



# SUPERIOR No. 90



## VOC-FREE, NON-HALIDE FLUX

- *Ideal for soldering of brass* – causes minimal-to-no reddening (de-zincification) during soldering.
- 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 No. 90** liquid flux 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 No. 90** an ideal choice for soldering products that cannot come in contact with chlorides or bromides. This flux can be used with various soldering methods, including torch, solder iron, wave solder, dip solder, etc.

### DIRECTIONS

**Superior No. 90** can be used in dipping, spraying, brushing, swabbing, and many other fluxing operations. Soldering processes should include the following steps:

- ❶ Remove any oil, grease, mold release, or other contaminants from the surface to be soldered.
- ❷ Apply flux to joint by dipping, spraying, dragging, swabbing or brushing to area being soldered.
- ❸ Preheat or air-dry area to be soldered after flux has been applied to activate the flux and yield optimum soldering characteristics.
- ❹ Apply solder, dip part, or place iron to area being soldered.
- ❺ Clean flux residues from soldered area using de-ionized, distilled, RO, and in some cases tap water heated to a temperature of 60°C±5°C / 140°F±10°F for best results. Room temperature water may also be used.

Post-solder residues from **Superior No. 90** 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 60-140°C±5°C. 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

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**Superior Flux  
& Mfg. Co.**

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## PHYSICAL PROPERTIES

Form	Clear Colorless Liquid
Specific Gravity	1.049 ± 0.005 @ 20-25°C/68-77°F
Density	8.75 Lbs./Gallon @ 20-25°C/68-77°F
pH	2.0 ± 0.30 @ 20-25°C/68-77°F
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. 90** 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 No. 90** 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 No. 90** 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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