

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004
 DateRun: 05/25/2004
 Experimenters: Jason Marshall
 ClientType: Lab
 ProjectNumber: Project #1
 Substrates: Aluminum
 PartType: Coupon
 Contaminants: Oil
 Cleaning Methods: Immersion/Soak
 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. Each product was used at full strength in a 250 ml beaker and heated to 96 F on a hot plate. Fifteen 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 stir-bar agitation. After cleaning parts were allowed to sit for 10 minutes for drying at room temperature. The coupons were weighed a final time and efficiencies were calculated.

Results:

Cleaner	Initial wt	Final wt	% Removed
Solvon PB	0.0826	0.0033	96.00
	0.1322	0.0015	98.87
	0.1582	0.0021	98.67
Solvon IP	0.0777	0.0029	96.27
	0.1685	0.0021	98.75
	0.1965	0.0041	97.91
OS 10	0.1755	0.0020	98.86
	0.0714	0.0022	96.92
	0.1539	-0.0017	101.10
OS 20	0.1155	0.0003	99.74
	0.2157	0.0002	99.91
	0.1126	0.0010	99.11
OS 30	0.0787	0.0153	80.56
	0.1285	0.0139	89.18
	0.1051	0.0216	79.45

Summary:

Substrates:	Aluminum				
Contaminants:	Oil				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Poly Systems USA Inc	Solvon Kreussler PB	100	97.85	<input checked="" type="checkbox"/>	
Poly Systems USA Inc	Solvon Kreussler IP	100	97.64	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 10	100	98.96	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 20	100	99.59	<input checked="" type="checkbox"/>	
Dow Chemical Company	OS 30	100	83.06	<input type="checkbox"/>	

Conclusion: Four of the five products removed over 85%.