alpha ASSEMBLY SOLUTIONS™

ALPHA® 2110

Aqueous Rosin Cleaner

DESCRIPTION

Alpha 2110 is a cleaning concentrate designed for efficient removal of rosin flux residues from printed circuit boards using aqueous saponification processing. In conveyorized, in-line aqueous machines, Alpha 2110 will provide excellent cleaning of assemblies, even to ionic cleanliness standards set forth in MIL-P-28809.

2110 is formulated to maintain its composition in the recirculated wash solution during prolonged use, thus greatly reducing makeup additions normally required. Alpha 2110 works without the use of silicone defoamers. If excessive levels of foaming are observed while using Alpha 2110, consider the use of K-2235LF saponifier. Alpha 2110 removes rosin flux residues primarily by forming water soluble rosin soaps.

FEATURES & BENEFITS

- Cleans rosin flux residues in water solution. Proven alternative to solvent cleaning.
- Most widely used product of this type. Safe and effective, even for high reliability assemblies.
- A concentrate used at 3-5% in conveyorized cleaners. Cost-effective and simple to use.
- Phase II approved.

PRODUCT INFORMATION

While designed for use in conveyorized cleaning equipment, Alpha 2110 can also be used in batch soak tanks and modified dishwasher units. Tap water is recommended for the wash solution.

Suggested use levels of 2110 by volume:

Conveyorized Machines:	3 – 5%
Soak Tanks:	4 – 8%
Dishwashers:	2 – 3%

The proper level of 2110 concentration will depend on such variables as throughput of printed wiring assemblies, wash temperature, and wash time. In order to be effectively clean reflowed rosin solder paste residue, a 10% concentration of Alpha 2110 is recommended.

Recommended wash tank temperatures are 150 - 160°F. Higher temperatures speed the saponification reaction. Temperatures of 160 -170°F are sometimes necessary for simultaneous removal of stabilizer waxes and temporary solder masks. Alpha 2110 has excellent solution stability, even at these elevated temperatures, as well as low-odor characteristics.

Multi-stage rinsing of assemblies cleaned with 2110 can be accomplished with hot tap water or DI water, depending upon the level of cleanliness sought (in general, they use of DI water is most appropriate and is recommended to ensure a high level of ionic cleanliness). After hot air drying, the ionic cleanliness

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level achieved by aqueous cleaning with 2110 can be measured with an Alpha Ionograph or Omegameter. The Alpha Sirometer can greatly facilitate measurement of test assemblies for surface insulation resistance under high temperature and humidity conditions.

MATERIALS COMPATIBILITY

When used as recommended, Alpha 2110 will not damage most plastics or marking inks. Cleaning equipment materials of construction should not include among the wetted parts: Lexan (polycarbonate), Viton, Neoprene, or natural rubber; copper, aluminum, brass, or galvanized metals.

MONITORING THE 2110 CONCENTRATION IN AN IN-LINE CLEANER

In order to maintain the 2110 concentration during the use in the desired range and continuously produce clean assemblies, periodic makeup additions of 2110 should be made. Losses from dragout and spray nozzle-mist can be replaced simultaneously with water makeup. Solutions of 2110 can be added manually or automatically, using proportioning devices.

Standard practice is to charge the wash tank contents completely after 8- 16 hours of continuous use, when the solution generally has become contaminated with rosin soaps.

Alpha 2110 contains a natural buffer to maintain the pH of the wash solution within a fairly narrow range, even as its concentration changes. Thus, if makeup additions of 2110 are made on the basis of pH, control of concentration would be lost. However, an alkalinity-titration procedure can be used to reliably monitor the concentration of 2110 in use. Request SM-291 Application Bulletin for simple saponifier concentration monitoring procedure and recommended equipment.

CLEANING MACHINE MAINTENANCE

Processes using untreated tap water will frequently deposit scale on the wetted parts of the wash and rinse sections of conveyorized machines. This scale can clog spray nozzles, and deposit on heating elements and electrical probes. Alpha 926 Scale Remover will effectively clean this scale.

TECHNICAL SPECIFICATION

Physical Properties	Typical Values
Appearance	Blue Liquid
Specific Gravity @ 25°C (77°F)	1.001 +/- 0.005
Pounds per gal. @ 25°C (77°F)	8.33
pH, as 5% vol. solution	11.6
Flash Point (Cleveland Open Cup)	99°C (210°F)

TECHNICAL BULLETIN

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SAFETY

When handling, observe standard precautions such as safety goggles and protective gloves. Use Alpha 2110 with adequate ventilation. Consult the SDS for all safety information. The most recent version of the SDS is available from alphaassembly.com.

STORAGE

Alpha 2110 is available in 5 and 55 gallon containers. Do not transfer to aluminum or galvanized containers. Avoid storage below 32°F for prolonged periods. Alpha 2110 containers carry D.O.T. "corrosive" label.

CONTACT INFORMATION

To confirm this is the most recent issue, please contact Alpha Assembly Solutions

AlphaAssembly.com

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency directory assistance Chemtrec 1 - 800 - 424 - 9300.