SUPERIOR SSF-NC50

Selective Soldering Flux

SELECTIVE SOLDERING, NO-CLEAN, VOC-FREE FLUX

- **Formulated for Selective Soldering Applications**
- VOC-Free, No-Clean, water-based formulation.
- For use with lead-free and lead-bearing alloys.
- Higher activity coupled with increased temperature tolerance.
- Formulated to reduce spattering upon contact with solder.
- Increased activity level to meet flow and melt-points of different Lead-Free solders.
- Conforms to IPC ANSI-J-STD-004, Type ORL0.

DESCRIPTION

Superior SSF-NC50 is a VOC-free, No-Clean selective soldering flux. This No-Clean flux promotes the rapid activity necessary for selective soldering. ***Superior SSF-NC50*** is also formulated to withstand the higher temperature requirements of selective soldering applications. (Solder temperatures in selective soldering units are often 300 – 340°C, instead of the 245-260°C typically found in wave soldering applications.) ***Superior SSF-NC50*** leaves a clear residue and is effective for both lead-free and lead-bearing solder alloys.

PROCESS RECOMMENDATIONS

Superior SSF-NC50 is designed to withstand the higher temperature requirements of selective soldering. Optimum topside PCB preheat temperature recommendation is 93-115°C/200-240°F. (While some selective soldering equipment is equipped with preheat mechanisms, some selective soldering equipment does not have a preheat option.) Even absent a pre-heat mechanism, ***Superior SSF-NC50*** is designed to withstand the sudden temperature spikes typical of selective soldering. Precise solder temperature requirements will vary depending on process, board thickness, heat-sinking on PCBs, and the Lead-Free alloy being used. The addition of nitrogen gas is recommended to ensure wicking, wetting and finished assembly consistency.

The following procedures are recommended for optimum performance.

1. Make certain that the PCB surfaces are free of any oil, grease, or other impurities.
2. Regularly maintain the solder nozzle by tinning the stainless steel tip and barrel of the selective soldering solder nozzle with ***Superior No. 75*** or ***No. 23*** tinning flux.

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PHYSICAL PROPERTIES

Specific Gravity	1.015 ± 0.01 @ 20-25°C/68-77°F
Pounds/Gallon	8.465 ± 0.20 @ 20-25°C/68-77°F
Acid Number	55 - 65
Total Solids	6%
Flash Point	None
Silver Chromate Paper Test	Passes
*Copper Mirror Test	Passes
Freeze/Thaw Test	Passes
Soldering Range	200 -350°C/390-660°F

THIS PRODUCT IS RoHS COMPLIANT.

** Modified IPC Test Method: Passes copper mirror test when same flux is formulated with isopropyl alcohol as the solids from water-based formulation are reconstituted with alcohol.*

SAFETY AND HANDLING PRECAUTIONS

Superior SSF-NC50 VOC-Free, No-Clean Selective Soldering Flux is a non-flammable, non-hazardous product. However, it is recommended that standard chemical safety practices be observed when handling this product. Avoid contact with eyes, skin, and mucous membranes. The use of rubber gloves, goggles and/or face shield is recommended. Use with adequate ventilation. Refer to the Material Safety Data Sheet (MSDS) for additional information. ***Superior SSF-NC50*** has a two (2) year shelf life.

Superior SSF-NC50 VOC-Free flux should be stored in plastic containers away from heat. In the event the flux is exposed to temperatures below 0°C/32°F, the flux may freeze. Freezing will not degrade this product if these steps are followed:

❶ Thaw flux until room temperature is reached

❷ Agitate flux to return to proper consistency.

The information contained herein is based on data considered to be accurate and is intended for use by persons having technical skills at their own discretion and risk. Since conditions of use are outside of Superior Flux & Mfg. Co.'s control, we cannot assume liability for results obtained or damage incurred due to misuse, nor can we assume customer liability.

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