

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004
DateRun: 05/28/2004
Experimenters: Jason Marshall
ClientType: Lab
ProjectNumber: Project #1
Substrates: Sterling/Silver
PartType: Coupon
Contaminants: Oil
Cleaning Methods: Vapor Degreasing
Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative cleaning products

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning. Two hundred fifty milliliters of each product were used at full strength in a 4000 ml beaker and heated to its boiling point on a hot plate. Preweighed aluminum coupons were coated with the Houghton International Cindol 3401 oil (64742-46-7) using a handheld swab. Coupons were weighed a second time to determine the amount of soil added to each coupon. Three coupons were cleaned in each solution for 5 minutes using vapor degreasing. After cooling to room temperature, the coupons were weighed a final time and efficiencies were calculated.

Results:

Summary:

Substrates:		Sterling/Silver				
Contaminants:		Oil				
Company Name:		Product Name:	Conc.:	Efficiency:	Effective:	Observations:
AGA Chemical		AK 225	100	99.14	<input checked="" type="checkbox"/>	
DuPont		Vertrel CCA	100	99.68	<input checked="" type="checkbox"/>	
DuPont		Vertrel MCA	100	100.01	<input checked="" type="checkbox"/>	
Micro Care		Heavy Duty Degreaser C	100	100.37	<input checked="" type="checkbox"/>	
Micro Care		Flux Remover C	100	100.55	<input checked="" type="checkbox"/>	
3M		HFE 7100	100	99.96	<input checked="" type="checkbox"/>	
3M		HFE 7200	100	98.92	<input checked="" type="checkbox"/>	
Enviro Tech International Inc		Ensolv	100	99.71	<input checked="" type="checkbox"/>	
Enviro Tech International Inc		Ensolv A	100	99.13	<input checked="" type="checkbox"/>	
Kyzen Corporation		Metalnox M6960	100	99.08	<input checked="" type="checkbox"/>	
Poly Systems USA Inc		Solvon Kreussler PB	100	99.87	<input checked="" type="checkbox"/>	
Poly Systems USA Inc		Solvon Kreussler IP	100	99.71	<input checked="" type="checkbox"/>	
Dow Chemical Company		OS 10	100	99.73	<input checked="" type="checkbox"/>	
Dow Chemical Company		OS 20	100	99.14	<input checked="" type="checkbox"/>	
Dow Chemical Company		OS 30	100	89.55	<input checked="" type="checkbox"/>	

Conclusion: All fifteen products removed over 85%.