CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2009
DateRun:	02/09/2009
Experimenters:	Johanna Oviedo
ClientType:	Lab
ProjectNumber:	Project #1
Substrates:	Plastic
PartType:	Coupon
Contaminants:	Inks
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric
Purpose:	To remove graphite from plastic surfaces
Experimental Procedure:	Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning. Products were selected based on the compatibility of substrate and for removal of the contaminant. Ten percent concentrations were used and heated the samples at 130F. The coupons were immersed in a product for 5 minutes, rinsed in tap water at 120 F and dried using compressed air at room temperature. Coupons were coated with graphite using a handheld swab and allowed to dry for 120 minutes at room temperature. The contaminated coupons were weighed again to determine the amount of soil added. After cleaning process, the final weights were recorded, efficiencies were calculated and recorded.

Results:

Cleaner	Initial wt	Final wt	% Removed
Sea wash			
	0.0083	0.0078	6.02
	0.0067	0.0049	26.87
	1.0046	0.0038	99.62
Simple Green			
	0.0044	0.0041	6.82
	0.0073	0.0080	-9.59
	0.0038	0.0031	18.42
Micro 90			
	0.0037	0.0090	-143.24
	0.0049	0.0052	-6.12
	0.0061	0.0083	-36.07
Sc Aircraft &Metal			
	0.0020	0.0018	10.00
	0.0054	0.0052	3.70
	0.0083	0.0404	-386.75
Sky Gold 1000			
	-0.9965	0.0297	102.98
	0.0074	0.0638	-762.16
	0.0076	0.0185	-143.42
Maxisolv			
	0.0035	0.0098	-180.00
	0.0091	0.0125	-37.36
	0.0033	0.0062	-87.88
SWR One			
	0.0038	0.1547	3971.05
	0.0035	-0.1436	4202.86
	0.0126	0.0143	-13.49

Summary:

Substrates:	Plastic				
Contaminants:	Inks				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**

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Warren Chemical Company	Sea Wash Cleaner	10	44.17	☐	
Simple Green	Simple Green D	10	5.22	☐	
International Products Corporation	Micro 90 Conc.	10	-61.81	☐	
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	10	-124.35	☐	
AG Environmental Products	Soy Gold 1000	10	-267.53	☐	
Gemtek Products	Safe Care (SC) Maxi Solv	10	-101.75	☐	
SWR Corporation	SWR One	10	72.75	☐	

Conclusion: Results were inconclusive with many of the products have erratic removal rates.