kester® Technical Data Sheet

922-CX Soldering Flux

No-Clean Low Solids Liquid Flux

Product Description

Kester 922-CX is a non-rosin organic fluxes designed for wave soldering conventional and surface mount circuit board assemblies. These fluxes eliminate defects often experienced in surface mount assembly wave soldering operations with traditional fluxes. These non-corrosive and non-conductive fluxes have an extremely low solids content. There is essentially NO RESIDUE left on the assembly after soldering. There are no residues to interfere with electrical testing and the expense of cleaning is eliminated. A particular feature of 922-CX is the very dry appearance of PCB assemblies as they exit the wave solder machine. Although cleaning is eliminated, the flux will not harm the electrical reliability of the assembly.

Performance Characteristics:

- Essentially no residue left behind after soldering
- Eliminates the expense of cleaning
- Boards are dry as they exit the wave solder machine
- Non-corrosive and halogen-free
- No surface insulation resistance degradation
- No offensive odors given off during soldering
- Conforms to ANSI/J-STD-004, flux designator ORL0

RoHS Compliance

This product meets the requirement of the RoHS (Restriction of Hazardous Substances) Directive, 2002/95/EC Article 4 for the stated banned substances.

Physical Properties

	922-CX	4662
Specific Gravity @ 24°C (75°F)	0.789	0.783
Pounds Per Gallon	6.58	6.53
Solids Content	2.3	---
Acid Number, mgKOH/gm	14.0 ± 0.7	---
Halogen Content	None	---
Flash point (T.O.C.)	18°C (64°F)	18°C (64°F)
Auto-ignition temperature	399°C (750°F)	399°C (750°F)
Copper Mirror Corrosion Test	Pass	---
Surface Insulation Resistance @ 50°C (122°F), 90% humidity*	10^{11} ohm	---
Surface Insulation Resistance @ 85°C (185°F), 85%humidity**	10^{9} ohm	---
Thinner	4662	---

* Test Boards - 12.5 mil lines, 12.5 mil spaces. 50 volts DC bias. Reading taken after 60-sec charge of 100 volts DC with polarity reversed from bias voltage. SIR of unsoldered control = 1011 ohm.

** Test Boards - 12.5 mil lines, 12.5 mil spaces. 50 volts DC bias. Reading taken after 60-sec charge of 100 volts DC with polarity reversed from bias voltage. SIR of unsoldered control = 109 ohm.

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Application Notes

Flux Application

922-CX can be applied to the assembly by dipping, spraying or wave fluxing. The usable preheat range is 82-110°C (180-230°F), but the optimum preheat temperature for most PCB assemblies is 99-110°C(210-230°F) as measured on the top or component side of the circuit board. Insufficient preheat tends to leave more residue behind after soldering. Excessive preheating time or temperature can partially degrade the flux and result in icicles or solder shorts.

Process Control

Control of the flux tank during use is necessary to assure a consistent amount of flux is applied to the circuit boards, the least amount of residue remains after soldering, no interference in electrical probe testing and consistent soldering results are obtained. Kester has developed the PS-22 Flux Test Kit to provide an effective means of determining the relative flux concentration and the proper amount of thinner to add to replace evaporative losses.

Also, debris from circuit boards (board fibers, etc.) and air lines can build up in the flux tank during use. When excessive, it will redeposit on circuit boards which may create a build up of residues on probe test pins and can even affect the foam head characteristic in the flux tank. It is necessary to replace the flux tank with fresh flux when excessive debris accumulates in the flux tank.

Cleaning

This product is a no-clean flux. For most electronic assemblies, removal of the flux residue is not required. If post soldering residue removal is desired, it can be cleaned with a 2-5% concentration of a saponifier such as Kester 5768 Cleaner.

Storage and Shelf Life

Kester 922-CX is flammable. Store away from sources of ignition. Shelf life is 3 years from the date of manufacture when handled properly and held at 10-25°C (50-77°F).

Health and Safety

This product, during handling or use, may be hazardous to your health or the environment. Read the Safety Data Sheet (SDS) and warning label before using this product.

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