## COMPONENT CLEANING

PRODUCTS: ALUMINUM ELECTROLYTIC CAPACITORS

<table>
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<tr>
<th>CLEANING AGENT</th>
<th>CLEANING CONDITIONS</th>
<th>MAXIMUM CLEANING TEMPERATURE</th>
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<tr>
<td>Pine Alpha ST-100S Clean Through 750H, 750L, 710M Sanelek B-12 Aqua Clean 210SEP Techno Care FRW 14~17 Isopropyl Alcohol DI Water Wash</td>
<td>Immersion, Ultrasonic, Vapor, Spraying Or Other Method <strong>Total Duration:</strong> Less Than 5 Minutes.</td>
<td>+60°C</td>
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</tbody>
</table>
| CFC Substitutes: AK-255AES All Others ** | 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 |

* - 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. The following solvents **cannot be used**, as they could 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)*
     - Methylene Chloride (Dichloromethane)
     - Perchloroethylene
     - Trichloroethylene
     - 1,1,1-Trichloroethane *(legislated phase-out of 1,1,1-trichloroethane occurred in many countries in 1995)*
   - Bromide Based Solvents
     - n-propyl bromide (alternative for traditional chlorinated solvents)
       - Leksol™
       - Solvon™
     - 1-Bromopropane

2. **Chlorine free** flux, adhesives, sealants must be used.
3. Care should be taken when water washing under pressure, to minimize shrinking or swelling of the PET sleeve on leaded components
4. Please ensure to **review cleaning method(s) of high voltage (≥ 160VDC) rated series**, and also **low ESR leaded type product series** *(i.e. NRSJ, NRSG, NRSH, NRSK)* with NIC to assure compatibility

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

ISO 9002 REGISTERED