CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2008

DateRun: 03/28/2008

Experimenters: Jason Marshall, Shweta Bansal

ClientType: Machining Company

ProjectNumber: Project #1

Substrates: Aluminum

PartType: Coupon

Contaminants: Inks

Cleaning Methods: Manual Wipe

Analytical Methods: Visual, Timing

Purpose: To evaluate selected products on fourth supplied ink using manual wiping.

Experimental Procedure: The top ten successful products from the previous trial were used at full strength and room temperature. Twenty preweighed coupons were coated with the supplied Sharpie permanent marker (blue). Once dry, a second weight was recorded to determine the amount of ink added to the coupon. As in the last trial, two coupons were used per cleaning alternative. A handheld swab was immersed into the cleaning product and then manual wiped across the coupon for up to one minute. Following the cleaning, the coupons was wiped dry for 5 seconds. Observations were made, final coupon weights recorded, and the average efficiencies were calculated.

Results: Due to the limited weight added by the blue sharpie, gravimetric analysis yielded inconclusive results and therefore, analysis was performed based on visual rankings and length of time needed to clean the coupons. Products were considered successful in they removed the ink in under one minute of cleaning. Six of the ten products required under one minute. The table lists the time needed to clean the ink from the coupons and the rankings for each coupon.

Cleaner	Time (sec)	Visual Rank
Soy Clear 1500	>60	10
Ink Zapper	10	4
Methyl Ester 1618	>60	9
Citrus Soy Solvent Cleaner & Degreaser	>60	8
Graffiti Remover SAC	12	6
BioRenewables Industrial Degreaser	>60	7
EP 921	10	3
BG Solv 717 Ink & Graffiti Cleaner	7	1
Graffiti remover	7	2
Smart Solve 605	25	5

Summary:

Substrates:	Aluminum
Contaminants:	Inks

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
AG Environmental Products	Soy Clear 1500	100		☐	
Vertec BioSolvents	Ink Zapper	100		☑	
Twin Rivers Technologies	Methyl Ester 1618	100		☐	
Bi-O-Kleen Industries	Citrus Soy Solvent Cleaner & Degreaser	100		☐	
Spartan Chemical Company	Graffiti Remover SAC	100		☑	
Spartan Chemical Company	BioRenewables - Restroom Cleaner	100		☐	
Inland Technologies Inc	EP 921	100		☑	
BioGenesis Enterprises Inc	BG Solv 717 Ink & Graffiti Cleaner	100		☑	

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Finger Lakes Chemical	Graffiti remover	100		☑	
United Laboratories International	Smart Solve 605	100		☑	

Conclusion: The same set of products will be evaluated on the fifth supplied ink despite the limited success on the Sharpie marker.