

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008
 DateRun: 06/17/2008
 Experimenters: Shweta Bansal
 ClientType: Lab
 ProjectNumber: Project #1
 Substrates: Stainless Steel
 PartType: Coupon
 Contaminants: Oil
 Cleaning Methods: Ultrasonics
 Analytical Methods: Gravimetric

Purpose: To remove maintenance soil from stainless steel using ultrasonic cleaning

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. Five percent concentrations were used and heated the samples at 104 F. The coupons were cleaned in a product for 20 minutes using ultrasonic cleaning, rinsed with tap water at 105 F and dried at room temperature using compressed air blow off. Coupons were coated with used maintenance soil using a handheld swab and allowed to dry for 20 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
Inproclean 3800			
	0.1008	0.0188	81.35
	0.1001	0.0128	87.21
	0.0943	0.0187	80.17
Polyspray Jet 790 XS			
	0.0926	0.1061	-14.58
	0.1650	0.0592	64.12
	0.1280	0.0211	83.52
Micro 90			
	0.0781	0.0189	75.80
	0.0975	0.0442	54.67
	0.1504	0.0272	81.91
Shopmaster LpH			
	0.1253	0.0643	48.68
	0.1129	0.0957	15.23
	0.1067	0.0457	57.17
BG Solve 717			
	0.1062	0.0228	78.53
	0.0995	0.0515	48.24
	0.1066	0.1016	4.69
Hurrisafe 9450			
	0.1322	0.0587	55.60
	0.1010	0.0634	37.23
	0.1070	0.0698	34.77
Daraclean 282 GF			
	0.1254	0.0749	40.27
	0.1126	0.0809	28.15
	0.0970	0.0527	45.67

Summary:

Substrates:	Stainless Steel				
Contaminants:	Oil				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:

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Oakite Products	Inproclean 3800	5	82.91	<input type="checkbox"/>	
US Polychem Corporation	Polyspray Jet 790 XS	5	44.35	<input type="checkbox"/>	
International Products Corporation	Micro 90 Conc.	5	70.79	<input type="checkbox"/>	
Buckeye International	Shopmaster LPH	5	40.36	<input type="checkbox"/>	
BioGenesis Enterprises Inc	BG Solv 717 Ink & Graffiti Cleaner	5	43.82	<input type="checkbox"/>	
PCI of America	Hurrisafe 9450	5	44.27	<input type="checkbox"/>	
Magnaflux	Daraclean 282 GF	5	38.03	<input type="checkbox"/>	

Conclusion: No product removed over 85%. Inproclean 3800 removed about 83%.