CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2002

DateRun: 03/03/2002

Experimenters: Jason Marshall

ClientType: Metal

ProjectNumber: Project #1

Substrates: Nickel

PartType: Coupon

Contaminants: Carbon Deposits

Cleaning Methods: Ultrasonics

Analytical Methods:

Purpose: Run a database search to help identify possible cleaning products

Experimental Procedure: Using SSL's Simple Solutions database, two lists of products were generated based on client input. The first list contains products that have been evaluated in the lab for carbon removal. The equipment and substrates may not be the same as the client requested materials. The second table is a listing of products that meet the clients specifics for contaminant, equipment and substrate.

Results: Table 1. SSL Evaluated Products for Carbon Removal

CompanyName	ProductName	Classification	Substrate	Equipment
AG Environmental Products	Soy Gold 1000	Organic	Aluminum	Immersion/ Soak
Brulin Corporation	Formula 815 GD	Alkaline Aqueous	Aluminum	Ultrasonics
Buckeye International	Shopmaster	Alkaline Aqueous	Stainless Steel	Immersion/ Soak
Chrisal USA, Inc.	Super CMF 240	Alkaline Aqueous	Aluminum	Immersion/ Soak
Delta Omega Technologies Ltd	DOT 111/113	Alkaline Aqueous	Stainless Steel	Ultrasonics
Delta Omega Technologies Ltd	DOT 111/113	Alkaline Aqueous	Aluminum	Ultrasonics
Envirosolutions, Inc.	Bio T Max	Terpene-Semi-Aqueous	Plastic	Immersion/ Soak
Kyzen Corporation	Ionox HC 2	Alcohol	Plastic	Immersion/ Soak
Solvent Kleene, Inc.	D-Greeze 500 LO	Organic	Aluminum	Immersion/ Soak
Twin Rivers Corp	Methyl Ester 1618	Ester	Stainless Steel	Immersion/ Soak
W.R. Grace & Co.	Daraclean 232	Alkaline Aqueous	Aluminum	Ultrasonics

Table 2. Vendor Recommended Products for Carbon Removal From Nickel Using Ultrasonics

CompanyName	ProductName	Classification
Abatement Technology	Bio Might 100	Alkaline Aqueous
Albemarle Corp	Abzol Cleaners	Organic
Alconox, Inc.	Alcojet	Alkaline Aqueous
Alconox, Inc.	Alcojet	Powder Detergent
Brulin Corporation	815 QR	Alkaline Aqueous
Brulin Corporation	Brulin 1696 PNC	Neutral Aqueous
Brulin Corporation	Brulin 1990 GD	Alkaline Aqueous

