



# SUPERIOR No. 43



## ORGANIC ACID, WATER-SOLUBLE FLUX

- ◆ Formulated for tinning semi-conductor leads, component leads, diodes, wire, and piezo-electric parts.
- ◆ Promotes outstanding solderability on Copper, Kovar, Alloy 42, Alloy 51, Electroless Nickel (EN), Beryllium Copper and other difficult to solder metals.
- ◆ For use in automated and manual soldering processes.
- ◆ Excellent flux for tin/lead and lead-free alloys.

### DESCRIPTION

**Superior No. 43** is an organic acid (OA), water-soluble flux that contains an amino-acid/halide activator in combination with a fluoride that starts to clean metal surfaces at room temperature, reaching peak activity at 260°C/520°F. The flux wets very effectively and promotes outstanding solderability to a wide variety of difficult-to-solder base metals, as well as badly oxidized metal surfaces. All post-solder residues are water-soluble.

### DIRECTIONS

**Superior No. 43** is specially formulated for tinning component leads. Soldering should be carried out as soon as possible after flux application. Preheating of leads reduces spattering and solder ball formation. For optimum soldering results, the following steps should be taken:

- ① Remove any oil, grease, or mold-release from component leads to be soldered.
- ② Dip or drag component leads in flux.
- ③ Preheat the leads prior to solder dipping to reduce or eliminate spattering and solder balls.
- ④ Dip or drag components in solder at a level that allows upward solder wetting.
- ⑤ Clean component leads in 60°C/140°F de-ionized or distilled water.

The flux is formulated for use as supplied; however, the specific gravity increases with prolonged use and should be monitored using a hydrometer. The flux and residues are completely water-soluble. Wash in an aqueous cleaning system, using hot (60°C/140°F) de-ionized or distilled water. A detergent or saponifier may be added if a cleaning process specifies its use, but these are not necessary for residue removal.

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



## PHYSICAL PROPERTIES

Form	Clear Colorless Liquid
Flash Point	None
Specific Gravity	1.058 ± 0.01
pH	3.6 ± 0.5
Chloride Content	17.5 - 25.0 g chlorine/liter
Fluorine Content	23.2 – 33.2 g fluorine/liter
Acid Equivalent	1.00 – 1.60 g hydrogen/liter
Spread Factor	80 minimum
Surface Tension	35 dynes/cm maximum
Flash Point	None
Freezing Effect	None
Recommended Soldering Range	95-315°C/ 200-600°F
Residues	Completely Water Soluble

## SAFETY PRECAUTIONS

**Superior No. 43** is a hazardous 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 solder. 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.

**Superior No. 43** 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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