

# Electroblack SG

New Cyanide Electroplating Process is ideal for both decorative and functional antique and black finishes. Electroblack SG is dependable, rapid, consistent, and economical. It is designed to meet the most exacting requirements.

An Electroblack SG process is an alkaline cyanide based electroplating process developed to produce a uniform, rich black finish on all substrate materials which will accept an electroplate. The process produces an adherent coating in forty-five seconds to two minutes plating time. The deposit has good corrosion resistance, excellent shelf-life and good wear and abrasion characteristics. The deposit can be used as a final black decorative finish or can easily be relieved to give a variety of antique finishes. Since the deposit is only a “flash” plate, it will retain the character of the surface being plated. The bright work remains bright and satin finishes are held. The tone of the deposit is enhanced and deepened by subsequent lacquering.

The Electroblack SG process is applicable to barrel plating. The process is not an arsenic plating solution and offers many advantages when compared to the arsenic black plating baths, black nickel-plating baths, and the conventional sulfide oxidizing systems. The finish is uniform, adherent, easily controlled and is produced in a single step. The process does not remove metal but will plate an additional coating which results in appreciable savings when silver is being antiqued.

## Features & Benefits

Cyanide base	Forgiving; Can plate multiple substrates
Flash plate	Thin and easily “relieved” for simulated antiqued finish

## Typical Applications

### Antique Finishes

Pewter, Flemish, Old English, Brown to Black on Brass, Bronze, Copper, Silver and Gold items like Lamp Parts, Costume Jewelry, Hardware, Specialty Products, etc.

### Black Finishes

Uniform rich, resistant, decorative black finish that is easily obtained on bright Nickel, Brass, Bronze, Copper, Silver, and other metals.

## Operating Conditions

### Solution Preparation



The solution is prepared by dissolving one pound Electroblack SG per gallon of water. The plating tank is filled 2/3 with warm water (120°F). The required amount of Electroblack SG is added slowly with stirring (Note: Heat is generated in mixing.) Water is added to working level of solution.

**DO NOT ADD CYANIDE WHEN STARTING A NEW SOLUTION.**

Tanks	Steel or Stainless steel
Anodes	Plain steel, stainless steel or the tank may be made anodic
Temperature	150 - 170° F Heating may be accomplished by plain steel, stainless steel coils OJ thermo panels; by plain steel electric immersion heaters or direct gas fired heating.
Power	2 - 6 volts D.C. 5 - 60 amperes per square foot.

### Control, Limits, and Maintenance

The solution is extremely stable and operating limits very wide.

Free Cyanide	3.0 - 5.5 oz/gallon
pH	11.0 - 13.0
Concentration	12.0 - 19.0 oz/gallon

As the bath ages, lower levels of Free Cyanide (1.0 - 4.0 oz/gal) are acceptable.

Imbalances in solution composition might result in certain variances in the plating characteristics of the bath. The conditions which might result, and their corrections are as follows:

1. Poor coverage in low current densities.
  - a. Low Electroblack SG concentration.
  - b. Low free cyanide
  - c. pH too high.
2. Slow plate.
  - a. High free cyanide
  - b. Low Electroblack SG
3. Brownish to grayish cast in high current densities.
  - a. Low free cyanide
  - b. Low Electroblack SG concentration.

Analytical determination of "free cyanide" is accomplished by the conventional methods. Maintenance of the bath will naturally depend on the workload and drag-out. Normal maintenance additions will run 0.5 - 2.0 oz per gallon of sodium cyanide and equivalent amount of Electroblack SG per week.



## Caution

ELECTROBLACK SG IS A CYANIDE CONTAINING PRODUCT. DO NOT ALLOW IT TO COME INTO CONTACT WITH ACIDS AS DEADLY HYDROGEN CYANIDE WOULD BE GENERATED.

Avoid skin, eye and oral contact. Wear PPE; protective clothing, gloves, impervious shoes or boot, and goggles when handling the product. Wash thoroughly after handling. If skin or eye contact should occur flush exposed areas immediately with clean, cold water. Contact a doctor immediately in case of injury.

Read and thoroughly understand the SDS for Electroblack SG prior to handling and or using the it.

WARRANTY: THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.

## Our people. Your problem solvers.

For more information on this process please call us at

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