SUR-TIN

Chem. Tinning

Instructions for Use

Mixture make-up

SUR-TIN consist of 3 parts, one liquid and two powders. It is important to keep the following sequence for making up the mixture.

Take a plastic bottle with a tight cap of at least 3 l capacity and fill in 2 litres of water with 40 to 50 °C. Wear gloves and eye protection while you pour SUR-TIN part 1 (130ml) into that water. Be careful: This part is an acid and aggressive liquid. Make sure you fill the bottle first with water and then with this acid, never vice versa!

Add SUR-TIN Part 2 to the warm solution and stir the liquid or shake the closed bottle until the powder is completely dissolved. Finally, add part 3 and repeat stirring or shaking until you obtain an (almost clear) solution. A little portion of white to yellow coloured residue might stay at the font of the bottle also after intense mixing as a reservoir of tin salt

Storage

The ready to use liquid may be stored for several months in a closed bottle in a dark place at a temperature not below 20 °C. Please label the bottle carefully, indicating that the contents is a corrosive chemical preparation.

Usage

Stir the liquid or shake the closed bottle thoroughly before use.

Carefully remove all oxides, grease, photoresist and fingerprints from the copper surface of the board, either by use of solvents or alcaline to remove the photocoating. In the case of solvents, finish cleaning with a good amount of fresh solvent on a clean paper tissue. For presensitized boards it is useful to expose and develop them a second time and rinse under plenty of tap water. In any case it is important that no alcaline be carried into the tin bath. The best result you get from brush cleaning the copper immediately before you put the board into the tin bath. If you rinsed the board with water before, do not dry it but leave it wet before immersion into the tin bath.

Leave the board in the liquid for 1-2 minutes and eventually move the tray so that the liquid is moving. The chemical reaction is limited in itself after all copper has been covered with tin. So do not leave the board longer than necessary in the bath, it would not improve the result.

Rinse

Finally, clean the board surface with hot tap water and polish it with clean paper tissue. There are tin salts sitting on the surface that are soluble only in hot water, but that would give the surface a grey aspect if not being fully removed. So for a perfect result in terms of solderability this is the decisive point in the whole application.

Remarks

With the solution being stored in the bottle, a residue of white to yellow colour may appear. This is tin salt falling out of the liquid, especially if storage is not in a dark place. The function of the solution will initially not be affected from this fall-out. Only if a bad smell occurs after even longer time, the liquid has become inactive and must be discharged. This is done either together with used etchant or separately as an acid preparation of anorganic laboratory chemicals, n.o.s.

If at a later time the tin surface turns into a grey colour or if solderability is bad after a longer time of storage, it will mostly help to repeat the above procedure. These instructions are based on our own test and experience, but they do not imply any responsibility from our side for the results that you achieve under your particular working conditions. Technical alterations are subject to change without notice.

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