CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004

DateRun: 04/29/2004

Experimenters: Jason Marshall

ClientType: Capacitor Manufacturer

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate five new products on the third supplied contaminant

Experimental Procedure: Five products were selected based on client request for vapor degreasing solvents. Each product was used at full strength in a 250 ml beaker and heated to 96 F on a hot plate. Fifteen preweighed aluminum coupons were coated with the Nisseki SAS 40 oil (27776-01-8, 612-00-0, 103-29-7, 101-81-5) using a hand held swab. Coupons were weighed a second time to determine the amount of soil added to each coupon. Three coupons were cleaned in each solution for 5 minutes using stir-bar agitation. After cleaning parts were allowed to sit for 10 minutes for drying at room temperature. The coupons were weighed a final time and efficiencies were calculated.

Results: All five products removed over 95% of the second soil. The table lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Ensolv	0.0569	0.0006	98.95
	0.1059	-0.0001	100.09
	0.0999	0.0014	98.60
Ensolv A	0.1933	0.0013	99.33
	0.0908	0.0012	98.68
	0.1631	0.0009	99.45
Metalnox M6960	0.0996	0.0001	99.90
	0.0965	-0.0004	100.41
	0.2437	0.0003	99.88
Flux Remover	0.1656	0.0024	98.55
	0.2004	0.0026	98.70
	0.1183	0.0058	95.10
Heavy DutyDegreaser C	0.1073	0.0030	97.20
	0.0833	0.0031	96.28
	0.0749	0.0048	93.59

Summary:

Substrates:	Aluminum
Contaminants:	Oil

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Enviro Tech International Inc	Ensolv	100	99.21	☑	
Enviro Tech International Inc	Ensolv A	100	99.15	☑	
Kyzen Corporation	Metalnox M6960	100	100.06	☑	
Micro Care	Flux Remover C	100	97.45	☑	
Micro Care	Heavy Duty Degreaser C	100	95.69	☑	

Conclusion: All five products will be tested on the final supplied soil.