



SUPERIOR SSF-NC400

Selective Soldering Flux



SELECTIVE SOLDERING, NO-CLEAN, ALCOHOL-BASED FLUX

- **Formulated for Selective Soldering Applications**
- No-Clean, alcohol-based formulation.
- For use with lead-free and lead-bearing alloys.
- Higher activity coupled with increased temperature tolerance.
- Solvent based to reduce spattering upon contact with solder.
- Contains specialized blend of activators, resin/rosin and solvents.
- Increased activity level to meet flow and melt-points of different Lead-Free solders.
- Conforms to IPC ANSI-J-STD-004, Type ROL1.

DESCRIPTION

Superior SSF-NC400 is an alcohol-based, No-Clean selective soldering flux. This No-Clean flux promotes the rapid activity necessary for selective soldering. **Superior SSF-NC400** 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.) Being alcohol based, **Superior SSF-NC400** features minimum spattering when molten solder hits flux. **Superior SSF-NC400** contains a specialized rosin/resin blend that leaves a clear residue and is effective for both lead-free and lead-bearing solder alloys. (The actual amounts of rosin/resin are such that with proper care, clogging of the flux spray and drop jet nozzles should not be an issue.)

PROCESS RECOMMENDATIONS

Superior SSF-NC400 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-NC400** is designed to withstand the sudden temperature spikes typical of selective soldering. Precise solder bath 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

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PHYSICAL PROPERTIES

Specific Gravity	0.805 ± 0.01 @ 20-25°C/68-77°F
Pounds/Gallon	6.714 ± 0.20 @ 20-25°C/68-77°F
Acid Number	21-27
Total Solids	4%
Flash Point	12°C/53°F T.C.C.
Copper Mirror Test	Passes
Freeze/Thaw Test	Passes
Soldering Range	200 -350°C/390-660°F

THIS PRODUCT IS RoHS COMPLIANT.

SAFETY AND HANDLING PRECAUTIONS

Superior SSF-NC400 Alcohol-Based, No-Clean Selective Soldering Flux is a Flammable product. Chemical safety and storage practices must 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 SF800** has a two (2) year shelf life.

Superior SSF-NC400 alcohol-based flux should be stored in plastic containers away from heat and in an area or cabinet designated for Flammable Liquids. 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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