CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2007

DateRun: 03/11/2007

Experimenters: Jason Marshall, Shweta Bansal

ClientType: Consultant

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Coatings, Oil

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: Retest one of the four azeotrope at the corrected concentration.

Experimental Procedure: The supplied solvent was mixed with DI water in 600 ml beakers to obtain a binary azeotrope. Methyl Acetate (MeOAc) was mixed with water (5% water) and heated to 56.1 C on a hot plate.

Three preweighed aluminum coupons were coated with Castrol Quench G oil (64742-55-8, 64742-65-0, 8052-42-4), three with Cargill Inc Canola Oil (120962-03-0), three with CP Hall Co Plasthall Eso oil (8013-07-8) and three with Soltex Polybutene 32 (9003-29-6) with a hand held swab. Coupons were weighed again to determine the amount of oil applied. The coupons were cleaned in the azeotrope for five minutes at the boiling point, rinsed for 15 seconds in 120 F tap water and dried for 30 seconds using compressed air at room temperature. Coupons were weighed a third time to determine the amount of oil remaining. Efficiencies were calculated and recorded.

Results: The methyl acetate mix at 95% worked well on all four soils. The lowest removal was for the fourth soil, removing just under 95%.

Soil	Initial wt	Final wt	% Removed
Quench G Oil	0.2824	0.0005	99.82
	0.2975	0.0004	99.87
	0.3315	0.0002	99.94
Cannola Oil	0.2829	0.0029	98.97
	0.3391	0.0012	99.65
	0.4125	0.0011	99.73
Plasthall Eso Oil	0.1600	0.0075	95.31
	0.7802	0.0043	99.45
	0.8637	0.0046	99.47
Soltex Polybutene 32	1.2209	0.0781	93.60
	1.1483	0.1052	90.84
	0.9851	0.0114	98.84

Summary:

Substrates:	Aluminum				
Contaminants:	Coatings, Oil				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
No Specific Vendor	Methyl Acetate-water	95	97.96	☑	

Conclusion: The methyl acetate mix boiled at the expected range and resulted in being effective for all four soils.