



SUPERIOR SUPERSAFE® No. 91



WATER-SOLUBLE, 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.
- A good choice for tin/lead, Tin/Silver solder alloys.

DESCRIPTION

Superior Supersafe® No. 91 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. 91** an ideal choice for soldering products that cannot come in contact with chlorides or bromides.

DIRECTIONS

Superior Supersafe® No. 91 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 surface 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 Supersafe® No. 91** 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.



PHYSICAL PROPERTIES

Form	Clear, red liquid
Specific Gravity	0.8645 ± 0.0145 @ 20-25°C/68-77°F
Density	7.21 lbs./gallon @ 20-25°C/68-77°F
pH	1.8 ± 0.5
Mv	268 ± 42
Flashpoint	12°C/53°F TCC Method
Recommended Soldering Range	200-270°C/390-520°F
Residues	Completely Water-Soluble

SAFETY PRECAUTIONS

Superior No. 91 is a flammable product, and should be handled and stored 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 soldering area. Wear NIOSH approved gloves, goggles, and respirators when working with this product. Avoid breathing vapors and contact with skin, eyes and mucous membranes.

Refer to the MSDS for additional safety information.

Store flux in an area with a controlled temperature between 18-25°C/64-77°F.

Superior No. 91 has a two (2) year shelf life.

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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