CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008

DateRun: 06/23/2008

Experimenters: Jason Marshall, 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 successful products at lower concentration

Experimental Procedure: Two products were selected from the previous trial based on successful removal of the resin and had the ability to be diluted. One product was included based on its similarity to a previously tested product which was not dilutable with water. Each of the three products were used at 50% strength in 300 ml glass beakers. Solutions were used at room temperature. Nine 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 20 minutes using no agitation. Following cleaning, coupons were rinsed for 15 seconds in tap water at 68 F and dried using air blow off for 30 seconds at room temperature. Final weights were recorded, and efficiencies were calculated.

Results: Initial immersion for 20 minutes using the diluted solvents only had marginal success with the Smart Solve 605 working the best at 56.57%. The follow up immersion and single wipe improved the effectiveness of the cleaning solvents, with all three removing more than 85%. The table lists the amount of resin added, the amount remaining and the efficiency for each coupon cleaned using immersion cleaning and the results from the wiping action.

Cleaner	Initial wt	Final wt	% Removed
Smart Solve 605	2.4759	1.5069	39.14
	2.2929	0.8837	61.46
	1.6702	0.5161	69.10
Floor Finish Remover	3.4086	3.0423	10.75
	1.7261	1.0318	40.22
	1.7160	1.2178	29.03
Maxi Solv	3.2685	2.6068	20.24
	2.6387	1.8270	30.76
	2.4476	1.6394	33.02

Additional 5 minute soak with wiping

Cleaner	Initial wt	Final wt	% Removed
Smart Solve 605	1.5069	0.0109	99.28
	0.8837	0.0537	93.92
	0.5161	0.0411	92.04
Floor Finish Remover	3.0423	0.4770	84.32
	1.0318	0.1447	85.98
	1.2178	0.1140	90.64
Maxi Solv	2.6068	0.1178	95.48
	1.8270	0.3517	80.75
	1.6394	0.1857	88.67

Summary:

Substrates:	Aluminum				
Contaminants:	Resins/Rosins				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
	Smart Solve 605	50	95.08	☑	

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United Laboratories International					
Spartan Chemical Company	Green Solutions Floor Stripper	50	86.98	☑	
Gemtek Products	Safe Care (SC) Maxi Solv	50	88.30	☑	

Conclusion: The same three dilutable products will be tested at longer times without the wipe.