Seacole Specialty Chemical

Technical Data Sheet

SURE/Flow HOF-1

A Recyclable Hot Oil Flux

Product Description

SURE/Flow HOF-1 is a specially formulated, WATER AND ALCOHOL FREE preparatory flux for tin-lead fusing and leveling by hot oil immersion applications. This unique blend will efficiently clean and remove tin and lead oxides as well as improve overall solder leveling. Because SURE/Flow HOF-1 is water and alcohol free, spattering and flammability hazards are significantly reduced.

Performance Features

- Water and alcohol free formulation; virtually no vapors.
- Exhibits excellent cleaning and tin and lead oxide removal.
- High flash point (greater than 160°F).
- Completely water soluble; exhibits excellent rinseability.
- Reduces spattering for improved user safety.

Physical Specifications

Physical State	Liquid
Appearance	Transparent Yellow
Freeze/Thaw Stability	Stable
Specific Gravity	0.9
Flash Point ASTM D-1310	162°F
pH (Neat)	< 1

Equipment Requirements

Tanks should be constructed of 316 stainless steel or other suitable alloys which can withstand temperatures of 600°F.

Product Make-Up

SURE/Flow HOF-1 is a use-as-is product and is not diluted or combined with other additives prior to use.

13505 Industrial Park Blvd. Plymouth, MN 55441

Operating Parameters

SURE/Flow HOF-1 is used at room temperature by either roller coating or immersion for three to ten seconds. If printed circuit boards are immersed, excess SURE/Flow HOF-1 should be allowed for one to two minutes at ambient temperature. A recommended process would include:

Procedure

1. Tin-lead Solder Brightener (ENVIRO/Bright®) - to clean and remove tin and lead oxides after resist stripping.
2. Water Rinse and Forced Air Dry - to remove tin-lead brightener and other residues from the printed circuit board prior to hot oil fusing.
3. SURE/Flow HOF-1 - to prepare the printed circuit board and enhance reflowability prior to hot oil fusing.
4. Preheat – ENVIRO/FLOW HO-10 operated at 275°F. The preheat step reduces thermal shock to the printed circuit board and minimizes drag-in contamination of the reflow bath.
5. Reflow – ENVIRO/FLOW HO-10 operated at 450°F to heat the electrodeposited tin-lead to its eutectic temperature forming a tin-lead alloy.
6. Cool Down – ENVIRO/FLOW HO-10 operated at 275°F to reduce thermal shock of the first rinse after reflow.
7. Rinse and Dry – Hand spray or conveyorized hot spray rinse to remove oil reside followed by a forced air drying cycle. For certain applications, it may be recommended a mild detergent scrub be incorporated after an initial dead rinse, followed by a typical hand spray or conveyorized hot spray rinse.

Control and Replenishment

Maintain the level of the bath with additions of SURE/Flow HOF-1. Based upon the severity of tin and lead oxidation, SURE/Flow HOF-1 may exhibit a finite life and should be changed at regular intervals per individual user observations.

Safety and Handling

Read and understand this product's MSDS before handling.

Waste Treatment

Individual users should verify the nature of spent solutions to assure compliance with local, state, and federal regulations. Contact Seacole for specific details and/or further waste treatment recommendations.

Ordering Information

SURE/Flow HOF-1 is available in 5 gallon pails and 55 gallon drums.

13505 Industrial Park Blvd. Plymouth, MN 55441