



# SUPERIOR No. 65



## ZC-Free™ ZINC CHLORIDE FREE FLUX

- > Contains no zinc chloride.
- > A versatile flux that is VOC-Free.
- > Used in air-conditioning, automotive, heat exchangers, refrigeration, plumbing, industrial cable and wire tinning, and other industrial tinning applications.
- > Excellent for all metals except aluminum and magnesium.

### DESCRIPTION

**Superior No. 65 ZC-Free™** is a water-based, flux that is entirely free of zinc chloride. It begins to clean metals at room temperature, reaching peak activity at 260°C/520°F, where it promotes excellent solderability on mild stainless steel, copper, and non-ferrous alloys.

### DIRECTIONS

**Superior No. 65 ZC-Free™** may be applied by brushing, swabbing, or dipping. Soldering should be carried out as soon as possible after applying flux. Air-drying or moderate preheating will reduce or eliminate spattering. Residues are water-soluble and can be cleaned completely using a hot (60°C/140°F) water rinse.

The following steps are recommended for optimum soldering results:

- ❶ Remove any oil, grease, 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 and reduce or eliminate spattering.
- ❹ Apply solder, dip part, place torch or 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.

### SAFETY PRECAUTIONS

**Superior No. 65 ZC-Free™** is 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 the MSDS for additional safety information.

**Superior No. 65 ZC-Free™** has a two (2) year shelf life.

*Superior manufactures quality fluxes. Our business is solving problems.*



## PHYSICAL PROPERTIES

Form	Colorless Liquid
Specific Gravity @ 20°C/68°F	1.029 ± 0.011
Density @ 20°C/68°F	8.58 Lbs./Gallon
pH	1.35 ± 0.65
Recommended Soldering Range	95-320°C/200-600°F
Spread Factor	80 Minimum
Surface Tension	35 dynes/cm maximum
Flash Point	None
Freezing Effects	None
Residues	Completely water-soluble

## DISPOSAL

**Superior No. 65 ZC-Free™** is a VOC-Free flux containing organic activators. It has a water base that contains no alcohols, solvents, petroleum derivatives or heavy metals.

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 as a neutralizer to spent flux. This ratio of neutralizer to flux 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.

## ENVIRONMENTAL

Replacing zinc chloride based fluxes with **Superior No. 65 ZC-Free™** may be crucial in meeting acceptable local zinc discharge levels by eliminating all zinc as a heavy-metal from the soldering process.

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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