

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 1995
 DateRun: 04/05/1995
 Experimenters: Donald Garlotta
 ClientType: Electrical Manufacturer
 ProjectNumber: Project #1
 Substrates: Aluminum, Gold
 PartType: Part
 Contaminants: Fluxes, Resins/Rosins
 Cleaning Methods: Immersion/Soak
 Analytical Methods: Black light, Visual
 Purpose: Determine effectiveness of three cleaners
 Experimental Procedure: The purpose of this trial is to determine the effectiveness of three different cleaners for the removal of flux for Electrical Manufacturer. Cleaning was performed for fifteen minutes at 160o F in a beaker agitated with a stir-bar. Rinsing was performed in a tap water bath followed by a DI water bath. Both rinses were for 5 minutes at 140 F. The parts were then dried under an air knife for two minutes and in a convection oven for 60 minutes (at 210 F). After drying the parts were visually observed for any residual flux and/or water spotting.
 SUBSTRATE MATERIAL: Gold-Coated Aluminum
 CONTAMINANTS: Rosin Solder Flux
 CONTAMINATING PROCESS USED: received contaminated from Electrical Manufacturer

Results: The black light showed that all the flux was removed from the part cleaned with the Calgon Geo-Guard 2215. There was a problem of water spotting on the parts. Both WR Grace cleaners were ineffective in removing the flux from the parts.

Summary:

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|----------------------|----------------------|-----------------------|--------------------|-------------------------------------|----------------------|
| Substrates: | | Aluminum, Gold | | | |
| Contaminants: | | Fluxes, Resins/Rosins | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Calgon Corporation | Geo Guard 2215 | 4 | 0.00 | <input checked="" type="checkbox"/> | |
| Magnaflux | Daraclean 211 | 10 | 0.00 | <input type="checkbox"/> | |
| Magnaflux | Daraclean 212 | 10 | 0.00 | <input type="checkbox"/> | |

Conclusion: The Geo-Guard 2215 seems to be a suitable chemistry for Electrical Manufacturer's needs. The water spotting could be a big problem, so a new rinsing and drying method needs to be determined.