

# TECHNICAL DATA SHEET

## Bright Tin Plating Process/Tinning(EB-300-02)

Tin plating is a soft, ductile, silvery-white metal that is not easily oxidized in air. It has good conductivity and corrosion resistance while enhancing solder ability of substrates that are not otherwise easily soldered to. Tin plating is generally considered non-toxic and non-carcinogenic and as such its use is generally approved for food contact applications.

### Solution Composition:

Chemical	Ranges	Optimum
Tin Sulfate	25-35 gm/ltr	30 gm/ltr
Sulfuric Acid	90-110 ml/ltr	100 ml/ltr
Acid Tin Make-up EB-300	20-40 ml/ltr	30 ml/ltr
Acid Tin Brightener EB-301 (For Full Bright)	2-6 ml/ltr	3 ml/ltr
Acid Tin Brightener EB-301 (For Semi Bright)	0.5-1ml/ltr	1 ml/ltr
Acid Tin Conditioner EB-302	1-2 ml/ltr	1 ml/ltr

### Operating Parameters:

	Rack	Barrel
Temperature	20-30 °C	25 °C
Cathode Current density	0.5-3.5 A/dm <sup>2</sup>	0.5-1.0 A/dm <sup>2</sup>
Anode Current Density	0.5-2.0 A/dm <sup>2</sup>	0.5 A/dm <sup>2</sup>
Filtration	Recommended	Recommended
Agitation	Mechanical	Mechanical
Anode	99.99% Pure tin	99.99% Pure tin

### Bath Make-up:

- Firstly clean tank thoroughly
- Fill the tank 2/3<sup>rd</sup> with RO water
- Carefully add required quantity of sulfuric acid.
- Add required quantity of tin sulfate and stir continuously.
- Level the tank with RO water till operating level and allow it to cool down at room temperature.
- Add required quantity of Acid tin Make-up EB-300, Acid Tin brightener EB-301 & Acid Tin Conditioner EB-302.

### Replenishment of Tin Plating Bath:-

The composition of the solution remains fairly constant over long period of use, the metal content being well maintained by dissolution of the anodes. Acid Tin Make-up and Acid Tin Brightener replenishment depends upon degree of brilliance required, drag out loss and temperature.

### Equipment's:-

- MS tanks recommended with FRP or PVC lined. Suitable exhaust system with scrubbing facilities should be provided.

### Cautions:-

- Must wear PP rubber gloves during chemical mixing.
- Also avoid eye, and skin contact.
- Care should be taken while adding chemical.

### Waste Treatment:-

Acid tin bath contains sulfuric acid and is acidic in nature. Neutralize the solutions with alkali before discharging into sewage systems.

