

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004  
 DateRun: 05/28/2004  
 Experimenters: Jason Marshall  
 ClientType: Lab  
 ProjectNumber: Project #1  
 Substrates: Aluminum  
 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 Cargill, Inc Canola Oil (120962-03-0) 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:

<b>Substrates:</b>	Aluminum				
<b>Contaminants:</b>	Oil				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
AGA Chemical	AK 225	100	99.66	<input checked="" type="checkbox"/>	
DuPont	Vertrel CCA	100	99.71	<input checked="" type="checkbox"/>	
DuPont	Vertrel MCA	100	98.53	<input checked="" type="checkbox"/>	
Micro Care	Heavy Duty Degreaser C	100	99.98	<input checked="" type="checkbox"/>	
Micro Care	Flux Remover C	100	99.50	<input checked="" type="checkbox"/>	
3M	HFE 7100	100	87.96	<input checked="" type="checkbox"/>	
3M	HFE 7200	100	93.27	<input checked="" type="checkbox"/>	
Enviro Tech International Inc	Ensolv A	100	100.05	<input checked="" type="checkbox"/>	
Kyzen Corporation	Metalnox M6960	100	99.91	<input checked="" type="checkbox"/>	
Poly Systems USA Inc	Solvon Kreussler PB	100	99.91	<input checked="" type="checkbox"/>	
Poly Systems USA Inc	Solvon Kreussler IP	100	100.04	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 10	100	99.33	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 20	100	95.89	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 30	100	90.38	<input checked="" type="checkbox"/>	

Conclusion: All fourteen products removed over 85%.