# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2000

DateRun: 07/05/2000

Experimenters: Jason Marshall

ClientType: Electrical Manufacturer

ProjectNumber: Project #1

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Inks, Paints

Cleaning Methods:

Analytical Methods:

Purpose: Information request

Experimental Procedure: SUBSTRATE MATERIAL: Stainless steel coating equipment
REQUEST: Looking for a list potential replacement cleaners for methylene chloride. Would like to be able to distill or recycle cleaning solution reducing the disposal costs.

Results: Using the laboratories database of effective testing, a list of products that have proven to remove paint/ink was generated and are listed in Table 1. Table 2 was generated from vendor supplied information.

Table 1. General Test Results

| SCL # | Substrate | Cont | Process | Manufacturer | Product | Classification |
|---|---|---|---|---|---|---|
| 97-538-02-2 | SS | INK | MANUAL | T-SQUARE | HTF 60 | S-A Terpene |
| 97-538-02-2 | SS | INK | MANUAL | T-SQUARE | HTF 50 | S-A Terpene |
| 98-559-01-1 | AL-OXIDE | INK | IMMERSION | US POLYCHEM | DE-OX 007 | Alkaline |
| 98-559-01-1 | AL-OXIDE | PAINT | IMMERSION | US POLYCHEM | DE-OX 007 | Alkaline |
| 98-559-01-1 | AL-OXIDE | INK | IMMERSION | Oakite Products | INPROCLEAN 3800 | Alkaline |
| 98-559-01-1 | AL-OXIDE | PAINT | IMMERSION | Oakite Products | INPROCLEAN 3800 | Alkaline |
| 98-559-03-2 | AL-OXIDE | INK | ULTRASONICS | Oakite Products | INPROCLEAN 3800 | Alkaline |
| 98-559-03-2 | AL-OXIDE | PAINT | ULTRASONICS | Oakite Products | INPROCLEAN 3800 | Alkaline |
| 96-423-02-2 | PLASTIC | INK | IMMERSION | MACDERMID | ND 17 | Alkaline |
| 96-423-02-2 | PLASTIC | INK | IMMERSION | MIRACHEM | MIRACHEM 500 | Alkaline |
| 98-559-04-2 | PLASTIC | INK | IMMERSION | Oakite Products | INPROCLEAN 3800 | Alkaline |
| 98-559-04-2 | PLASTIC | PAINT | IMMERSION | Oakite Products | INPROCLEAN 3800 | Alkaline |
| 98-559-04-2 | PLASTIC | INK | IMMERSION | CHRISAL USA | SUPER CMF 240 | Alkaline |
| 98-559-04-2 | PLASTIC | PAINT | IMMERSION | CHRISAL USA | SUPER CMF 240 | Alkaline |
| 98-559-05-2 | ZrO2 | PAINT | IMMERSION | Oakite Products | INPROCLEAN 4000 T | S-A Terpene |
| 98-571-02-2 | AL | INK | MANUAL | AG ENVIRONMENTAL | SOY GOLD 1000 | Soy Methyl Ester |
| 98-571-02-2 | AL | INK | MANUAL | Oakite Products | INPROCLEAN 4000 T | S-A Terpene |
| 98-571-02-2 | AL | INK | MANUAL | BUCKEYE | SHOPMASTER | Alkaline |
| 98-571-03-2 | AL | INK | MANUAL | T-SQUARE | HTF 50 | S-A Terpene |
| 98-571-03-2 | AL | INK | MANUAL | Oakite Products | INPROCLEAN 4000 T | S-A Terpene |
| 98-676-01-2 | AL | PAINT | IMMERSION | SOLVENT KLEENE | D-GREEZE 500 | Hydrocarbon Solvent |
| 98-676-01-2 | AL | PAINT | IMMERSION | SOLVENT KLEENE | D-GREEZE 500 | Hydrocarbon Solvent |
| 98-676-02-4 | AL | PAINT | IMMERSION | CHRISAL USA | | Alkaline |

