

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004
 DateRun: 07/11/2004
 Experimenters: Jason Marshall, Heidi Wilcox, Andy Harris
 ClientType: Metal Finishing
 ProjectNumber: Project #2
 Substrates: Aluminum
 PartType: Coupon
 Contaminants: Coatings
 Cleaning Methods: Immersion/Soak
 Analytical Methods: Gravimetric
 Purpose: To evaluate successful products on the second supplied contaminant.

Experimental Procedure: Five cleaners were selected from the previous trial. All products were diluted to 5% using DI water in 600 ml beakers. All nine products were heated to 120 F on a hot plate. Fifteen preweighed aluminum coupons were coated with client supplied coating, Castrol Industries Rustilo DW 924 (64742-88-7, 64742-95-6, 64741-89-5, 64741-97-5, 64742-53-6, 95-63-6), using a hand held swab and then weighed a second time to determine the amount of soil added. Three coupons were cleaned in each solution for 5 minutes using stir-bar agitation. Coupons were rinsed in tap water for 15 seconds at 120 F, followed by air blow off at room temperature. Once dry, coupons were weighed a final time and efficiencies for each cleaner were calculated.

Results: All five products removed over 99% of the rust preventative coating. 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
Beyond 2004	0.2034	-0.0013	100.64
	0.1339	0.0001	99.93
	0.1758	0.0002	99.89
Aeromaster	0.1281	0.0007	99.45
	0.1751	0.0004	99.77
	0.1752	0.0004	99.77
1400 GD	0.3453	0.0001	99.97
	0.2659	-0.0003	100.11
	0.2920	-0.0004	100.14
M Aero	0.2214	-0.0003	100.14
	0.2546	-0.0007	100.27
	0.1804	-0.0002	100.11
815 QR	0.2150	-0.0002	100.09
	0.1106	-0.0002	100.18
	0.2082	-0.0003	100.14

Summary:

Substrates:	Aluminum				
Contaminants:	Coatings				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Today & Beyond	Beyond 2004	5	100.15	<input checked="" type="checkbox"/>	
Buckeye International	Aeromaster	5	99.67	<input checked="" type="checkbox"/>	
Brulin Corporation	Aquavantage 1400	5	100.07	<input checked="" type="checkbox"/>	
Church & Dwight Co Inc.	Armakleen M Aero NS	5	100.17	<input checked="" type="checkbox"/>	
Brulin Corporation	815 QR	5	100.14	<input checked="" type="checkbox"/>	

Conclusion: The same five products will be used on the third supplied contaminant under the same conditions.