

REDUCING TIN SLUDGE IN ACID TIN PLATING

ABSTRACT

The present invention relates to a solution for use in the electroplating of tin and tin-lead alloys comprising a basis solution which includes fluoboric acid or an organic sulfonic acid or one of their salts, divalent tin ions, and an antioxidant compound which includes a transition metal selected from the elements of Group IV B, V B or VI B of the Periodic Table in an amount effective to assist in maintaining the tin ions in the divalent state. Another aspect of the invention relates to a method for preventing, reducing or minimizing the oxidation of tin ions in an acid electroplating solution by adding one of these antioxidant compounds thereto. This method is effective in certain basis solutions even when iron contamination or high oxygen levels are present.