



# SUPERIOR No. 45



## Organic Acid, Halide Flux

- Formulated for tinning Nickel/Copper semiconductor and component leads in automated soldering systems.
- Promotes excellent solderability of electroless Nickel (EN), Alloy 42, Alloy 51, Beryllium Copper, and other difficult-to-solder metals.
- Helps achieve high first-pass yields to meet ISO standards.
- Excellent flux for tin/lead and lead-free alloys.
- Solder coatings pass steam-aging tests.
- Conforms to IPC ANSI J-STD-004, Type ORM1.

### DESCRIPTION

**Superior No. 45** is an organic-acid (OA) flux that contains a unique amino acid-chloride activator. The flux removes oxides at room temperature, reaching peak activity in a temperature range of 240-270°C/460-520°F. The flux contains little water and does not pop or spatter during normal soldering processes that include pre-heating prior to solder dipping.

### DIRECTIONS

**Superior No. 45** is specially formulated for tinning Copper, and Nickel alloy component leads. Soldering should be carried out as soon as possible after flux application. Pre-heating of leads reduces spattering and solder ball formation.

For optimum soldering results, the following steps should be taken:

- ❶ Remove any oil, grease, or mold-release from component leads to be soldered.
- ❷ Dip or drag component leads in flux.
- ❸ Preheat the leads prior to solder dipping to reduce or eliminate spattering and solder balls.
- ❹ Dip or drag components in solder at a level that allows upward solder wetting.
- ❺ Clean component leads in hot (60°C±10°C/140°F±20°F) de-ionized or distilled water.
- ❻ If the post-solder water develops too much foam, add **Superior No. DF-1 Defoamer**.

The flux is formulated for use as supplied. However, the specific gravity increases with prolonged use and should be monitored using a hydrometer. To adjust specific gravity, add **Superior No. 95T** to the flux to keep it in a range of 0.878 ± 0.005 @ 20-25°C/68-77°F.

Flux and residues are completely water-soluble. Clean soldered leads in an aqueous cleaning system, with hot (60°C±10°C/140°F±20°F) de-ionized or distilled water. If hot water is unavailable, room temperature water may also be used, although it may require a longer rinse cycle. A detergent or saponifier may be added if a cleaning process specifies its use, but are not necessary for residue removal. Rinse waters are completely biodegradable. Consult local authorities for disposal regulations.

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



## PHYSICAL PROPERTIES

Form	Clear, very slightly yellow liquid.
Specific Gravity	0.880 ± 0.05 @ 20-25°C/68-77°F
Density	7.32 lbs/gallon @ 20-25°C/68-77°F
Acid Number	42.5 ± 12.5
Flashpoint	12°C/53°F TCC Method
Recommended Soldering Range	95-315°C/200-600°F
Residues	Completely Water-Soluble

**THIS PRODUCT IS RoHS COMPLIANT**

## SAFETY PRECAUTIONS

**Superior No. 45** 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. 45** 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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