

**Instructions for Kepro's
IMMERSION TIN PLATING SOLUTION
ITP-1QT, ITP-1G, ITP-5G
and
IMMERSION TIN PLATING KIT
ITP-801A**

CAUTION! ITP CONTAINS HYPOPHOSPHOROUS ACID AND THIOUREA. MAY CAUSE SKIN OR EYE IRRITATION. AVOID CONTACT WITH EYES, SKIN OR CLOTHING. WASH THOROUGHLY AFTER USE. IN CASE OF EYE CONTACT, FLUSH THOROUGHLY WITH WATER. STORE IN A COOL, DRY PLACE AWAY FROM OXIDIZING MATERIALS. USE ONLY WITH ADEQUATE VENTILATION. KEEP OUT OF THE REACH OF CHILDREN.

DO NOT FREEZE!

Kepro's Immersion Tin Plating Solution provides a simple and inexpensive method of applying a thin coating of essentially pure tin to the surface of etched circuit boards. This thin layer of tin will effectively retard oxidation of the copper surfaces. Electroless or immersion plating is a chemical process requiring no experience or expensive plating equipment. A five minute immersion in Kepro's ITP will deposit a layer of pure tin, approximately 20 millionths of an inch thick. The tinned surface will retain solderability after exposure to 95% relative humidity at 96° Fahrenheit for 96 hours. Plating will withstand 96 hours exposure to concentrated salt spray without breakthrough.

CONTAINERS

Use GLASS or PLASTIC containers ONLY. Containers should be meticulously cleaned prior to use.

SHELF LIFE

Kepro's Immersion Tin Plating Solution has a shelf life of approximately 12 months from the date on the product label.

COVERAGE

One quart of Kepro's Immersion Tin Plating Solution will plate approximately 25 square feet of etched circuitry. This figure is based on 50% removal of copper from a single sided panel, using the immersion time recommended by Kepro. This figure will vary according to the amount of copper remaining, the number of clad sides and the length of time the panel is immersed.

USE

1. During storage and extremely cold weather, solids will settle to the bottom of the container. To get the solids back into solution, pour the solution into a container (see CONTAINERS above) and SLOWLY warm the solution to 100° - 110° Fahrenheit. Stir gently until all traces of the solids vanish.
2. Copper surfaces must be free of any contamination prior to plating. After the stripping of resists and photoresists, it is a good practice to immerse the panel in an acidic cleaning solution, such as Alpha Metals CU3 Copperbrite™ Cleaner, before plating. Mechanical cleaning can be done in addition to the chemical cleaning by abrading the panel with a NON-METALLIC pad such as Kepro's Part No. FSB-500 or equivalent. DO NOT use steel wool. NOTE: Insufficient removal of contamination will result in spotty discoloration in the plated areas. This contamination will also render the tin plating useless and result in a surface that is virtually impossible to solder.
3. This solution is designed to be used at room temperature. Immerse the panel in the ITP solution, agitating the panel continuously by moving the panel both horizontally and vertically in the solution. After five minutes in the solution, at room temperature, you will deposit a dense, plated film of approximately 0.00002" thick. To shorten the plating time, the solution can be heated to 100° - 120° Fahrenheit. The required plating time will decrease to three minutes. Heating the solution will result in less coverage. NOTE: If you are heating the solution, it will be necessary to add distilled water to maintain the solution level. DO NOT add acid. The pH needs no adjustment during operational life.

4. Remove the panel from the ITP and rinse with HOT (140° - 160° Fahrenheit) running water for three minutes, followed with a second rinse with COLD water for three minutes. Dry the panel thoroughly.
5. Tin will oxidize in time, but at a significantly slower rate than copper. If a plated panel will not solder, abrade with a non-metallic pad, such as Kepro's FSB-500 or equivalent, and re-tin.

DISPOSAL

To properly dispose of all chemicals used in the Kepro process, contact an E.P.A. approved hazardous waste disposal company. The hazardous contents of all Kepro chemicals are discussed in the material safety data sheets (MSDS) included with each chemical shipped.

Contents ITP-801A IMMERSION TIN PLATING KIT

Qty	Description	Reorder as:
1	12.5"x15" Plastic Tray	N/A
1	ITP-1QT immersion tin plating solution	ITP-1QT 1(Qt)
1	Set of Instruction and Material Safety Data Sheet for the ITP-1QT	

N/A = Not available separately.

NOTE: The PVC handling tong included in the ITP-801A kits in the past have been discontinued.

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