CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008

DateRun: 07/09/2008

Experimenters: Jason Marshall, Heidi Wilcox, Shweta Bansal

ClientType: Chemical Company

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Resins/Rosins

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To evaluate different cleaning parameters for resin cleaning

Experimental Procedure: The top six products from the previous trials were selected based on successful removal of the resin were used at full strength in 300 ml glass beakers. Solutions were used at room temperature. Twenty-four preweighed aluminum coupons were coated with the Mereco ECN 809 Base Black resin using a swab. Coupons were weighed a second time to determine the amount of soil added. Three coupons were immersed into each product and cleaned for 60 minutes using no agitation. The coupons were not rinsed but were dried using compressed air blow off 30 seconds at room temperature. Final weights were recorded, and efficiencies were calculated. Coupons also were visually analyzed to determine the level of residue left on the coupons.

Results: All of the products removed more than 98% of the resin from the aluminum coupons. The table lists the amount of soil added, the amount remaining after cleaning and the calculated efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed	Visual Residue Rank
EZ Solv	2.3587	0.0384	98.37	2
	1.5218	0.018	98.82	
	2.0437	0.0186	99.09	
Maxi Solv	2.4618	0.0032	99.87	3
	2.9164	0.0015	99.95	
	1.8763	0.0007	99.96	
Graffiti Remover SAC	2.4272	0.0115	99.53	1
	2.2462	0.0151	99.33	
	1.7293	0.0160	99.07	
Green Solutions	2.4350	0.0113	99.54	6
	2.3189	0.0016	99.93	
	2.0206	-0.0016	100.08	
Bio T Max	2.5422	0.0321	98.74	5
	2.4409	0.0210	99.14	
	2.0312	0.0434	97.86	
Smart Solve 605	2.4768	0.0112	99.55	4
	2.7625	0.0126	99.54	
	1.3547	0.0175	98.71	

Summary:

Substrates:	Aluminum				
Contaminants:	Resins/Rosins				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Gemtek Products	SC EZ Solv Safety Solvent	100	98.76	☑	
Gemtek Products	Safe Care (SC) Maxi Solv	100	99.93	☑	
Spartan Chemical Company	Graffiti Remover SAC	100	99.31	☑	
Spartan Chemical Company		100	99.85		

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	Green Solutions Floor Stripper			☑	
Bio Chem Systems	Bio T Max	100	98.58	☑	
United Laboratories International	Smart Solve 605	100	99.27	☑	

Conclusion: All six products will be tested again using tap water rinse and air blow off drying.