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Brulin Corporation	EXP 1400	Alkaline Aqueous
Brulin Corporation	Formula 815 GD	Alkaline Aqueous
Buckeye International	Shopmaster	Alkaline Aqueous
Buckeye International	Shopmaster LPH	Alkaline Aqueous
By*Pas & Star Cleaning Products	By*Pas #1500	Alkaline Aqueous
By*Pas & Star Cleaning Products	Star Cleaning Miracle # 50	Alkaline Aqueous
Calgon Corporation	SCN 9194	Neutral Aqueous
Calgon Corporation	SMS 206 K	Alkaline Aqueous
Chrisal USA, Inc.	Super CMF 240	Alkaline Aqueous
Church & Dwight	Armaklean M Aero	Alkaline Aqueous
Church & Dwight	Armakleen M Auto	Alkaline Aqueous
Cleaning Systems	Release	Alkaline Aqueous
Dynamold Solvents, Inc.	DS-104	Petroleum Distillate
Dynamold Solvents, Inc.	DS-108	Petroleum Distillate
Ecolink	Positron	Organic
Enviro-Safe Services, Inc.	Aluminum De-Oxidizer 662	Neutral Aqueous
Enviro-Safe Services, Inc.	Neutral Rust Remover 232	Neutral Aqueous
Enviro-Safe Services, Inc.	Yellow Metal De-Tarnish 170	Neutral Aqueous
Envirosolutions, Inc.	Bio T Foam Plus	Terpene
Envirosolutions, Inc.	Green Stuff (6325)	Alkaline Aqueous
Envirosolutions, Inc.	Neutral Green (8020)	Alkaline Aqueous
Envirosolutions, Inc.	SOLSAFE 245	Petroleum Distillate
Fine Organic Corporation	FO 2085 M	Alkaline Aqueous
Gemtek Products	SC 1000	Alkaline Aqueous
Gemtek Products	SC Aircraft & Metal Cleaner	Alkaline Aqueous
Gemtek Products	SC Supersolve	Organic
Hazwell International	Biosolve	Neutral Aqueous
Hotsy Cleaning Systems	Hotsy Detergents Tub & Pressure Wash	Alkaline Aqueous
Hubbard Hall Inc	Ram Charger	Alkaline Aqueous
Hurri Safe	Hot Immersion Degreaser	Alkaline Aqueous
Hurri Safe	Special Degreaser	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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LPS Laboratories	LPS Precision Clean	Alkaline Aqueous
Man Gill Chemical	Gillite 0650 Cl	Alkaline Aqueous
Mirachem Corporation	Mirachem 500	Alkaline Aqueous
Safe Science	Safe Science Concrete/ Graffiti (Industrial)	Alkaline Aqueous
System One Technologies	QSOL-100	Petroleum Distillate
System One Technologies	QSOL-110	Petroleum Distillate
System One Technologies	QSOL-200	Organic
System One Technologies	QSOL-220	Organic
T & D Finishing Co	TD 110	Alkaline Aqueous
Tarksol, Inc.	Tarksol Aqua Kleen Citric	Acidic Aqueous
Tarksol, Inc.	Tarksol Aqua Kleen Citric	Alcohol
Tarksol, Inc.	Tarksol Aqua Kleen Citric	Organic
Tarksol, Inc.	Tarksol HTF-40	Alcohol
Tarksol, Inc.	Tarksol HTF-40	Neutral Aqueous
Tarksol, Inc.	Tarksol HTF-40	Organic
Tarksol, Inc.	Tarksol HTF-7	Alcohol
Tarksol, Inc.	Tarksol HTF-7	Alkaline Aqueous
Tarksol, Inc.	Tarksol HTF-7	Organic
Tarksol, Inc.	Tarksol NPB	Organic
Tarksol, Inc.	Tarksol Oilsolv	Alcohol
Tarksol, Inc.	Tarksol Oilsolv	Neutral Aqueous
Tarksol, Inc.	Tarksol Oilsolv	Organic
Tarksol, Inc.	Tarksol Powergreen	Alcohol
Tarksol, Inc.	Tarksol Powergreen	Alkaline Aqueous
Tarksol, Inc.	Tarksol Powergreen	Organic
Tech Spray	Concentrated Aqueous Defluxer	Caustic
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
Tomah Products	Tomadyne 102	Neutral Aqueous
Tomah Products	Tomadyne Mix	Neutral Aqueous
Tower Products, Inc	Tower 270 Cleaner Concentrate	Alkaline Aqueous
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	

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		Alkaline Aqueous
U.S. Polychem Corp.	Polychem Acra Strip 600	Semi-Aqueous
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
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	Petroleum Distillate
U.S. Polychem Corp.	Polychem RCC-25	Terpene
U.S. Polychem Corp.	Polyspray Jet 790 C	Caustic
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
Valtech Corporation	Valtron SP 2250-2LF	Alkaline Aqueous
Valtech Corporation	Valtron SP 2500	Alkaline Aqueous
Valtech Corporation	Valtron SP 2610	Neutral Aqueous
W.R. Grace & Co.	Daraclean 203	Caustic
W.R. Grace & Co.	Daraclean 257	Alkaline Aqueous
Warren Chemical Co	Sea Wash 700 New	Neutral Aqueous
Warren Chemical Co	Sea Wash 700 Old	Neutral Aqueous
Watson Technical Associates	Watson Formula 7001-CP	Alkaline Aqueous
Westford Chemical Corporation	Biosolve	Neutral Aqueous

Summary:

Conclusion:

Cleaning projects vary from case-to-case. To obtain more detailed information about any of the products listed below, 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 Technology Transfer Center (TTC) using Database TOMES: Toxicological, Occupational, Medical and Environmental Series.