

INFORMATION ON PLATING METALS AND USES

The first and most important element in electroplating is surface preparation. All rust, tarnish and surface oxidation must be removed prior to applying the plating solutions listed below. The processes for correct surface preparation will be discussed in detail in the individual metal plating processes listed below.

POPULAR TYPES OF PLATING METALS:

A. **COPPER:** There are two types of copper that are used in brush plating.

1. **ACID COPPER** or high-build copper is used to deposit a thick coat to fill and bond to surfaces such as steel, brass, bronze, nickel, copper, gold and silver. Scratches and nicks can be spot plated and buffed or polished. Then plated with Gold, Silver, or Rhodium to finish.

2. **ALKALINE COPPER:** or copper strike is used as a base coat over die-cast or is used over zincated aluminum. After a coat of alkaline copper is applied, acid copper may be deposited to build up the copper surface for polishing.

B. **BRIGHT NICKEL** is deposited to give the article a hard bright surface to plate Gold, silver or Chrome. This surface is recommended for articles that may be in a highly corrosive environment such as automobile parts that are exposed to the weather and road salt.

C. **NICKEL STRIKE** or **STAINLESS STEEL PRE-PLATE** is used to give a bond coat to stainless steel or other metals that may be passive such as some brass.

BRONZES

D. **BRASS** can be plated over nickel, copper, bronze, nickel strike or other base metals that copper can be used on. Brass must be polished as soon as it is plated and coated with a protective coating or clear coat to retard the tarnishing process. Contact Samson Technology for products to finish brass.

PROCESS

E. **SILVER** is deposited over polished brass, nickel, bronze, and previously plated surfaces such as gold and old silver.

F. **GOLD** can be plated over nickel, brass, copper, silver, bronze and other previously plated surfaces.

G. **RHODIUM** is a bright white, hard surface used in the jewelry industry that will give excellent wearability and can be plated over nickel, gold, silver, copper, bronze and brass. Rhodium is also a base for a bright gold finish.