CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2002

DateRun: 08/28/2002

Experimenters: Jason Marshall

ClientType: Chemical Company

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Coatings

Cleaning Methods: Ultrasonics

Analytical Methods: Gravimetric

Purpose: To evaluate successful cleaners on fourth contaminant.

Experimental Procedure: The four successful products from the previous trial were again used at full strength and room temperature. An additional product was added to the trial for comparative purposes. All five products were used in 600 ml beakers and degassed for 5 minutes in a Crest 40 kHz ultrasonic tank. Fifteen preweighed coupons were coated with Emerson & Cuming CS-6001 Conductive Silicone (7440-22-4, silicone resin, silicone cross linker) using a hand held swab. Coupons were allowed to sit for 20 minutes and then weighed again. Three coupons were cleaned in each beaker for 5 minutes using ultrasonics. Coupons were rinsed for 15 seconds in a tap water bath at 68 F and dried for 2 minutes using air knives also at 68 F. Once dried, final weights were recorded and efficiencies calculated for each cleaner.

Results: Three of the five products, Both the Bio Chem System products and the Vertec BioSolvents, removed over 90% of the contaminant from the aluminum coupons. The Vertec BioSolvents product did not rinse well under the trial settings. The table below lists the efficiency for each coupon cleaned during the trial.

Table 1. Cleaning Effectiveness

Cleaner	Initial wt	Final wt	% Removed
Bio T Max	0.9493	0.0143	98.49
	1.4445	0.1793	87.59
	1.0391	0.1249	87.98
Solsafe 245	1.1709	0.0064	99.45
	0.2641	0.0035	98.67
	0.7257	0.0067	99.08
DS-108	0.7291	0.1912	73.78
	0.4363	0.0002	99.95
	0.6375	0.2019	68.33
Ionox HC 2	0.9186	0.6132	33.25
	0.9347	0.2912	68.85
	0.5509	0.2851	48.25
VertecBio Gold 2	0.2742	0.0160	94.16
	0.1432	0.0096	93.30
	0.1783	0.0145	91.87

Summary:

Substrates:	Aluminum
Contaminants:	Coatings

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Bio Chem Systems	Bio T Max	100	91.35	☑	
Bio Chem Systems	Solsafe 245	100	99.07	☑	
Dysol	DS 108 Wipe Solvent	100	80.69	☐	
Kyzen Corporation	Ionox HC 2	100	50.11	☐	
Vertec BioSolvents	VertecBio Gold Unscented Part Cleaner	100	93.11	☑	

Conclusion: Please contact the lab to obtain vendor contact information for successful products to be used during pilot testing at client facility.