

COMPONENT CLEANING

PRODUCTS: ALUMINUM ELECTROLYTIC CAPACITORS

CLEANING AGENT	CLEANING CONDITIONS	MAXIMUM CLEANING TEMPERATURE
<i>Pine Alpha ST-100S</i> <i>Clean Through 750H, 750L, 710M</i> <i>Sanelek B-12</i> <i>Aqua Cleaner 210SEP</i> <i>Techno Care FRW 14~17</i> <i>Isopropyl Alcohol</i> <i>DI Water Wash</i>	Immersion, Ultrasonic, Vapor, Spraying Or Other Method Total Duration: Less Than 5 Minutes.	+60°C
CFC Substitutes: <i>AK-255AES</i> <i>All Others **</i>	Immersion, Ultrasonic, Vapor, Spraying Or Other Method Total Duration: - SMT Types: 2 Minutes Maximum - Leaded Ultra-miniature* Sizes: 2 Minutes Maximum - Leaded Standard Sizes: 5 Minutes Maximum	+40°C
SPRAY WASHING:	Regarding spray washing, please use caution since the sleeve (on leaded components) may expand or swell from the angle and/or the strength of the spray	
DRYING – BAKING:	After PCB board cleaning process has been completed, the capacitors should be dried using hot air for a minimum of 10 minutes Hot air temperature should not exceed softening temperature (+80°C) of the sleeve Insufficient drying after water rinse may cause appearance problems, such as sleeve shrinkage	

* - NIC Ultra-miniature Series: NSR, NRE-S, NRE-SW, NSRW, NLE, NLE-S, NRE-SN, NRE-SX, NSRZ and NSRN

** - Please review compatibility of all other CFC substitute cleaning solvents with NIC technical team: tpmg@niccomp.com

NOTES:

1. Please monitor for contamination of cleaning agents (*electric conductivity, pH, specific gravity, water content. etc.*) trapped underneath the component or sleeve, and on PCB surface
2. After cleaning, do not store the capacitors in an atmosphere containing the cleaning agent
3. Depending on the cleaning method, the marking on a capacitor may be erased or blurred
4. The following solvents **cannot be used**, as they may damage the components
 - Halogenated solvents; (*potential for component failure due to electrical corrosion*)
 - Alkali based solvents; (*potential for dissolution of aluminum case, as aluminum is weak against alkali*)
 - Petroleum based solvents: (*potential for rubber seal material deterioration and component failure*)
 - Xylene: (*potential for rubber seal material deterioration and component failure*)
 - Acetone: (*potential for damage to sleeve and removal of ink markings*)

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4. (continued) The following solvents **cannot be used**, as they may damage the components

Chlorinated Solvents:

- Methylene Chloride (Dichloromethane)
- 1,1,1-Trichloroethane (legislated phase-out of 1,1,1-trichloroethane occurred in many countries in 1995)
- Perchloroethylene
- Trichloroethylene

Bromide Based Solvents

- n-propyl bromide (alternative for traditional chlorinated solvents)
 - Leksol™ / Solvon™
- 1-Bromopropane

5. **Chlorine-free** flux, adhesives, tapes, coatings and sealants must be used

6. Please ensure to **review cleaning method(s)** of **high voltage** ($\geq 160\text{VDC}$) rated series, and also **low ESR** leaded type product series (i.e. *NRSG*, *NRSH*) with NIC to assure compatibility

Please review cleaning with all other solvents and conditions with NIC TPMG. / Contact: tpmg@niccomp.com