CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2002
DateRun:	11/17/2002
Experimenters:	Jason Marshall
ClientType:	Optical Manufacturer
ProjectNumber:	Project #3
Substrates:	Plastic
PartType:	Coupon
Contaminants:	Adhesive, Resins/Rosins
Cleaning Methods:	
Analytical Methods:	
Purpose:	To generate a list of products that can be used to remove acrylic resin adhesives from polycarbonate surfaces
Experimental Procedure:	The identified acrylic resin adhesive family identified crosslinks at or above 250 F which is less than the mold temperatures (265-275 F). Acids catalyze this reaction.
Results:	Using SSL's Simple Solutions database, two lists of products were generated based on client input. The first are products that have been successfully used to remove adhesives. The second list contains products that meet client's required needs based on from vendor supplied information.

Table 1. Effective Products for Adhesive Cleaning

Company	Product	Classification	Total Effective Trials	Parameters
Alconox, Inc.	Citranox	Acidic Aqueous	4	Adhesives
Aremco	Crystalbond 590 S	Powder Detergent	1	Adhesives
Bio Chem Systems	Bio T Max	Terpene-Semi-Aqueous	2	Plastic & Adhesive
Bio Chem Systems	Bio T Max	Terpene-Semi-Aqueous	6	Adhesives
Bio Chem Systems	SOLSAFE 245	Petroleum Distillate	2	Adhesive & Ultrasonics
Bio Chem Systems	SOLSAFE 245	Petroleum Distillate	3	Adhesives
CSA Inc	Bio Safe 1023	Hydrocarbon	1	Adhesives
Du Pont	DBE	Ester	1	Adhesives
Dynamold Solvents, Inc.	DS-104	Petroleum Distillate	6	Adhesives
Dynamold Solvents, Inc.	DS-108	Petroleum Distillate	1	Adhesives
Ecolink	Positron	Organic	1	Plastic & Adhesive
Ecolink	Positron	Organic	7	Adhesives
Ecolink	Safe Strip	Organic	1	Adhesives
Ecolink	VG 151	Terpene	1	Adhesives
Inland Technologies Inc	Citrasafe	Terpene	4	Adhesives
International Products	Surface Cleanse 930	Neutral Aqueous	3	Adhesives
Loctite Corporation	7360	Ester	1	Plastic & Adhesive
	7360	Ester	1	Adhesives

Loctite Corporation				
MacDermid	ND Supreme	Alkaline Aqueous	2	Adhesive & Ultrasonics
MacDermid	ND Supreme	Alkaline Aqueous	2	Adhesives
Oakite Products	Inproclean 3800	Alkaline Aqueous	1	Adhesive & Ultrasonics
Oakite Products	Inproclean 3800	Alkaline Aqueous	1	Adhesives
Safe Science	All Purpose	Alkaline Aqueous	2	Adhesives
Safe Science	Concrete/ Graffiti	Alkaline Aqueous	6	Adhesives
Safe Science	Engine Degreaser	Terpene	1	Adhesives
Solvent Kleene, Inc.	D-Greeze 500 LO	Organic	2	Plastic & Adhesive
Solvent Kleene, Inc.	D-Greeze 500 LO	Organic	2	Adhesives
Tarksol, Inc.	Tarksol HTF-50	Semi-Aqueous	2	Adhesives
Today & Beyond	Beyond-2009	Organic	2	Adhesives
U.S. Polychem Corp.	Hydropurge HPL 790	Caustic	1	Adhesives

Table 2. Vendor Recommended Products for Adhesive Removal From Plastics Using Ultrasonics

Company	Product	Classification
AGA Chemical	AK 225	HCFC
Alconox, Inc.	Luminox	Neutral Aqueous
Bio Chem Systems	SOLSAFE 245	Petroleum Distillate
Brulin Corporation	Brulin 1696 PNC	Neutral Aqueous
Brulin Corporation	EXP 1400	Alkaline Aqueous
Buckeye International	Shopmaster	Alkaline Aqueous
Buckeye International	Shopmaster LPH	Alkaline Aqueous
Chrisal USA, Inc.	Super CMF 240	Alkaline Aqueous
CSA Inc	Bio Safe 1024	Hydrocarbon
Du Pont	DBE 3	Ester
Ecolink	Bulldog	Alkaline Aqueous
Ecolink	Safe Strip	Organic
Gemtek Products	ODOR-EX	Alkaline Aqueous
Gemtek Products	SC Supersolve	Organic
Hotsy Cleaning Systems	Hotsy Detergents Tub & Pressure Wash	Alkaline Aqueous
Innovative Organics Inc	Amberclean Q3	Alkaline Aqueous
International Products Corp	LF 2100	Alkaline Aqueous
International Products Corp	Micro	Alkaline Aqueous
International Products Corp	Micro 90	Alkaline Aqueous

