



SURCLEAN

Electronic Production Materials

Samuel Whites Industrial Estate, Medina Road, Cowes, Isle of Wight, U.K., PO31 7LP
Tel: +44 (0) 1983 290333 Fax: +44 (0) 1983 295499 email: info@smt.uk.com
www.smt.uk.com

Surclean Screenclean 450 SP and Screenclean 450 PG

Screenclean 450 is a high performance water based micro emulsion cleaner specified for use in automatic Stencil Cleaning machines. It has no flashpoint, is non-flammable, minimal odour, low toxicity, biodegradable, and has a VOC potential of Zero. It is effective at removing both uncured Solder Pastes and Adhesives together with some Inks. SC450 can be used from 20 ~ 45°C becoming more active at the higher temperatures. Use in spray, immersion, ultrasonic and batch type cleaning systems, but not recommended for manual cleaning operations. Specify SC450 SP for solder past removal and SP450 PG when adhesive residues are also to be cleaned.

Supplied in 25Litre Containers

Main Characteristics of Screenclean 450

- 1) Powerful action with the cleaning power of Solvent Cleaners combined with the safety and environmental advantages of water based materials.
- 2) Wide range of process applications from manual cleaning and batch type methods, through to fully automated screen-cleaning systems. Usable from 20 deg. C through to 45 deg. C.
- 3) Cleans a wide range of residues and will not foam or leave white residues after rinsing.
- 4) Environmentally safe. SC 450 is free of Surfactants, Inorganic salts and Halogenated Compounds. SC 450 is classified as an Ultra low VOC content material and it has an ODP potential of 0. Surclean SC 450 is 100% Biodegradable.
- 5) Economical in use. SC 450 is diluted with water for many of the listed applications
- 6) Safe and pleasant to use. SC 450 is very low odour, non-flammable and has very low toxicity.
- 7) Exceptionally good compatibility with Screen and Stencil attachment adhesives. PH neutral formulation prevents damage to Screen and Stencil Frames.

General Process Application Data

Surclean Screenclean 450 is designed for use in a wide range of processes. Process times will vary according to process and residue characteristics. Screenclean 450 can be used in a contaminated state until residue saturation inhibits cleaning or the rinse stage is unable to cope with contamination levels. Recirculation of the solution through filters down to 5 Microns will extend its working life. When diluted the level of Screenclean 450 concentrate will vary according to requirements but is typically a minimum of 15% and up to a maximum of 30% in DI water. Rinsing of Stencils can be carried out using Town water. Rinsing of misprinted PCB's with D.I. water is preferable.

Processing Cleaning in Immersion type systems

Fully immerse Screen in the cleaning tank. SC 450 must be heated to a min. temp. of 20 degrees C. A reduction in cleaning time is possible if the temperature is increased up to a maximum of 45 deg. C. Agitation of the solution using spray under immersion or ultrasonics where available is beneficial. Process times vary according to the residue and cleaning process but are typically 2 to 12 minutes.

Processing Cleaning ~ Spray type 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. SC 450 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 ~ Drying

Dry using re-circulated hot air at 50 ~ 80 deg. C. Drying time typically 5 ~ 10 minutes.

Cleaning Applications ~ residue types

<u>Residue</u>	<u>Cleaning ability</u>
Low solids Flux residues	Acceptable
Rosin/Modified Resin based Flux residues	Good
Water Soluble Flux residues	Good
Misprinted Solder Paste	Very good
Uncured Misprinted Adhesive	Very good

Screenclean 450 ~ 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.	Neutral.
Operating temperature range.	20-45 deg. C
Solubility in water.	Miscible
Typical dilution ratios.	15% min ~ 30% max.

Maintenance of Screenclean 450 Solution

Screenclean 450 can be used in a contaminated state until residue saturation levels cause either a fall off in cleaning action or the 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.