CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2005

DateRun: 05/05/2005

Experimenters: Heidi Wilcox

ClientType: Wire & Cable Mfr

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Mold Releases, Resins/Rosins

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To re-evaluate products using heated immersion.

Experimental Procedure: Four products selected from previous testing. The products were used at full strength. Products were heated to 120 F on a hot plate. Twelve 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). 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 thin strip of Chockfast Orange Resin was applied and allowed to dry. A second set of weights were recorded to determine the amount of contaminant that was 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: Three of the 4 products, DS 104, SC MaxiSolv & DEB 5, removed the resin with a heated immersion. With air blow off and a wipe the resin seemed to be lifted off the coupon. The end weights do not all reflect 100% removal due to being mostly concerned with the resin removal. The coupons were not wiped down before final weighing to remove all the mold release. This is not an issue since it was shown in experiment 3 that these products removed the mold release effectively. The next step is to try the Bio T Max in heated ultrasonics to see if it can remove the resin. We know from experiment 3 that it removed the mold releases.

Cleaner	Initial wt	Final wt	% Removed
Bio T Max	0.1004	0.0707	29.58
	0.0984	0.0752	23.58
	0.0754	0.0438	41.91
DS 104	0.0774	-0.0005	100.65
	0.0633	-0.0006	100.95
	0.0539	-0.0001	100.19
MaxiSolv	0.1024	0.0228	77.73
	0.0616	0.0236	61.69
	0.0472	0.0026	94.49
DBE 5	0.0500	0.0229	54.20
	0.0534	0.0352	34.08
	0.0864	0.0357	58.68

Summary:

Substrates:	Aluminum				
Contaminants:	Mold Releases, Resins/Rosins				
Company Name:	**Product Name:**	**Conc.:**	**Efficiency:**	**Effective:**	**Observations:**
Bio Chem Systems	Bio T Max	100	31.69	☐	
Dysol	DS 104 Wipe Solvent	100	100.59	☑	
Gemtek Products	Safe Care (SC) Maxi Solv	100	77.97	☑	
Invista S.a.r.l	Flexisolv DBE 5 ester	10	48.99	☑	

Conclusion: Three of the four products worked and are deemed effective in removing the mold release per experiment 3 and the resin per this experiment.