



SUPERIOR SUPERSAFE[®] No. 90F



VOC-FREE, NON-HALIDE FLUX

- Formulated for electronic, electrical, and aerospace applications, including:
 - ◆ Printed Circuit Boards (PCBs)
 - ◆ Wire, Cable, and Terminal Lead Tinning and Soldering
 - ◆ Semiconductor and Component Lead Tinning
- Used for Copper, Beryllium-Copper, Brass, and other non-ferrous alloys.
- VOC-Free formulation is non-hazardous and environmentally friendly.
- Conforms to IPC ANSI J-STD-004, Type ORM0.
- A good choice for tin/lead, Tin/Silver, and Lead-Free solder alloys.

DESCRIPTION

Superior Supersafe[®] No. 90F contains a non-halide activation system which starts to clean metals at room temperature, reaching peak fluxing activity at 260°C/500°F, where it promotes excellent solderability. The non-halide formulation makes **Superior Supersafe[®] No. 90F** an ideal choice for soldering products that cannot come in contact with chlorides or bromides.

DIRECTIONS

Wave Soldering

To ensure optimum flux activity, a topside temperature of 190-240°F is recommended. Residues from **Superior No. 90F** are completely water-soluble and can be removed in batch or in-line aqueous cleaning systems. For best cleaning results, wash residues immediately after soldering. A water temperature of 120-140°F is recommended for optimum results. However, excellent results are routinely achieved at lower water temperatures. The organic base of **Superior No. 90F** is non-toxic and low foaming. Rinse waters are completely biodegradable. Consult local authorities for disposal regulations.

Best results can be obtained by following these guidelines:

- ❶ Make certain that the PCB surfaces are free of any oil, grease, or other impurities.
- ❷ Maintain a consistent foam head by narrowing the flux chimney, or using dual flux stones.
- ❸ Add fresh flux to maintain proper flux level in flux tank.
- ❹ Replace flux daily if self-contained storage is not available. Otherwise, replace after every forty (40) hours of operation.
- ❺ Regularly clean the fluxing equipment. Never leave foaming stone in flux when pressure is not applied.
- ❻ Clean fluxing stone in Superior No. 95T flux thinner.

Post-solder residues from **Superior Supersafe[®] No. 90F** are self-neutralizing at soldering temperatures. However, removal of the residues is imperative for electronic applications to prevent corrosion to sensitive joints and components and promote long-term reliability of assemblies. The residues and raw flux are completely water soluble and should be washed in an aqueous cleaning system using de-ionized or distilled water heated to a recommended temperature of at least 60°C±5°C /140°F±10°F. The addition of one gram of non-ionic surfactant to four (4) liters of water is recommended to reduce the wash water surface tension and make it a more effective cleaner. Each user must determine the best cleaning procedure to meet required specifications.

It is recommended that flux be changed in soldering processes using a flux pot at least once a week to maintain consistent flux performance and provide maintenance and cleaning of the flux pot. However, different environmental conditions may necessitate more frequent or less frequent flux changes to be determined by the end-user.

Superior manufactures quality fluxes. Our business is solving problems.



**Superior Flux
& Mfg. Co.**

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PHYSICAL PROPERTIES

Form	Clear Colorless Liquid
Specific Gravity	1.049 ± 0.005 @ 20°C/68°F
Density	8.75 Lbs./Gallon
pH	2.0 ± 0.30
Chloride Content	0 g chlorine/liter
Spread Factor	80 minimum
Surface Tension	35 dynes/cm maximum
Flash Point	None
Freezing Point	-2°C/28°F
Inorganic Cation Content	None
Recommended Soldering Range	200-270°C/390-510°F
Residues	Completely Water Soluble

THIS PRODUCT IS RoHS COMPLIANT

DISPOSAL

Superior No. 90F is a VOC-Free flux containing organic activators. It has a water base that contains no alcohols, solvents, petroleum derivatives, or inorganic material additives

The following steps should be taken to effect proper disposal:

- ① Measure out the amount of flux for disposal.
- ② As a general rule, add soda ash in a 1 to 50 ratio of neutralizer to spent flux. This ratio may differ depending upon pre-neutralization solids content and/or pH.
- ③ When the neutralization bubbling subsides, the solution may be flushed down a drain. The neutralized solution has a pH of 6 to 8. Use a pH meter or paper to determine the pH.

Consult local, state, or federal EPA to determine local guidelines regarding disposal.

SAFETY PRECAUTIONS

Superior Supersafe® No. 90F is a non-hazardous product, but should be treated as an industrial chemical. Store in plastic containers away from heat, sparks, or open flame. Do not store or place flux in contact with metals.

Adequate ventilation is necessary to remove flux fumes along with vapors and fumes from hot solder. Avoid breathing vapors and contact with skin, eyes and mucous membranes. Refer to Material Safety Data Sheet (MSDS) for additional information.

Superior Supersafe® No. 90F has a two (2) year shelf life.

Refer to the MSDS for additional safety information.

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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