industries such as Aerospace, Electronics, Military, Medical, Manufacturing and Tool and Molds.

**Electroless nickel plating** is an auto-catalytic reaction used to deposit a coating of nickel on a substrate. Unlike electroplating, it is not necessary to pass an electric current through the solution to form a deposit. This plating technique is used to prevent corrosion and wear.

**Electroless nickel plating** can be applied on most metals such as Carbon and High Alloy Steels, Aluminum, Copper and Copper Alloys.

**BTR-Plating Resources** reputation for outstanding quality and service is in no small part due to our continuously searching for cost-effective, efficient and environmentally friendly processes to meet our customer's ever changing needs. [more info](#)



Whether your objective is cosmetic appearance, corrosion resistance or functionality it can be achieved by:

**Anodizing**

**Bright dipping**

**Bright nickel chrome**

**Chromate conversion**

**E-coating**

**Electroless plating**

**Electroplating**

**Electropolishing**

**Gold plating**

**Hard Chrome**

**Liquid top coating**

**Nickel plating**

**Phosphate coating**

**Polymer coating**

**Powder coating**

**Silver plating**

**Tin plating**

**Zinc and zinc alloys**



## Advantages of Electroless Nickel

- ⇒ **Uniformity of deposits** even on complex shapes
- ⇒ **Lubricity**
- ⇒ **Hardness**
- ⇒ **Corrosion Resistant**
- ⇒ **Resistant** to a wide range of chemicals
- ⇒ **Abrasion Resistant**
- ⇒ **Mould Resistant**
- ⇒ **Stainless Steel Alternative** –parts can be manufactured from Mild Steel and coated with electroless nickel to provide similar performance to stainless steel at a much lower cost.

## Electroless Plating vs. Electro-Plating



**Electroless nickel plating** is a process for chemically applying nickel-alloy deposits onto metallic substrates using an auto catalytic immersion process without the use of electrical current. It differs from electroplating, which depends on an external source of direct (electrical) current to produce a deposit on the substrate material. Since electrical current cannot be distributed evenly throughout the component, it is very difficult to obtain uniform coatings with electrolytically applied deposits. Electroless nickel deposits, therefore, are not subject to the uniformity problems associated with electroplated coatings.

**Electroless nickel** is the preferred choice among functional coatings for irregularly shaped, highly detailed part geometries because of its completely uniform deposit thickness and close dimensional tolerance capabilities. Electroless nickel deposits can also contain up to 25% PTFE, silicon carbide, diamonds or other alloying materials, which result in deposit properties for superior to those of conventional electro-plated deposits.

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