



# BOW ELECTRONIC SOLDERS

## BOW #109 Organic Acid, Water Soluble Flux

### Product Description

**Bow #109** is a high activity, organic acid (OA) foam flux formulated for difficult-to-solder surfaces where activated rosin fluxes and less active OA fluxes cannot be used. This flux combines a unique activation system with a special no-polyol base that is compatible with all solder masks, does not leave a post-solder white residue, and is an ideal choice for high volume operations.

The solderability and cleanability of **Bow #109**, along with excellent foaming characteristics and heat stability, provide a moderately low “solids” flux adaptable to a wide variety of board styles, sizes and thicknesses.

### Features and Benefits

- Excellent for Copper and difficult-to-solder metals including Alloy 42, Alloy 51, and Nickel alloys.
- Effective on bare Copper, OSP, HASL, or plated surfaces.
- May be applied in either foam or spray systems.
- Solder single- and double-sided circuit boards.

### Applications

To ensure optimum flux activity, a topside temperature of 190-240°F is recommended. Residues from **Bow #109** are completely water-soluble and can be removed in batch or in-line aqueous cleaning systems. For best cleaning results, wash residues immediately after soldering. A water temperature of 120-140°F is recommended for optimum results. However, excellent results are routinely achieved at lower water temperatures. The organic base of **Bow #109** is non-toxic and low foaming. Rinse waters are completely biodegradable. Consult local authorities for disposal regulations.

For optimum soldering results, use the following guidelines:

1. Make certain that the PCB surfaces are free of oil, grease, or other impurities.
2. Maintain a consistent foam head by narrowing the flux chimney, or using dual flux stones.
3. Add fresh flux to maintain proper flux level in flux tank.
4. Replace flux daily if self-contained storage is not available. Otherwise, replace after every forty (40) hours of operation.
5. Regularly clean fluxing equipment. Never leave foaming stone in flux when pressure is not applied.
6. Clean fluxing stone in **Bow #120T** flux thinner.
7. Adjust the specific gravity to the nominal level with a hydrometer. Evaporated solvent should be replaced by the addition of **Bow #120T** flux thinner.

## Physical Properties

Specific Gravity	0.833 ± 0.005 @ 25°C
Color	Clear liquid, pale yellow
Solids Content	17%
Halide Content	3.35%
Flashpoint	53°F Tag Closed Cup Method
Recommended Topside Temperature	190-224°F
Recommended Solder Range	200-315°C / 390-615°F

## Safety Precautions

**Bow #109** is a flammable product and should be handled with care and the normal precautions taken when working with chemical products.

When soldering with **Bow #109**, adequate 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.

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

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

The information contained herein is based on data consideration 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 Bow Electronics control, we cannot assume liability for results obtained or damage incurred due to misuse, nor can we assume customer liability.

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