



SUPERIOR No. 555C



BATTERY FLUX CONCENTRATE

- ◆ Specially formulated for battery soldering applications.
- ◆ Wide active temperature range for lead-based alloys.
- ◆ Completely free of zinc chloride and other chlorides.
- ◆ High fluxing activity.
- ◆ Residues are completely water-soluble.
- ◆ Flux is highly concentrated and can be diluted in high water-to-flux ratios.

DESCRIPTION

Superior No. 555C is a water-based, water-soluble flux with extended temperature capability that begins to clean metals at room temperature. This inorganic flux is chloride-free. Residues are non-hygroscopic, non-corrosive, and completely water-soluble.

Superior No. 555C is specially formulated for battery soldering applications and can be used as-is, or diluted. It can also be used for soldering radiators and industrial soldering applications including mild stainless steel, copper, and non-ferrous alloys. Since it contains no chlorides, **Superior No. 555C** will not discolor brass due to de-zincification, and helps make post-solder metal finishing a quicker, cleaner process.

DIRECTIONS

Superior No. 555C can be used in Cast-on-Strap (CoS) processes, dipping, drag soldering, spraying, brushing, swabbing, and many other fluxing operations. Air-drying or moderate pre-heating of the part will reduce or eliminate spattering upon contact with hot solder. The residues are non-hygroscopic and non-corrosive, however post solder cleaning is required. Residues are water-soluble and are best removed with hot (60°C/140°F) de-ionized or distilled water. If these water-types are not available, room temperature water may also be used.

The following steps are recommended for optimum soldering results:

- ① Remove any oil, grease, or other contaminants from the surface to be soldered.
- ② Apply flux to joint by injecting, dipping, dragging, swabbing or brushing area being soldered.
- ③ 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.
- ④ Apply solder, dip part, place torch or iron to area being soldered.
- ⑤ Clean flux residues using de-ionized, distilled, Reverse-Osmosis (RO) and in some cases tap-water heated to a temperature of 60°C±5°C/140°F±10°F for optimum results. In battery applications, flux residues do not require post-solder aqueous cleaning.

Superior manufactures quality fluxes. Our business is solving problems.



PHYSICAL PROPERTIES

Form	Clear Liquid
Specific Gravity	1.252 ± 0.015 @ 20-25°C
Density	10.44 lbs./gallon
Mv	350-450
Chloride Content	None
Flash Point	None
Freezing Effects	None
Residues	Water-soluble
Recommended Soldering Range*	200-450°C/390-850°F

* Due to lead oxide formation at 900°F, it is recommended that process temperature not exceed 850°F.

DILUTE PROCEDURE

Using de-ionized, distilled, or Reverse-Osmosis (RO) water, add water to flux. As an example, to achieve a 17:1 ratio of water-to-flux, the following steps should be taken.

- ① Base weights upon a consistent measurement: pounds/gallons or grams/liters.
- ② Weigh flux first.
- ③ Multiply flux weight by 17 (flux should be 5.55% of total weight).
- ④ Add room temperature water to flux.
- ⑤ Mix flux for 10 minutes.

When mixing is complete, the flux should have the following properties:

Specific Gravity	1.011 ± 0.0075 @ 20-25°C
pH	1.57 ± 0.5
mV	305 ±100

SAFETY PRECAUTIONS

Superior No. 555C is a corrosive product and should be handled with care and the normal precautions taken when working with chemical products.

When soldering with **Superior No.555C**, adequate exhaust ventilation should be provided. Avoid contact with eyes, skin, and mucous membranes. Always wear NIOSH approved safety equipment when working with chemicals. Store in plastic containers away from heat.

Refer to Material Safety Data Sheet (MSDS) for additional safety information.

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

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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