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|---|---|---|---|---|---|---|
| | | | | | SUPER CMF 240 | |
| 98-676-02-4 | AL | PAINT | IMMERSION | AG ENVIRONMENTAL | SOY GOLD 1000 | Soy Methyl Ester |
| 98-676-07-2 | AL | PAINT | IMMERSION | AG ENVIRONMENTAL | SOY GOLD 2000 | Soy Methyl Ester |
| 98-682-01-2 | SS | INK | MANUAL | EXXON | AROMATIC 100 | SOLVENT |
| 98-682-01-2 | SS | INK | MANUAL | AG ENVIRONMENTAL | SOY GOLD 1000 | Soy Methyl Ester |
| 98-682-01-2 | SS | INK | MANUAL | ENVIROSOLUTIONS | BIO-T MAX | S-A Terpene |
| 98-682-01-2 | SS | INK | MANUAL | FINGER LAKES | 1/1/02 | Terpene |
| 98-682-01-2 | SS | INK | MANUAL | INLAND TECHNOLOGIES | EP 921 | Terpene |
| 98-682-01-2 | SS | INK | MANUAL | T-SQUARE | HTF 60 | S-A Terpene |
| 98-676-08-2 | AL | PAINT | SPRAY | AG ENVIRONMENTAL | SOY GOLD 2000 | Soy Methyl Ester |
| 98-676-08-2 | AL | PAINT | SPRAY | AG ENVIRONMENTAL | SOY GOLD 2000 | Soy Methyl Ester |
| 98-676-10-4 | AL | PAINT | IMMERSION | AG ENVIRONMENTAL | SOY GOLD 2000 | Soy Methyl Ester |
| 98-676-10-4 | AL | PAINT | IMMERSION | AG ENVIRONMENTAL | SOY GOLD 2000 | Soy Methyl Ester |
| 98-682-03-4 | SS | INK | MANUAL | ENVIROSOLUTIONS | BIO-T MAX | S-A Terpene |
| 98-676-09-4 | AL | PAINT | SPRAY | AG ENVIRONMENTAL | SOY GOLD 2000 | Soy Methyl Ester |
| 00-7123-01-2 | PLASTIC | INK | IMMERSION | Envirosolutions, Inc. | BIO T MAX | S-A |
| 00-7123-01-2 | PLASTIC | INK | IMMERSION | Oakite Products | Inproclean 4000 T | S-A Terpene |
| 00-7123-01-2 | PLASTIC | INK | IMMERSION | Valtech Corporation | Valtron SP 2250-2LF | Alkaline |
| 00-7123-07-4 | SS | INK | IMMERSION | SWR CORP | SWR ONE | Alkaline |
| 00-7123-08-4 | SS | INK | WIPE | Oakite Products | Inproclean 4000 T S-A | Terpene |
| 00-7123-08-4 | SS | INK | WIPE | Envirosolutions, Inc. | BIO T MAX | S-A |
| 00-7123-07-4 | SS | INK | WIPE | SWR CORP | SWR ONE | Alkaline |

Table 2. Vendor Suggested Products for Paint/Ink Cleaning

| Company Name | Product Name |
|---|---|
| AW Chesterton | 278 Super Solv |
| Buckeye International | Shopmaster |
| Buckeye International | Shopmaster LPH |
| Dynamold Solvents, Inc. | DS-801 |
| Envirosolutions, Inc. | SOLSAFE 245 |
| Gemtek Products | SC Supersolve |
| Hazwell International | Biosolve |
| Hotsy Cleaning Systems | Hotsy Detergents Tub & Pressure Wash |
| New Pig Corporation | New Pig Degreaser |
| Oakite Products | Inproclean 4000 T |
| Purac America, Inc. | Purasolv Els |
| Safe Science | Safe Science Concrete/ Graffiti (Industrial) |
| Safe Science | Safe Science Engine Degreaser (Industrial) |
| Savogran | HD-34 Cleaner Degreaser |

# CLEANING LABORATORY EVALUATION SUMMARY

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|---|---|
| Savogran | Safety-Solve |
| Savogran | SI #3 Coating Remover |
| Soy Envrinonmental | Soy Clean |
| Tarksol, Inc. | Tarksol NPB |
| Today & Beyond | Beyond-2001 |
| Today & Beyond | Beyond-2002 |
| Today & Beyond | Beyond-2003 |
| Today & Beyond | Beyond-2004 |
| Today & Beyond | Beyond-2005 |
| Today & Beyond | Beyond-2006 |
| Today & Beyond | Beyond-2008 |
| U.S. Polychem Corp. | Hydropurge 36 |
| U.S. Polychem Corp. | Polychem 2000 P |
| U.S. Polychem Corp. | Polychem A 2000 XS |
| U.S. Polychem Corp. | Polychem Acra Strip 600 |
| U.S. Polychem Corp. | Polychem DE-144 |
| U.S. Polychem Corp. | Polychem DEOX - 007 |
| U.S. Polychem Corp. | Polychem Hydropurge 21 |
| U.S. Polychem Corp. | Polychem Hydropurge 36 XS |
| U.S. Polychem Corp. | Polychem Hydropurge XS-790 |
| U.S. Polychem Corp. | Polychem QS-85 LO |
| U.S. Polychem Corp. | Polychem RCC-25 |
| U.S. Polychem Corp. | Polyspray Jet 790 C |
| U.S. Polychem Corp. | Polyspray Jet 790 P |
| U.S. Polychem Corp. | Polyspray Jet 790 XS |
| U.S. Polychem Corp. | Polyspray Jet ST-21 |
| Warren Chemical Co | Sea-Wash Cleaner |
| Westford Chemical Co | Biosolve |

The following Table lists 6 suggested products to be evaluated.

Table 3. Suggested Replacements

| Company Name | Product Name |
|---|---|
| Envirosolutions, Inc. | Bio T Max |
| Oakite Products | Inproclean 3800 |
| Oakite Products | Inproclean 4000 T |
| Savogran | HD-34 Cleaner Degreaser |
| Solvent Kleene, Inc. | D-Greeze 500 LO |
| U.S. Polychem Corp. | Polyspray Jet 790 P |

Summary:

Conclusion: Cleaning projects vary from case-to-case. To obtain more detailed information about any of the listed trials, have the SCL # ready when contacting the lab at (978)934-3133.