CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006

DateRun: 05/08/2006

Experimenters: Jason Marshall

ClientType: General

ProjectNumber: Project #2

Substrates: Plastic

PartType: Part

Contaminants: Inks, Paints

Cleaning Methods: Ultrasonics

Analytical Methods: Tactile, Visual

Purpose: To evaluate products for paint/ink removal from supplied products

Experimental Procedure: Nine products were selected from the lab's database of test results based on client supplied information. One product was used at 5% and the remaining eight were used at full strength. Each product was heated to 130 F in a 40 kHz ultrasonic tank. One golf ball was cleaned in each solution for 30 minutes. At the end of the cleaning, the ball was rinsed in a tap water spray for 15 seconds at 120 F and wiped dry with a paper towel. Observations were made and compared to the client's current cleaner.

Results: No alternative product worked as well as the client's current cleaner. A couple of products did remove a lot of the white paint but had trouble with the ink printed on the ball. Observations and rankings are listed in the table below.

Cleaner	Observations	Rank
D-Zolv 1012	Current solvent - complete removal in under 15 min	1
Inproclean 4000 T	looked different; slight change	8
Solsafe 245	no visual change; felt different	9
Ink Zapper	no visual change; felt different	9
Citrus Burst 7	lost shine - not smooth feeling	5
D Limonene	pock marks on surface; still had shine	4
Shopmaster RC	Black ink could be rubbed off; still smooth w/ shine	6
Soy Clear 1500	Only one small spot removed	7
SC Supersolv	Some spots tacky; no ink removal; coating started to pull up; looked like "crystals" forming; lost shine	3
SC Activsolv	lost shine; not smooth; little ink removed; closest to current solvent	2

Summary:

Substrates:	Plastic
Contaminants:	Inks, Paints

Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Oakite Products	Inproclean 4000 T	5	0.00	☐	
Bio Chem Systems	Solsafe 245	100	0.00	☐	
Vertec BioSolvents	Ink Zapper	100	0.00	☐	
Transene Company, Inc.	D Zolve 1012	100	0.00	☑	
Florida Chemical Company	Citrus Burst 7	100	0.00	☐	
Florida Chemical Company	D-Limonene	100	0.00	☐	
Buckeye International	Shopmaster RC	100	0.00	☐	

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AG Environmental Products	Soy Clear 1500	100	0.00	☐	
Gemtek Products	SC Supersolve Safety Solvent	100	0.00	☑	
Gemtek Products	SC Actisolv Safety Solvent	100	0.00	☑	

Conclusion: Only one product, SC Actisolv, was close to removing the paint coating from the supplied golf balls. Follow up testing will be conducted to determine other alternatives products and operating conditions.