



DIRECTIONS

Only mix enough solution to do the job on hand. Do not store used or unused etch solution, as it decomposes rapidly after it is mixed. You will need approx. 250gms per litre of water. By volume this is a ratio of approx. 1:5, 1 part Crystals : 5 parts water.

Select a suitable size container. The container should be plastic or Pyrex glass. Do not use food containers or food utensils as the residues of this process are poisonous. Do not use metal containers as the etchant may attack the container.

Place a measured amount of HOT water into the container. The water should be approx. 75°C. Add the correct amount of ammonium persulphate crystals to the water and mix until fully dissolved.

If you are using an etch tank, fill the etch tank with the solution. Turn on the heater and set the thermostat to 75°C. Now connect the air pump to the tank.

Place the Printed Circuit Board (PCB) into the etchant. If you are using an etch tank, start the air pump agitator. If you are using an open container try to keep the solution moving by stirring regularly.

Watch your PCB closely. The unwanted copper should disappear quite quickly. 4-5 minutes in an etch tank or 6-10 minutes in a open container. As soon as the unwanted copper has been removed from the PCB take the PCB out of the etchant solution and rinse thoroughly in clean running water.

Carefully inspect the PCB tracks. If you have any spots where the copper has not been fully etched away causing bridging or short circuits between tracks, these can often be removed using a sharp bladed knife. If you have any tracks which have been partially or fully etched away you can repair these by laying a piece of tinned copper wire across the break and soldering it to the track on both sides of the break.

WHAT DO I NEED?

1. Plastic or Pyrex Glass Container and an Etching Tank, if available.
2. Ammonium Persulphate Crystals.
3. Hot Water.
4. Rubber Gloves.
5. Safety Glasses or Goggles.
6. Access to Clean Running Water.
7. Fume Cupboard or well ventilated area.

PRE-ETCHING TIPS

Cut PCB to size required, as etching oversized pieces of PCB will prematurely deplete the etching solution.

Start with a clean copper surface on the PCB, remove all oil, grease and oxidation using a kitchen scourer pad ie "Scotch Brite" and Ajax powder, rinse thoroughly in running water.

Allow time for ink to fully dry, the ink in etch resist pens can take 4-5 hours to fully harden at normal room temperatures.

GETTING STARTED

Remember "Safety First" always wear rubber gloves and protective eyewear when working with Ammonium Persulphate. The crystals and the solution you are going to make up, may irritate your skin and eyes. In cases of contact wash and flush with clean running water.