CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006

DateRun: 11/07/2006

Experimenters: Jason Marshall

ClientType: Lab

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Carbon Deposits, Greases, Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative aerosol cleaning products

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning.

Thirteen products were selected for testing based on soil removal. Six products were diluted to ~15% using DI water and one was used at 10%. The other six products were used at full strength in 250 ml beakers. Products were used at room temperature. Thirteen preweighed aluminum coupons were coated with a collection of brake/engine soil collected from an automobile shop. The coupons were allowed to sit for several days before a second weight was recorded. One coupons was cleaned in each solution for 5 minutes using no agitation. Coupons were then rinsed in tap water for 15 seconds and dried using air blow off at room temperature for 30 seconds. Following drying, final weights were recorded and cleaning efficiencies were calculated.

Testing was conducted as a preliminary screening and did not follow the triplicate testing process normally followed.

Results: Five of the thirteen products removed over 65% of the soil mix from the individual coupons. Two products removed just over 40%. These seven products were considered acceptable for continued testing. The table below lists the amount of soil added, the amount remaining and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
278 Super Solv	0.3734	0.2160	42.15
DS 104	0.3992	0.0926	76.80
D Greeze 500 Lo	0.2893	0.0413	85.72
Soy Solv	0.4111	0.3197	22.23
Soy Solv II	0.3262	0.2970	8.95
Soy Solv II Plus	0.4247	0.4147	2.35
Harvest Gold 2002	0.3457	0.1024	70.38
Soy Cleaner Kitchen/Bath	0.3146	0.3236	-2.86
Cleaner & Degreaser	0.2783	0.2779	0.14
Formula T	0.1094	0.0807	26.23
SC Maxisolv	0.1845	0.1059	42.60
Eliminator	0.1555	0.0418	73.12
Sea Wash Blue	0.4399	0.1369	68.88

Summary:

Substrates:	Aluminum
Contaminants:	Carbon Deposits, Greases, Oil

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
AW Chesterton	278 Super Solv	10	42.15	☑	
Dysol	DS 104 Wipe Solvent	100	76.80	☑	
Transene Company, Inc.	D Greeze 500 LO	100	85.72	☑	
Soysolv Industrial Products	Soysolv industrial solvent	17	22.23	☐	
Soysolv Industrial Products	Soysolv II solvent	100	8.95	☐	
Soysolv Industrial Products	Soysolv II sovent Plus	17	2.35	☐	

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United Laboratories International	United 2002 Harvest Gold	100	70.37	☑	
Bi-O-Kleen Industries	Soy Cream Cleaner	17	-2.86	☐	
Bi-O-Kleen Industries	Citrus Soy Solvent Cleaner & Degreaser	17	0.14	☐	
Finger Lakes Chemical	Formula T	100	26.23	☐	
Gemtek Products	Safe Care (SC) Maxi Solv	100	42.60	☑	
Phase III Inc	Eliminator	17	73.12	☑	
Warren Chemical Company	Sea Wash Blue	17	68.88	☑	

Conclusion: The products that showed good cleaning abilities in the preliminary testing phase will be evaluated further.