

# 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 Nisseki SAS 40 oil (27776-01-8, 612-00-0, 103-29-7, 101-81-5) 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				
<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>	
AGA Chemical	AK 225	100	99.64	<input checked="" type="checkbox"/>		
DuPont	Vertrel CCA	100	98.70	<input checked="" type="checkbox"/>		
DuPont	Vertrel MCA	100	99.32	<input checked="" type="checkbox"/>		
Micro Care	Heavy Duty Degreaser C	100	100.13	<input checked="" type="checkbox"/>		
Micro Care	Flux Remover C	100	100.01	<input checked="" type="checkbox"/>		
3M	HFE 7100	100	94.64	<input checked="" type="checkbox"/>		
3M	HFE 7200	100	98.22	<input checked="" type="checkbox"/>		
Enviro Tech International Inc	Ensolv A	100	99.99	<input checked="" type="checkbox"/>		
Kyzen Corporation	Metalnox M6960	100	100.47	<input checked="" type="checkbox"/>		
Poly Systems USA Inc	Solvon Kreussler PB	100	99.80	<input checked="" type="checkbox"/>		
Poly Systems USA Inc	Solvon Kreussler IP	100	100.20	<input checked="" type="checkbox"/>		
Dow Chemical Company	OS 10	100	100.06	<input checked="" type="checkbox"/>		
Dow Chemical Company	OS 20	100	98.36	<input checked="" type="checkbox"/>		
Dow Chemical Company	OS 30	100	91.97	<input checked="" type="checkbox"/>		

Conclusion: All fourteen of the products removed over 85%.