

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2000  
 DateRun: 02/24/2000  
 Experimenters: Jason Marshall  
 ClientType: City Government  
 ProjectNumber: Project #1  
 Substrates: Aluminum, Carbon Steel, Copper, Stainless Steel, Steel  
 PartType: Coupon  
 Contaminants: Carbon Deposits, Cutting/Tapping Fluids, Greases, Lubricating/Lapping Oils, Dirt, Oil  
 Cleaning Methods:  
 Analytical Methods:  
 Purpose: Information request

Experimental Procedure: SUBSTRATE MATERIAL: Metal  
 QUESTION ASKED: Would like a listing of cleaners that have been used for cleaning engine parts from DPW's and Highway Departments.

Results: RESPONSE/ANSWER: The Massachusetts Toxics Use Reduction Institute (TURI) has made the results of the tests conducted at the Institute's Surface Cleaning Laboratory (SCL) into a searchable database/ spreadsheet format making alternative cleaner selection faster and easier. Here are the results of your query, based on the information supplied:

Products Evaluated for DPWs and Highway Depts.

| SCL #       | Cleaner Mfr          | Cleaning Chem | Classification                 | Efficiency of Removal(%) |        |           |
|-------------|----------------------|---------------|--------------------------------|--------------------------|--------|-----------|
|             |                      |               |                                | Oil                      | Grease | Lubricant |
| 98-561-02-4 | ZEP Manufacturing Co | Dyna 143      | Hydrocarbon Solvent            | 98                       |        |           |
| 98-561-02-4 | Envirosolutions      | SolSafe 245   | Alcohol-aliphatic hydrocarbons | 96                       |        |           |
| 98-561-02-4 | Safe CleanUp         | Super Neutral | Neutral Aqueous-Mircrobial     | 91                       |        |           |
| 98-561-02-4 | AG Environmental     | Soy Gold 1000 | Soy Methyl Ester               | 84                       |        |           |
| 98-561-02-4 | WR Grace             | Daraclean 282 | Alkaline Aqueous               | 63                       |        |           |
| 98-561-02-4 | WR Grace             | Daraclean 232 | Alkaline Aqueous               | 45                       |        |           |
| 98-561-02-4 | Solvent Kleene       | D-Greeze 500  | Hydrocarbon Solvent            | 77                       |        |           |
| 98-561-03-4 | WR Grace             | Daraclean 282 | Alkaline Aqueous               | 80                       |        |           |
| 98-561-03-4 | WR Grace             | Daraclean 232 | Alkaline Aqueous               | 72                       |        |           |
| 98-561-03-4 | Safe CleanUp         | Super Neutral | Neutral Aqueous-Mircrobial     | 90                       |        |           |
| 98-561-04-4 | ZEP Manufacturing Co | Dyna 143      | Hydrocarbon Solvent            | 100                      |        |           |
| 98-561-04-4 | Safety Kleen         | Premium Gold  | Hydrocarbon Solvent            | 100                      |        |           |
| 98-561-04-4 | Envirosolutions      | SolSafe 245   | Alcohol-aliphatic hydrocarbons | 96                       |        |           |
| 98-561-04-4 | Safe CleanUp         | Super Neutral | Neutral Aqueous-Mircrobial     | 98                       |        |           |

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|              |                        |                          |                                |     |     |     |
|--------------|------------------------|--------------------------|--------------------------------|-----|-----|-----|
| 98-561-04-4  | AG Environmental       | Soy Gold 1000            | Soy Methyl Ester               | 90  |     |     |
| 98-561-04-4  | WR Grace               | Daraclean 282            | Alkaline Aqueous               | 99  |     |     |
| 99-6103-02-2 | WR Grace               | Daraclean 282 GF         | Alkaline Aqueous               | 81  |     |     |
| 99-6103-02-2 | EMKAY Chemical CO      | Safety Wash              | Alkaline Aqueous               | 70  |     |     |
| 99-6103-02-2 | Safe CleanUp           | Super Neutral            | Neutral Aqueous-Mircrobial     | 93  |     |     |
| 99-6103-02-2 | Watson                 | Formula 7300             | Alkaline Aqueous               | 34  |     |     |
| 99-6103-02-2 | Envirosolutions        | SolSafe 245              | Alcohol-aliphatic hydrocarbons | 100 |     |     |
| 99-6103-02-2 | AG Environmental       | Soy Gold 2000            | Soy Methyl Ester               | 88  |     |     |
| 99-6103-02-2 | International Products | Micro 90                 | Alkaline Aqueous               | 73  |     |     |
| 99-6103-02-2 | Gemtek Products        | SC Aircraft & Metal      | Alkaline Aqueous               | 93  |     |     |
| 99-6103-03-4 | ForBest                | Sea Wash 700             | Neutral Aqueous-Mircrobial     | 99  |     |     |
| 99-7103-04-4 | New Pig                | Degreaser                | Semi-Aqueous Terpene           | 100 | 98  | 86  |
| 99-7103-05-4 | New Pig                | Hoofmark All Purpose     | Non-ionic Surfactant           | 93  | 100 | 75  |
| 99-7103-05-4 | New Pig                | Industrial Degreaser     | D-limonene Terpene             | 61  | 91  | 68  |
| 99-7103-06-4 | Ensolve Biosystems     | Grease Feast             | Neutral Aqueous-Mircrobial     | 94  | 100 | 88  |
| 99-7103-06-4 | United Laboratories    | United 450 All Clear     | Alkaline Aqueous               | 95  | 100 | 91  |
| 99-7103-06-4 | United Laboratories    | United 2002 Harvest Gold | Refined Vegetable Oil          | 66  | 65  | -12 |
| 00-7103-07-4 | EnviroSan Products Ltd | Solution 2000            | Alkaline Aqueous               | 96  | 96  | 44  |
| 00-7103-07-4 | Mirachem Corporation   | Mirachem 500 RTU         | Alkaline Aqueous               | 99  | 94  | 76  |
| 00-7103-07-4 | Mirachem Corporation   | Mirachem 500             | Alkaline Aqueous               | 92  | 96  | 91  |

Summary:

Conclusion:

For further information or MSDSs on any of the listed products contact the lab at (978)934-3133.