

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2006  
 DateRun: 05/17/2006  
 Experimenters: Jason Marshall  
 ClientType: General  
 ProjectNumber: Project #2  
 Substrates: Plastic  
 PartType: Part  
 Contaminants: Paints  
 Cleaning Methods: Ultrasonics  
 Analytical Methods: Visual

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

Experimental Procedure: Nine additional products were selected from the lab's database of test results based on client supplied information. One product was used at 30%, two products were mixed to 50-50 mix and the remaining seven were used at full strength. Each product 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
	DBE 5/6	Slightly less removal of paint than Actisolv
	Actisolv	Little change from the previous trial at 130 F
		Still had paint left on golf ball
	Inproclean 4000 T	Excellent removal at 30 minutes. Paint could be peeled off along with the ink. Still had some paint left.
		With additional cleaning time the alternative may have started to affect the plastic ball
	Pinene	No change in paint
	Ionox HC2	Some coating may have been removed. Less shine
	Bio T Max	No change in paint
	Soy Gold 2000	No change in paint
	EP 921	Removed a lot of the paint; However the ball was damaged
	DS 104	Removed some of the paint.

Summary:	<b>Substrates:</b>	Plastic				
	<b>Contaminants:</b>	Paints				
Company Name:		Product Name:	Conc.:	Efficiency:	Effective:	Observations:
Invista S.a.r.l		Flexisolv DBE 5 ester	50		<input checked="" type="checkbox"/>	
Gemtek Products		SC Actisolv Safety Solvent	100		<input checked="" type="checkbox"/>	
Oakite Products		Inproclean 4000 T	30		<input checked="" type="checkbox"/>	
Finger Lakes Chemical		FLSC-31 Pinene All Purpose Cleaner	100		<input type="checkbox"/>	
Kyzen Corporation		Ionox HC 2	100		<input checked="" type="checkbox"/>	
Bio Chem Systems		Bio T Max	100		<input type="checkbox"/>	
AG Environmental Products		Soy Gold 2000	100		<input type="checkbox"/>	
Inland Technologies Inc		EP 921	100		<input type="checkbox"/>	

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Dysol	DS 104 Wipe Solvent	100		<input checked="" type="checkbox"/>	
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Conclusion: Only a few alternatives showed limited success in removing the paint from the golf ball.