



# SUPERIOR No. 555C



## BATTERY FLUX CONCENTRATE

- Specially formulated for battery soldering applications.
- Wide active temperature range.
- Completely free of Zinc Chloride and other chlorides.
- High fluxing activity.
- Low VOC Emissions.

### DESCRIPTION

**Superior No. 555C Battery Flux** is specially formulated as a low VOC, non-flammable product for the Cast-on-Strap (CoS) manufacturing process in high concentrate formulation. This flux contains no chlorides, heavy metals, or organic acids that could affect the long-term life of batteries. Additional formulation advantage of this flux is the wide window of operation at various temperatures and line speeds.

**Superior No. 555C Battery Flux** remains consistently active to produce strong burn-in cast bonds and allow the flux to be used in low temperature operations due to potential cracking of straps or to be used in high temperature applications to accommodate the larger mass plates

### DIRECTIONS

**Superior No. 555C Battery Flux** provides excellent metallurgical bonding of all Lead-based battery alloys that are used in the Cast-on-Strap operating process. This flux exhibits very low fuming and/or smoke during the burn-in manufacturing process. Minimal residues are left after completion of the CoS process.

The following steps are recommended for optimum CoS results:

- ➊ Remove any oil, grease, or other contaminants from the CoS surface.
- ➋ Apply flux to joint by dipping, dragging, swabbing or brushing to the CoS area.
- ➌ Preheat or air-dry CoS area after flux has been applied to activate the flux and yield optimum soldering characteristics and reduce or eliminate spattering.
- ➍ Apply Lead-based alloys into CoS process.

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



## PHYSICAL PROPERTIES

Form	Clear Red Liquid
Specific Gravity	1.252 ± 0.015 @ 20-25°C/68-77°F
Density	10.44 lbs./gallon @ 20-25°C/68-77°F
Mv	350-450 @ 20-25°C/68-77°F
Chloride Content	None
Flash Point	None
Freezing Effects	None
Residues	Water-soluble
Recommended Soldering Range*	260-455°C/500-850°F

**This Product is RoHS Compliant**

\* 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 18-25°C/64-77°F.

**Superior No. 555C** 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.

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



**Superior Flux  
& Mfg. Co.**

6615 Parkland Blvd. • Cleveland, OH 44139 • Phone: 440-349-3000 • Fax:  
440-349-3003 www.superiorflux.com • e-mail: info@superiorflux.com