

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006  
 DateRun: 05/22/2006  
 Experimenters: Jason Marshall  
 ClientType: General  
 ProjectNumber: Project #2  
 Substrates: Plastic  
 PartType: Part  
 Contaminants: Inks, Paints  
 Cleaning Methods: Ultrasonics  
 Analytical Methods: Visual

Purpose: To evaluate additional products for removing paint and ink from supplied parts

Experimental Procedure: Individual products and mixture of products were used at various concentrations. Each product/mix was heated to 150 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. An additional 30 minutes of cleaning was included if the alternative started to remove the paint and ink.

Results:	Alternative	Observation
	D Zolve 1012 @10%	No visual effect
	D Zolve 1012 @50%	Some removal of ink - ball still shiny
	Metabolix E3HB	Some removal, not as shiny, ink coming off
	Metabolix & Actisolv 50-50 mix	Good removal, ink very faded
	Inproclean 4000 T 30%	Followed with 20 minutes of cleaning with
		Metabolix & Actisolv mix - did not improve
		cleaning
	Soy Cleaner 180 D	No removal
	DFC Degreaser	No removal
	Actisolv & Inproclean & Water	Paint flaking off with some ink removal
	50%-15%-35%	Additional 30 minutes had lots of paint
		flaking off and ink nearly gone
		Not completely cleaned

Summary:	<b>Substrates:</b>	Plastic				
	<b>Contaminants:</b>	Inks, Paints				
	<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>
	Oakite Products	Inproclean 4000 T	30		<input type="checkbox"/>	
	Sysco Corporation	Soy Cleaner 180 D	100		<input type="checkbox"/>	
	Cogent Environmental Solutions	DFC Degreaser	100		<input type="checkbox"/>	
	Gemtek Products	SC Actisolv Safety Solvent	50		<input checked="" type="checkbox"/>	Mix with Inproclean 4000 T and water
	Transene Company, Inc.	D Zolve 1012	10		<input type="checkbox"/>	
	Transene Company, Inc.	D Zolve 1012	50		<input type="checkbox"/>	
	Metabolix Inc	Metabolix E3HB	100		<input type="checkbox"/>	
	Metabolix Inc	Metabolix E3HB	50		<input checked="" type="checkbox"/>	Mix with Actisolv

Conclusion: Despite some of the products having moderate success when mixed with other successful products, nothing worked as well as the current solvent.