

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2005
DateRun: 11/10/2005
Experimenters: Jason Marshall
ClientType: Lab
ProjectNumber: Project #1
Substrates: Aluminum
PartType: Coupon
Contaminants: Lubricating/Lapping Oils
Cleaning Methods: Low Pressure Spray
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. Six preweighed aluminum coupons were coated with Keystone Nevastane 6 Food Machinery Lubricating Oil (64742-47-8, 8042-47-5, 9003-29-6) by spray application and wiping with a handheld swab. Coupons were reweighed to determine the amount of soil added. Two aqueous products were diluted to 5% using DI water and were placed in a 500 ml glass bottle. An adapter designed to convert the liquid solution into a spray aerosol was used in conjunction with Crown Spra-Tool (propane and isobutane) as the propellant. Each aqueous product was used for about 1 minute at room temperature. After cleaning coupons were allowed to air dry for 30 minutes at room temperature. At the end of drying, final weights were recorded, and removal efficiencies were calculated for each coupon cleaned.

Results: The Brulin Corp product removed over 75% of the lubricant using the aerosol application technique. The other product removed less than 30%. The table lists the amount of soil added, the amount remaining and the efficiency.

Cleaner	Initial wt	Final wt	% Removed
KPC 820 N	0.1403	0.1143	18.53
	0.1791	0.1165	34.95
	0.1495	0.1033	30.90
815 GD	0.3361	0.0606	81.97
	0.2877	0.0703	75.56
	0.2703	0.0711	73.70

Summary:

Substrates:		Aluminum			
Contaminants:		Lubricating/Lapping Oils			
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
AW Chesterton	KPC 820 N	5	28.10	<input type="checkbox"/>	Aersol deilvery
Brulin Corporation	Formula 815 GD	5	77.10	<input type="checkbox"/>	Aerosol deilvery

Conclusion: One product showed moderate success as an aerosol cleaner.