

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2000
DateRun: 02/28/2000
Experimenters: Jason Marshall
ClientType: City Government
ProjectNumber: Project #1
Substrates:
PartType: Coupon
Contaminants:
Cleaning Methods:
Analytical Methods:
Purpose: Information request
Experimental Procedure:

Results: I have sent you MSDSs and Technical data sheets on the products you requested as well as the reports for the corresponding SCL#s. (I couldn't find the information on Mirachem RTU, but I will continue to look.) The SCL# is the trial classification system used by the laboratory to identify specific trials performed at the Lab. A different SCL# represents a separate test and not a different product.

Terpenes are homocyclic hydrocarbons with a characteristic odor with low-volatility. They usually contain limonene (citrus based) or pinene (pine origins). The following is a list of pro's and con's for semi aqueous cleaners (of which terpenes are included).

| Pro's | Con's |
|---|--|
| Excellent cleaning of difficult soils | Generally high initial costs |
| Little or no residue following rinsing | Not as widely demonstrated as aqueous or solvents |
| Neutral solutions will not etch metals | Some may be incompatible with plastics, aluminum or magnesium |
| Low surface tensions compared to water, allows for penetration into blind holes | Flammability; low flash point in some cleaners |
| Low vapor pressure when emulsified with water | Odors |
| Some are biodegradable with low toxicity | Discharge may have high BOD |
| Capable of high soil loading while still maintaining cleaning ability | High soil loading may make recycling of some cleaners difficult |
| No ozone depleting potential | Some contain significant concentrations of volatile organic compounds |
| Organic effluent may have fuel value | Higher number of waste streams to manage when compared to of aqueous solvent systems |

Summary:
Conclusion: