CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2008
DateRun:	03/02/2008
Experimenters:	Jason Marshall
ClientType:	Aluminum Anodizing Job Shop
ProjectNumber:	Project #2
Substrates:	Aluminum
PartType:	Coupon
Contaminants:	Coatings
Cleaning Methods:	Immersion/Soak
Analytical Methods:	Gravimetric, Visual
Purpose:	To evaluate non-aqueous alternatives for removing the supplied lacquer
Experimental Procedure:	Seven additional products were selected from the lab's on-line database, www.cleanersolutions.org, based on past testing results matching client supplied information. All of these products were used at full strength as recommended by the vendor. All eight products were used at room temperature. Twenty-one preweighed 5052 Aluminum coupons were coated with the Stan Chem Inc Red Stop Off (78-93-3, 108-88-3) lacquer using a handheld swab. The coating was allowed to dry for about an hour. Once dry, the coupons were weighed a second time to determine the amount of Red Stop Off applied. Three coupons were immersed into each solution and cleaned for 5 minutes using stir-bar agitation. Rinsing was performed for 15 seconds using tap water heated to 120 F and followed by 30 seconds of air blow off with dry compressed air at room temperature. Final weights were recorded and efficiencies were calculated for each coupon cleaned.
Results:	As was the case for the Ink Zapper, nearly all of these products showed visual signs of removing the red lacquer but had negative cleaning efficiencies. The negative number implies that the solutions were being absorbed into the lacquer, increasing the final weights above the initial dirty weights. Visually inspecting the cleaning solutions revealed that several of the products had turned different shades of red during the 5 minutes of cleaning. The table below lists the amount of lacquer added, the amount remaining, the cleaning efficiencies and observations made for each product.

Cleaner	Initial wt	Final wt	% Removed	Solution color	Visual Rank
DS 144 S	0.1954	0.1964	-0.51		
	0.2292	0.2298	-0.26	light pink	3
	0.1571	0.1574	-0.19		
DS 800	0.2582	0.2556	1.01		
	0.1624	0.1590	2.09	no change	7
	0.3013	0.2924	2.95		
Solsafe 245	0.3884	0.3914	-0.77		
	0.1490	0.1553	-4.23	pink	2
	0.2428	0.2488	-2.47		
SC Actisolv	0.2466	0.3059	-24.05		
	0.2067	0.2675	-29.41	slight pink	5
	0.3266	0.3856	-18.06		
D Greeze 500 Lo	0.1272	0.1503	-18.16		
	0.2409	0.2668	-10.75	slight pink	4
	0.1336	0.1422	-6.44		
Shopmaster RC	0.3005	0.6950	-131.28		
	0.2065	0.4678	-126.54	red	1
	0.2224	0.5364	-141.19		
Soy Clear 1500	0.3100	0.3293	-6.23		
	0.2665	0.2934	-10.09	no change	6

CLEANING LABORATORY EVALUATION SUMMARY

	0.2833	0.3041	-7.34		

Summary:

Substrates:	Aluminum
Contaminants:	Coatings

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Dysol	DS 144S Wipe Solvent	100	-0.32	☐	light pink
Dysol	DS 800 Solvent	100	2.02	☐	no change
Bio Chem Systems	Solsafe 245	100	-2.49	☑	pink
Gemtek Products	SC Actisolv Safety Solvent	100	-23.84	☑	slight pink
Transene Company, Inc.	D Greeze 500 LO	100	-11.78	☐	no change
Buckeye International	Shopmaster RC	100	-13.30	☑	red
AG Environmental Products	Soy Clear 1500	100	-7.89	☐	no change

Conclusion: The products that changed to a pink/red color will be retested at a longer time, higher temperature and with ultrasonic energy.