

## Products & Services

**BTR-Plating Resources** provides high-quality and competitively priced decorative nickel-chrome and industrial hard chrome plating services with the emphasis on quality, service and fast turn-around.

**Chrome plating**, often referred to simply as **Chrome**, is a technique of electroplating a thin layer of chromium onto aluminum, copper, steel and stainless steel parts.

**Decorative chrome plating** requires one or two layers of nickel plating prior to the deposition of chrome which provides surface embellishment as well as corrosion resistance and increased surface hardness.

**Industrial chromium plating**, also known as Hard Chrome or Engineered Chrome, is used to reduce friction, add wear resistance, build up surface area for grinding and to increase corrosion resistance.

The two types of chrome plating solutions are:

⇒ **Hexavalent chromium** baths whose main ingredient is chromic anhydride.

⇒ **Trivalent chromium** baths whose main ingredient is chromium sulfate or chromium chloride which is environmentally friendly and complies with RoHS standards. (see below)

A wide variety of base materials lend themselves to hard chrome plating, including steel, stainless, alloys, cast iron, brass, copper and bronze. We plate pieces of all sizes and inside/outside diameters, including:

- Aircraft parts • Machine parts • Molds • Tools • Dies • Fasteners
- Gauges • Rolls • Bearing Diameters • Shafts • Spindles

**BTR-Plating Resources** has earned a reputation for outstanding quality and service by continuously searching for cost-effective, efficient and environmentally friendly processes to meet our customer's ever changing needs.



**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**

### Unique Uses of Hard Chrome

**Repair and Restore Worn Parts** – Machine parts that have become worn can be repaired using hard chrome. Parts can be restored to their original dimensions. This usually requires grinding before and after the plating process.

**Increase Life of New Parts** – Hard chrome plating on the “wear” surfaces of new machine parts will protect against abrasion and wear and increase the life of the part.

**Corrosion Protection** – Hard chrome provides excellent corrosion protection on many different substrates in different environments.

**Abrasion Resistance** – Hard chrome provides excellent abrasion resistance because it has a low coefficient of friction. It lasts 50 to 100 times longer than hardened steel or electroless nickel plated parts.

**Improved Appearance of Parts** – Hard chrome can be buffed and/or polished to a

### Unique Properties of Hard Chrome



- ⇒ Hard Chrome is usually applied because of its hardness, measuring in the range of 850-100 HV (65-70 Rockwell c scale of hardness). This increases the service life of machine parts.
- ⇒ Hard Chrome can also be used to re-size parts.
- ⇒ Hard Chrome provides corrosion protection.
- ⇒ Hard Chrome can be ground and/or polished for improved surface finish to decrease friction and wear.

### We are RoHS Compliant

**RoHS** (Restriction of Hazardous Substances) holds electrical and electronic equipment companies directly responsible for the chemical compliance of their products. This means all products must conform to strict standards, provide extensive compliance documentation, and ensure that electrical and electronic products sold do not contain lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyls (PBBs), and polybrominated diphenyl ethers (PBDEs) above the legal threshold.

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