chanhvinh.com

MacDermid Alpha ELECTRONICS SOLUTIONS

TECHNICAL DATA SHEET

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.

ALPHA 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.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

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 to 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 ALPHA 2110 by volume:

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

chanhvinh.com

The proper level of ALPHA 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 to 160 °F. Higher temperatures speed the saponification reaction. Temperatures of 160 to 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 ALPHA 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

level achieved by aqueous cleaning with ALPHA 2110 can be measured with an lonograph or Omegameter. A 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 ALPHA 2110 CONCENTRATION IN AN IN-LINE CLEANER

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

Standard practice is to charge the wash tank contents completely after 8 to 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 ALPHA 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 ALPHA 2110 in use.

chanhvinh.com

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 DATA

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)

chanhvinh.com

MacDermid Alpha ELECTRONICS SOLUTIONS

TECHNICAL DATA SHEET

SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

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

www.macdermidalpha.com

North America 140 Centennial Avenue Piscataway, NJ 08854 1.800.367.5460	**Europe** Unit 2, Genesis Business Park Albert Drive Woking, Surrey, GU21 5RW, UK 44.01483.758400	**Asia** 8/F., Two Sky Parc 51 Hung To Road Kwun Tong, Kowloon, Hong Kong, SAR China 852.2500.5365

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 safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

DISCLAIMER: All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. No statement or recommendation shall constitute a representation unless set forth in an agreement signed by officers of seller and manufacturer. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY IS MADE. The following warranty is made in lieu of such warranties and all other warranties, express, implied, or statutory. Products are warranted to be free from defects in material and workmanship at the time sold. The sole obligation of seller and manufacturer under this warranty shall be to replace any noncompliant product at the time sold. Under no circumstances shall manufacturer or seller be liable for any loss, damage or expense, direct, indirect, incidental or consequential, arising out of the inability to use the product. Notwithstanding the foregoing, if products are supplied in response to a customer request that specifies operating parameters beyond those stated above, or if products are used under conditions exceeding said parameters, the customer by acceptance or use thereof assumes all risk of product failure and of all direct, indirect, incidental and consequential damages that may result from use of the products under such conditions, and agrees to exonerate, indemnify, defend and hold harmless MacDermid, Incorporated and its affiliates therefrom. No suggestion for product use nor anything contained herein shall be construed as a recommendation to use any product in a manner that infringes any patent or other intellectual property rights, and seller and manufacturer assume no responsibility or liability for any such infringement.

© 2019 MacDermid, Inc. and its group of companies. All rights reserved. “(R)” and “TM” are registered trademarks or trademarks of MacDermid, Inc. and its group of companies in the United States and/or other countries.