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International Products Corp	Surface Cleanse 930	Neutral Aqueous
Loctite Corporation	7360	Ester
Magnaflux	Daraclean 212	Neutral Aqueous
Magnaflux	Daraclean 235	Neutral Aqueous
Magnaflux	Daraclean 238	Alkaline Aqueous
Magnaflux	Daraclean 257	Alkaline Aqueous
Northern Products, Inc.	Necco Super Cleaner	Alcohol-Semi Aqueous
Oakite Products	Citradet	Semi-Aqueous
Oakite Products	Inproclean 4000 T	Terpene-Organic
Safe Science	Safe Science Concrete/Graffiti (Industrial)	Alkaline Aqueous
Smart Sonic	440-R SMT Detergent	Alkaline Aqueous
Solvent Kleene, Inc.	D-Greeze 500 LO	Organic
System One Technologies	QSOL-100	Petroleum Distillate
System One Technologies	QSOL-110	Petroleum Distillate
Tarksol, Inc.	Tarksol HTF-40	Terpene-Semi-Aqueous
Tarksol, Inc.	Tarksol HTF-7	Terpene-Semi-Aqueous
Today & Beyond	Beyond-2001	Alkaline Aqueous
Today & Beyond	Beyond-2002	Alkaline Aqueous
Today & Beyond	Beyond-2003	Alkaline Aqueous
Today & Beyond	Beyond-2004	Alkaline Aqueous
Today & Beyond	Beyond-2005	Alkaline Aqueous
Today & Beyond	Beyond-2006	Alkaline Aqueous
Today & Beyond	Beyond-2007	Alcohol
U.S. Polychem Corp.	Hydropurge 36	Alkaline Aqueous
U.S. Polychem Corp.	Polychem 2000 P	Alkaline Aqueous
U.S. Polychem Corp.	Polychem A 2000 XS	Alkaline Aqueous
U.S. Polychem Corp.	Polychem A-2000 C	Caustic
U.S. Polychem Corp.	Polychem Acra Strip 600	Semi-Aqueous
U.S. Polychem Corp.	Polychem DE-144	Petroleum Distillate
U.S. Polychem Corp.	Polychem DEOX 007	Alkaline Aqueous
U.S. Polychem Corp.	Polychem Hydropurge 21	Alkaline Aqueous
U.S. Polychem Corp.	Polychem Hydropurge 36 XS	Alkaline Aqueous

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U.S. Polychem Corp.	Polychem Hydropurge XS-790	Alkaline Aqueous
U.S. Polychem Corp.	Polychem PW-147	Alkaline Aqueous
U.S. Polychem Corp.	Polychem RCC-25	Terpene-Petroleum Distillate
U.S. Polychem Corp.	Polyspray Jet 790 P	Alkaline Aqueous
U.S. Polychem Corp.	Polyspray Jet 790 XS	Alkaline Aqueous
U.S. Polychem Corp.	Polyspray Jet ST-21	Alkaline Aqueous
Universal Photonics	Uni Clear	Terpene
Valtech Corporation	Valtron DP 98023	Caustic
Valtech Corporation	Valtron SP 2500	Alkaline Aqueous

Summary:

Conclusion: Cleaning projects vary from case-to-case. To obtain more detailed information about any of the products listed, contact the lab at (978)934-3133.

Please note: The Toxics Use Reduction Institute's Surface Cleaning Laboratory can supply MSDSs and any available Technical Data Sheets for all chemical cleaners tested. Not all cleaners tested are ranked equally for environmental, health and safety considerations; some are selected for comparative purposes only. The most accurate, up-to-date information concerning cleaning chemistries can be obtained at the Institute's T.H.E Library using Database
TOMES: Toxicological, Occupational, Medical and Environmental Series.