



SURCLEAN

Electronic Production Materials

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ElectroKleen 2020 Aqueous Cleaner - General Description

ElectroKleen 2020 is a high performance Aqueous based cleaner for fast, effective removal of post Solder Flux Residues. It can also be used for the removal of uncured Solder Paste and Adhesive from misprinted PCB's. Because it is free from Surfactants it does not degrade in use. ElectroKleen 2020 is available as a concentrate or pre-diluted ready for use, according to the type of cleaning system and the residues to be removed.

Main Characteristics of ElectroKleen 2020

- 1) Powerful action with the cleaning power of Solvent Cleaners combined with the safety and environmental advantages of Aqueous based materials.
- 2) Wide range of process applications from manual cleaning and batch type methods, through to large automated inline spray type systems. Usable from 40 degree C through to 80 degree C.
- 3) Cleans a wide range of residues and will not foam or leave white residue after rinsing.
- 4) Environmentally safe. ElectroKleen 2020 is free of Surfactants, Inorganic salts and Halogenated Compounds ElectroKleen 2020 is 100% Biodegradable.
- 5) Economical in use. ElectroKleen 2020 is diluted with water.
- 6) Safe and pleasant to use. ElectroKleen 2020 is very low odor, non-flammable and has very low toxicity.

General Process Application Data

ElectroKleen 2020 is designed to use in a four stage process. Typical process times shown will vary according to process and residue characteristics. ElectroKleen 2020 can be used in a contaminated state until residue saturation inhibits cleaning or the first rinse stage is unable to cope with contamination levels. Recirculation of the solution through filters down to 5 microns will extend its working life. In spray type inline systems, topping up is sometimes sufficient to maintain the solution due to carry over losses. Dilution levels of ElectroKleen 2020 concentrate vary according to requirements but are typically a minimum of 15% and up to a maximum of 30% in DI water.

Processing - Stage 1 Cleaning - Immersion Type Systems

Fully immerse work in the cleaning tank. ElectroKleen 2020 must be heated to a min temp of 40 degrees C. A reduction in cleaning time is possible if the temperature is increased up to a maximum of 80 deg. C. Agitation of the solution using spray under immersion or ultrasonic (where allowed) is beneficial. Process times vary according to the residue and cleaning process but are typically 3 to 12 minutes.

Processing - Stage 1 Cleaning - Inline Conveyor Spray Systems

Process times depend on the throughput speed and spray characteristics of the particular equipment but all the process parameters shown for immersion cleaning can be used as a guide. ElectroKleen 2020 does not show tendencies to produce micro aerosols; however process fume extraction should be utilized.

Processing - Stage 2 - Rinse

Rinse using Town water or DI water at ambient temperature. Typical rinse time 3 to 5 minutes.

Processing - Stage 3 - Rinse

Rinse using DI water at ambient temperature. Typical rinse time 3 to 5 minutes.



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Processing - Stage 4 - Drying

Dry using hot air at a minimum temperature of 80 deg. C. Drying time typically 5-10 minutes.



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Cleaning Applications - Residue Types

Residue

Low solids Flux residues
Rosin/Modified Resin based Flux residues
Water Soluble Flux Residues
Misprinted Solder Paste
Uncured Misprinted Adhesive

Cleaning Ability

Very Good
Very Good
Very Good
Good
Acceptable

ElectroKleen 2020 - Physical Characteristics

Relative Density (gms/cubic CM) measured at @ 20 deg. C.	0.92
Surface Tension (mN/m) measured at @ 25 deg. C.	30.0
Boiling Range	93-225
Flash Point	None
Flammability	Non Flammable
Ph. Value	11.5 typ
Operating temperature range	40-80 deg. C.
Solubility in water	Miscible
Typical dilution ratios	15% min. up to 30% max.

Maintenance of ElectroKleen 2020 Solution

ElectroKleen 2020 can be used in a contaminated state until residue saturation levels because either a falloff in cleaning action or the first stage rinse section is no longer able to rinse the cleaning solution and contaminant away. Determining this point is by experience, but heavily contaminated fluid can still work quite acceptably. Contamination levels can be monitored by visual observation and by spot PH testing to determine the level of flux activation acids dissolved within the cleaning solution. By correlating PH readings and observations of cleaning and first stage rinse performance, a repeatable process control procedure can be established allowing timely replenishment of the solution without undue waste.

Disposal Actions

Dispose of in accordance with local authority trade effluent license conditions or by specialist waste collection contractors, e.g. Biffa PLC