



SUPERIOR No. 312-1



NO-CLEAN SOLDERING FLUX

- Low Solids (1%) No-Clean Flux
- Excellent surface wetting.
- Eliminates the need for cleaning soldered boards.
- May be conformal coated without post-solder cleaning.
- Conforms to ANSI-J-STD-004, Type ORL0.

DESCRIPTION

Superior No. 312-1 No-Clean flux is a specially formulated low-solids flux free of any halides, resin, or rosin. This flux was designed for soldering high quality electronic printed circuit boards (PCBs), such as, through-hole, mixed technology, and surface mount assemblies while eliminating the need for a post cleaning operation. No. 312-1 is also ideal for soldering of solar panels where low solids content fluxes are a requirement. **Superior No. 312-1 No-Clean** is formulated for foam or spray applications as supplied.

APPLICATION

WAVE SOLDERING:

Superior No. 312-1 No-Residue, No-Clean Flux may be applied by foam, spray, or wave application. The optimum topside PCB preheat temperature recommendation is 200-240°F/93-115°C. Too low a preheat setting is indicated by post-solder residues on PCBs that look like water stains. A solder-bath temperature of 480°F ± 20°F is recommended for optimum result.

For optimum soldering results, use the following guidelines:

- ❶ Make certain that the PCB surfaces are free of any oil, grease, or other impurities.
- ❷ Maintain a consistent foam head by narrowing the flux chimney, or using dual flux stones.
- ❸ Add fresh flux to maintain proper flux level in flux tank.
- ❹ Replace the flux daily unless a sealed, self-contained system is used; such as in a spray fluxing system.
- ❺ Regularly clean the fluxing equipment. Never leave foaming stone in flux when pressure is not applied.
- ❻ Clean fluxing stone in **Superior No. 367T** flux thinner.
- ❼ When foam fluxing, flux properties can be maintained by monitoring the specific gravity. However, control by checking the acid value is recommended as the most accurate measure. Titration kits are available from Superior Flux.
- ❽ Add **Superior No. 367T** flux thinner when needed.

Superior No. 312-1 is also formulated for use in manual soldering applications for electronic assemblies. A soldering iron temperature between 315-400°C / 600-750°F is recommended for optimum results. Apply flux to area that is being soldered. Though a No-Clean flux, post soldering residues are water-soluble and can be washed off. In cases where post-solder washing is specified, please use DI, distilled, or RO water.

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

PHYSICAL PROPERTIES

Specific Gravity	0.8075 ± 0.01 @ 20-25°C/68-77°F
Density	6.81 lb/gal @ 20-25°C/68-77°F
Color	Water white & clear
Halide Content	None
Acid Value	17.0 ± 2.5
Fluoride Test	Passed, No Fluoride Content
Silver Chromate Paper Test	Passed, No Chloride Content
Percent Solids	1.0 ± 0.1
Copper Mirror Corrosion Test	Passed
Flash Point (TCC)	15°C/59°F
This Product is RoHS Compliant	

SAFETY PRECAUTIONS

Superior No. 312-1 No-Clean flux is a flammable product and should be handled with care and the normal precautions taken when working with chemical products.

When soldering with **Superior No. 312-1**, 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. 312-1 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