



# SUPERIOR No. 312-PVA



## NO-CLEAN FLUX FOR PHOTOVOLTAIC ASSEMBLY

- Zero-Halogen
- Produces high reliable ribbon that interconnects solar cells
- Wetting and drying quickly allowing fast throughput
- Eliminates cleaning process
- Compatible with the most popular EVA
- Can be applied by spraying or dipping
- Low-Solids
- Conforms to ANSI-J-STD-004, Type ORL0

### DESCRIPTION

**Superior No. 312-PVA No-Clean** flux is zero-halogen, non-rosin organic flux designed specifically for use in tabber and stringer equipment of Photovoltaic Assembly (PV) module industry by soldering tabs to cell contacts. **Superior No. 312-PVA** could be applied directly to interconnecting ribbon by hand soldering or auto-equipment with tabber and stringer soldering system, by dipping or spraying. The extremely low solids content (around 2%) and nature of the activator system results in practically no residue left on the cell after soldering. Cell are dry and cosmetically clean as they exit the tabber and stringer machine. **Superior No. 312-PVA** has a wider operating window varying with temperature range, and can be used in SnPb, SnAgPb, and Pb-free alloys.

### APPLICATION

**Superior No. 312-PVA No-Clean**, Need to ensure flux is sufficiently applied on the cell to prevent dewetting and residues.

### SAFETY PRECAUTIONS

**Superior No. 312-PVA 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-PVA No-Clean**, 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-PVA** has a two (2) year shelf life.

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



## PHYSICAL PROPERTIES

Specific Gravity	0.815 ± 0.015 @ 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	20.0 ± 5
Fluoride Test	Passed, No Fluoride Content
Silver Chromate Paper Test	Passed, No Chloride Content
Percent Solids	2.0 ± 0.1
Copper Mirror Corrosion Test	Passed
Flash Point (TCC)	11.7°C/53°F

**This Product is RoHS Compliant**

## RELIABILITY PROPERTIES

### Copper Mirror

The test method is designed to determine the removal effect the flux has on a copper mirror. (IPC-TM-650, 2.3.32)

**Result: No Breakthrough** **Rating Category: L**

### Silver Chromate

The test method is designed to determine the presence of chlorides and bromides in solder flux. (IPC-TM650, 2.3.33)

**Result: No Color Change** **Rating Category: Pass**

### Fluoride Spot

This test method is designed to determine the presence of fluorides in soldering flux. (IPC-TM650, 2.3.35.1)

**Result: No Color Change** **Rating Category: Pass**

### Halide Concentration (part I)

This test method is designed to determine the halide content of fluxes attributable to chlorides and bromides. The halide content is reported as the weight percentage of halide to the solid portion of the flux. (IPC-TM-650, 2.3.35 or 2.3.28)

**Result: 0.0%** **Rating Category: 0**

### Halide Concentration (part II)

This test method is used to determine the concentration of fluoride in soldering flux. The halide content is reported as the weight percentage of halide to the solid portion of the flux. (IPC-TM-650, 2.3.35.2 or 2.3.28)

**Result: 0.0%** **Rating Category: 0**

### Corrosion Test

This test method is designed to subjectively determine the corrosive properties of the flux residue under extreme environmental condition. (IPC-TM-650, 2.6.15)

**Result: No Evidence of Corrosion** **Rating Category: L**

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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**Superior Flux  
& Mfg. Co.**

6615 Parkland Blvd. • Cleveland, OH 44139 • Phone: 440-349-3000 • Fax:  
440-349-3003 [www.superiorflux.com](http://www.superiorflux.com) • e-mail: [info@superiorflux.com](mailto:info@superiorflux.com)