CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008

DateRun: 02/21/2008

Experimenters: Heidi Wilcox, Shweta Bansal

ClientType: Electronics Manufacturer

ProjectNumber: Project #1

Substrates: Copper

PartType: Coupon

Contaminants: Cutting/Tapping Fluids

Cleaning Methods: Mechanical Agitation

Analytical Methods: Gravimetric

Purpose: To evaluate products on second supplied cutting fluid

Experimental Procedure: Four new product samples of solvents used for hand dipping applications at room temperature were chosen. Twelve preweighed coupons were coated with Master Chemical Corporation Trim Sol sf (8002-05-9, 61789-85-3, 68410-99-1, 68991-48-0, 68603-15-6) cutting fluid using a hand held swab. The contaminated coupons were weighed a second time to determine the amount of soil added. Three coupons were immersed into each cleaning solution and manual raised and lowered in the cleaning solution to provide minimal mechanical agitation. After one minute of cleaning, the coupons were removed and dried for 30 seconds using compressed air at room temperature. Following air drying, the coupons were weighed a final time to determine the amount of soil remaining. Efficiency for each coupon was determined and average cleaning results for each product were calculated.

Results: All four products removed over 99% of the cutting fluid within one minute. The table below lists the amount of soil added, the amount remaining and the affiance for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Dysol 104	0.1174	0.0000	100.00
	0.0808	0.0002	99.75
	0.0932	0.0001	99.89
Dysol 108	0.1227	0.0001	99.92
	0.0632	-0.0001	100.16
	0.1578	0.0001	99.94
Dysol 144	0.0614	0.0002	99.67
	0.1348	0.0002	99.85
	0.1096	0.0002	99.82
Dysol 800	0.0159	0.0000	100.00
	0.1068	0.0003	99.72
	0.1106	0.0002	99.82

Summary:

Substrates:	Copper				
Contaminants:	Cutting/Tapping Fluids				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Dysol	DS 104 Wipe Solvent	100	99.88	☑	
Dysol	DS 108 Wipe Solvent	100	100.00	☑	
Dysol	DS 144S Wipe Solvent	100	99.78	☑	
Dysol	DS 800 Solvent	100	99.85	☑	

Conclusion: All four products removed over 98% of the contaminant. The top products will be used on supplied parts and other client supplied soils.