

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1996
DateRun: 02/27/1996
Experimenters: Jay Jankauskas
ClientType: Electronics Manufacturer
ProjectNumber: Project #1
Substrates: Plastic, Electronics
PartType: Part
Contaminants: Fluxes
Cleaning Methods: Immersion/Soak
Analytical Methods: Visual, microscopic
Purpose: To replace the current Genesolve 2004

Experimental Procedure: The purpose of this trial is to find a replacement chemistry and/or process to replace the current Genesolve 2004 used by Electronics Manufacturer. All chemistries will be tested in a beaker with stir-bar agitation, and all chemistries except the Asashiklin will be tested in the Crest 40kHz Ultrasonic unit. After drying was complete, the parts were analyzed under a microscope for remaining flux, residual cleaning chemistry or detrimental effects to the parts. All parts were then sealed and shipped to David Norton of Electronics Manufacturer for further evaluation.
SUBSTRATE MATERIAL: Electronic Components
CONTAMINANTS: RMA flux
CONTAMINATING PROCESS USED: Received contaminated from Electronics Manufacturer

Results: Although the ultrasonics removed all of the flux for all four chemistries, pitting was noticed on the part's surface. The other three aqueous chemistries did not fare so well under stir-bar agitation.

| Product | Concentration | Temperature | Effective |
|------------------|---------------|-------------|-----------|
| Detergent 8 | 4 | 68 | No |
| Armakleen E 2002 | 4 | 68 | Yes |
| Daraclean 282 GF | 4 | 68 | No |
| Amberclean SC 11 | 4 | 68 | No |
| AK 225 | 100 | 68 | No |

Summary:

| Substrates: | | Plastic, Electronics | | | | |
|-------------------------|------------------|----------------------|-------------|-------------------------------------|---------------|--|
| Contaminants: | | Fluxes | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: | |
| Alconox Inc | Detergent 8 | 4 | | <input type="checkbox"/> | | |
| Church & Dwight Co Inc. | Armakleen E 2002 | 4 | | <input checked="" type="checkbox"/> | | |
| Magnaflux | Daraclean 282 GF | 4 | | <input type="checkbox"/> | | |
| Innovative Organics Inc | Amberclean SC 11 | 4 | | <input type="checkbox"/> | | |
| AGA Chemical | AK 225 | 100 | | <input type="checkbox"/> | | |

Conclusion: The Armakleen E-2002 did an excellent job of removing all flux with just stir-bar agitation in 15 minutes (appeared to perform as good if not better than Asahiklin).