

# ACCU-LABS INC.

4831 S. Whipple Avenue  
Chicago IL 60632  
Phone: 773.523.3100 Fax: 773.523.4008  
[www.accu-labs.com](http://www.accu-labs.com)

A2LA Accredited ISO/IEC 17025:2005 Certificate # 2558.01

## 862-1

# BRASS & COPPER ANTI-TARNISH

ACCU-LABS 862-1 is a neutral liquid added to rinse water to prevent tarnishing, staining, green salt formation, pit corrosion, finger marking and spotting-out of copper and brass. It is ideal for use in the final rinse tank following copper or brass plating because it will preserve the freshly plated appearance for weeks, even under high humidity storage conditions. ACCU-LABS 862-1 does not contain chromates.

The coating produced by ACCU-LABS 862-1 is completely invisible and has many times the corrosion resistance of bare copper and brass. It can withstand 200 hours exposure to tropical humidity conditions without discoloration, whereas bare copper or brass will start to corrode after 1 hour. However, it is not recommended for protection against outdoor exposure. The primary function of 862-1 coating is to prevent tarnishing, corrosion, and spotting-out of copper and brass during storage.

The coating formed by this product does not interfere with subsequent plating, painting, or soldering. Alkali cleaning, soak or electrolytic, removes the coating prior to plating. The presence of the coating improves the adhesion of lacquers and enamels and improves solderability.

Caution should be used since some clear epoxies may be darkened by ACCU-LABS 862-1 film.

### OPERATIONAL PARAMETERS

<b>Concentration:</b>	<b>1 % by volume typical</b>
<b>Temperature:</b>	<b>Room to 140°F</b>
<b>Time of Immersion:</b>	<b>5 to 30 seconds</b>
<b>Caution:</b>	<b>Above 140°F, ACCU-LABS 862-1 may form a visible film on the metal surface.</b>

Parts entering ACCU-LABS 862-1 rinse should be clean, wet and free of water-breaks. This is usually the case after plating, pickling, or other wet processing. The solution has no cleaning ability of its own and the protective coating will not form on unclean surfaces.

**TESTING PROCEDURE:** The simplest control is to observe if the parts exiting the 862-1 solution has water-breaks on it. Failure of the solution to “break” cleanly from the metal surface will indicate that the concentration is low. An addition of 0.5% by volume of ACCU-LABS 862-1 should be made at this point.

A more accurate analytical method is based on precipitation of the active ingredients and measurement of the volume of precipitate with a centrifuge. The procedure is as follows:

1. To a 15 cc centrifuge tube graduated in tenths of a cc, add 10 cc of the solution to be tested.
2. Add 1cc of 2 % by weight anhydrous copper sulfate or 2- $\frac{1}{2}$  % solution of hydrated copper sulfate (CuSo<sub>4</sub>.5H<sub>2</sub>O).
3. Mix by inverting the tube 1 to 2 times, holding a finger over it. Allow standing for 30 minutes.
4. Centrifuge for 30 seconds.
5. Read the volume of precipitate immediately.
6. If the volume is not read immediately, there is a tendency for the precipitate to rise in the tube, leading to inaccuracy. This is because the precipitate is so flocculent.
  - A. If the volume of precipitate is 0.15cc, or more, the bath has the correct concentration of 862-1 and no additions are required.
  - B. If the volume of precipitate is between 0.1 - 0.15cc add  $\frac{1}{2}$  gallon of ACCU-LABS 862-1 for each 100 gallons of solution or  $\frac{1}{2}$  % by volume.
  - C. If the volume of precipitate is less than 0.1cc, add a full charge to the bath or 1 gallon of 862-1 to 100 gallons of solution.

For maximum effectiveness, parts entering ACCU-LABS 862-1 rinse should have an alkaline, rather than an acid surface condition.

## **EQUIPMENT**

**Tank:** Stainless steel, fiberglass, plastic or rubber lined steel, PE, or ceramic crocks. Plain steel tanks tend to rust and interfere with the application of the protective film.

**CAUTION:** Always wear eye protection and personal protective gear when working with or handling this product. Read the Material Safety Data Sheet before working with this material.

**NOTICE OF NON-WARRANTY:** *The information contained in this bulletin is true and accurate to the best of our knowledge. Because use and conditions are beyond our control, no guarantee is expressed or implied. ACCU-LABS, INC., will not incur any liability in connection with the use of these suggestions or recommendations.*