

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2005
 DateRun: 03/28/2005
 Experimenters: Heidi Wilcox
 ClientType: Wire & Cable Mfr
 ProjectNumber: Project #1
 Substrates: Aluminum
 PartType: Coupon
 Contaminants: Mold Releases
 Cleaning Methods: Immersion/Soak
 Analytical Methods: Gravimetric
 Purpose: To re-evaluate products for removing mold release agents only

Experimental Procedure: Eight products selected from the lab's database. Two additional product were selected based on client input. Nine products were diluted to 5% by volume in 600 ml glass beakers using DI water. The remaining product was used at full strength. Products were used at room temperature.

Thirty 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 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: Cleaning the mold release agents in immersion cleaning did not yield any successful products. The table below lists the amount of soil added, the amount remaining after cleaning and the efficiency for each coupon cleaned.

Cleaner	Initial wt	Final wt	% Removed
Aquavantage 1400	0.0541	0.0546	-0.92
	0.0395	0.0400	-1.27
	0.0518	0.0523	-0.97
Shopmaster LpH	0.0367	0.0374	-1.91
	0.0410	0.0413	-0.73
	0.0503	0.0515	-2.39
Daraclean 282	0.0382	0.0394	-3.14
	0.0402	0.0406	-1.00
	0.0397	0.0414	-4.28
Beyond 2006	0.0338	0.0349	-3.25
	0.0526	0.0540	-2.66
	0.0342	0.0359	-4.97
Polyspray Jet 790 XS	0.0207	0.0209	-0.97
	0.0294	0.0302	-2.72
	0.0246	0.0249	-1.22
Crest 211	0.0447	0.0443	0.89
	0.0418	0.0426	-1.91
	0.0270	0.0272	-0.74
SC Aircraft 7 Metal	0.0426	0.0425	0.23
	0.0343	0.0353	-2.92
	0.0315	0.0310	1.59
Amberclen L12	0.0282	0.0287	-1.77
	0.0175	0.0181	-3.43
	0.0254	0.0255	-0.39
Crest 14	0.0375	0.0376	-0.27

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	0.0320	0.0310	3.13
	0.0218	0.0211	3.21
Ionox HC 2	0.0426	0.0445	-4.46
	0.0322	0.0402	-24.84
	0.0230	0.0292	-26.96

Summary:

Substrates:	Aluminum				
Contaminants:	Mold Releases				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Brulin Corporation	Aquavantage 1400	5	-1.05	<input type="checkbox"/>	
Buckeye International	Shopmaster LPH	5	-1.67	<input type="checkbox"/>	
Magnaflux	Daraclean 282	5	-2.81	<input type="checkbox"/>	
Today & Beyond	Beyond 2006	5	-3.63	<input type="checkbox"/>	
US Polychem Corporation	Polyspray Jet 790 XS	5	-1.64	<input type="checkbox"/>	
Crest Ultrasonics	Crest 211	5	-0.59	<input type="checkbox"/>	
Crest Ultrasonics	Crest 14	5	-0.36	<input type="checkbox"/>	
Gemtek Products	SC Aircraft & Metal Cleaner Super Concentrate	5	-1.87	<input type="checkbox"/>	
Innovative Organics Inc	Amberclean L 12	5	2.02	<input type="checkbox"/>	
Kyzen Corporation	Ionox HC 2	100	-18.75	<input type="checkbox"/>	

Conclusion:

The same ten products will be evaluated using heated ultrasonic cleaning.