CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2005

DateRun: 03/14/2005

Experimenters: Jason Marshall, Heidi Wilcox

ClientType: Wire & Cable Mfr

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Mold Releases, Resins/Rosins

Cleaning Methods: Immersion/Soak

Analytical Methods: Visual

Purpose: To identify alternatives for first process with mold release agents and resin

Experimental Procedure: Ten cleaners were selected from the laboratories database of testing. One additional product were selected based on client input. Seven products were diluted to 5% by volume in 600 ml glass beakers using DI water. The remaining four products were used at full strength. Products were used at room temperature.

Thirty-three preweighed coupons were first coated with Valspar MR 225 mold release (100-41-4, 1330-20-7, 8052-41-3, 67-63-0, 108-88-3, 110-82-7, 64742-89-8), followed by a second coating with Valspar MR 225 Aerosol (75-28-5, 74-98-6, 100-41-4, 75-09-2). Finally, the coupons were coated with ITW Philadelphia Resins Chockfast Orange Resin (25068-38-6). The coupons were placed into a convection oven at 150 F and allowed to cure overnight. After the coupons were cooled to room temperature, a second set of weights were recorded to determine the amount of contaminants were added.

Three coupons were cleaned in each product for five minutes using stir-bar agitation. After cleaning the coupons were removed and dried using compressed air at room temperature. Final weights were to be recorded after coupons were dry. Observations were made and recorded.

Results: After running the trial for the aqueous based products, it was observed that surface of the resin/mold release agents were not affected. The semi-aqueous products had more success in removing the resin from the coupons.
Final weights were not recorded after visual inspection of the aqueous cleaned coupons. The semi-aqueous products were found to be effective when the coupons were wiped with a paper towel after the soaking.

Manufacturer	Products	Observations
Brulin Corp	Aquavantage 1400	No change
Buckeye International	Shopmaster LpH	No change
Mangaflux	Daraclean 282	No change
Today & Beyond	Beyond 2006	No change
Gemtek Products	SC Aircraft-Metal	No change
Innovative Organics	Amberclean L12	No change
Crest Ultrasonics	Crest 211 (client supplied)	No change
Soysolv Industrial	SoySolv II	Some removal after wiping
Kyzen Corp	Ionox HC2	More removal
Bio Chem Systems	Bio T Max	Some removal
Florida Chemical	Citrus Burst 7	Tacky with some removal

When the coupons were allowed to soak in the semi-aqueous products overnight, the resin peeled off the aluminum coupons in a single sheet.

Summary:

Substrates:	Aluminum				
Contaminants:	Mold Releases, Resins/Rosins				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**

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Brulin Corporation	Aquavantage 1400	5	0.00	☐	
Buckeye International	Shopmaster LPH	5	0.00	☐	
Magnaflux	Daraclean 282	5	0.00	☐	
Today & Beyond	Beyond 2006	5	0.00	☐	
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	0.00	☐	
Innovative Organics Inc	Amberclean L 12	5	0.00	☐	
Soysolv Industrial Products	Soysolv II solvent	100	0.00	☑	
Kyzen Corporation	Ionox HC 2	100	0.00	☑	
Bio Chem Systems	Bio T Max	100	0.00	☑	
Florida Chemical Company	Citrus Burst 7	100	0.00	☑	

Conclusion: The testing will be repeated for the aqueous products but no resin will be applied to the mold release agent on the coupons.