TOXICS USE REDUCTION INSTITUTE

THE MASSACHUSETTS
TOXICS USE REDUCTION INSTITUTE

Solvent/Cleaning Chemistry Questionnaire

University of Massachusetts Lowell
One University Avenue
Lowell, MA 01854
Telephone: (508) 934-3275
FAX: (508) 934-3050

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The Toxics Use Reduction Institute maintains a vendor database of alternative cleaning chemistries and equipment. Information from this database is published and provided to companies who are searching for safer cleaning alternatives. Please provide the following for each product or product line:

1. Completed Questionnaire 2. MSDS 3. Printed literature (optional).

Return response to: Vendor Survey
Toxics Use Reduction Institute
University of Massachusetts Lowell
One University Avenue
Lowell MA 01854

*Please duplicate this questionnaire and complete a separate copy for each product or product line you would like included in our database.

Trade Name of Product MIRACHEM 500 CLEANER/DEGREASER + ETU spray

Company Name MIRACHEM CORPORATION ☒ Manufacturer ☐ Distributor

Address P.O. BOX 27608, TEMPE, AZ 85285

Telephone 602-966-3030 Contact Person DON LEE, VICE PRESIDENT SALES

1. Product Manufacturer OEM (if different from above) Where is Product manufactured ARIZONA, U.S.A. (state / country)

2. Please check the classification that most closely describes your product.

☐ Saponified aqueous	☐ Acid aqueous solutions
☐ Semi-aqueous	☐ Hot water/steam
☐ Alkaline aqueous	☐ Petroleum distillates
☐ Terpenes	☒ Other (please specify) WATER BASE, NON-IONIC SURFACTANT

3. Give a chemical / generic description of your product.

WATER
NON-IONIC SURFACTANT
WETTING AGENTS
EMULSIFYERS

4. Which contaminants is your product most effective in removing?

IT WILL EMULSIFY ANYTHING ORGANIC
(GREASE, OIL, INK, BLOOD)

5. Is there a recommended process or type of equipment associated with this product? If so please describe it.

HAND WIPE, SPRAY, STEAMCLEANER, DIP TANK, PARTS WASHER, ULTRA SONIC

6. Is there a separation process associated with maintaining this cleaning solution? Please describe.

OIL CAN BE SKIMMED FROM SURFACE FILTERED

7. What concentration of cleaning solution is typically used?

1:1 - 30:1

8. Is your product designed to be recycled? If so, how is it recycled?

YES
ULTRA FILTRATION

9. What is the typical cost of your cleaner?

$12.00 PER GALLON

10. Are there any constituents in your cleaner which are listed under SARA 313 or CERCLA? Please include an MSDS and any other information that would assist potential customers in evaluating the applicability of your product to their needs (e.g. a typical process flow diagram, waste stream constituents, special handling equipment).

NO SERA 131 OR CERCGA

11. Would you be interested in loaning equipment for testing purposes in TURI's Surface Cleaning laboratory? If yes, please contact Carole LeBlanc (508-934-3249) or Jay Jankauskas (508-934-3133).

REPORT OF RESULTS
MIRACHEM 500 CLEANER/DEGREASER
EPA METHOD 625: GC/MS FRACTION-BASE/NEUTRAL COMPOUNDS
ALL RESULTS REPORTED IN ug/L (ppb)
NOTE: ND = NOT DETECTED

Compound		Compound	
Acenaphthene	nd<5	Diethylphthalate	nd<5
Acenaphthylene	nd<5	Dimethylphthalate	nd<5
Anthracene	nd<5	di-n-Butylphthalate	nd<5
Benzidine	nd<10	2,4-Dinitrotoluene	nd<5
Benzo(a)anthracene	nd<5	2,6-Dinitrotoluene	nd<5
Benzo (a)pyrene	nd<5	di-n-Octylphthalate	nd<5
3,4-Benzofluoranthene	nd<5	1,2-Diphenylhydrazine	nd<5
Benzo(ghi)perylene	nd<5	Fluoranthene	nd<5
Benzo(k)fluoranthene	nd<5	Fluorene	nd<5
bis(2-Chloroethoxy)methane	nd<5	Hexachlorobenzene	nd<5
bis(2-chloroethyl)ether	nd<5	Hexachlorobutadiene	nd<5
bis(2-ethylhexyl)phthalate	nd<5	Hexachlorocyclopentadiene	nd<5
4-Bromophenylphenylether	nd<5	Hexachloroethane	nd<5
Butylbenzylphthalate	nd<5	Indeno(1,2,3-cd)pyrene	nd<5
2-Chloronaphthalene	nd<5	Isophorone	nd<5
4-Chlorophenylphenylether	nd<5	Naphthalene	nd<5
Chrysene	nd<5	Nitrobenzene	nd<5
Dibenzo(ah)anthracene	nd<5	n-Nitrosodimethylamine	nd<25
1,2-Dichlorobenzene	nd<5	n-Nitrosodi-n-propylamine	nd<25
1,3-Dichlorobenzene	nd<5	n-Nitrosodiphenylamine	nd<25
1,4-Dichlorobenzene	nd<5	Phenanthrene	nd<5
3,3'-Dichlorobenzidine	nd<25	Pyrene	nd<5
bis(2-chloroisopropyl)ether	nd<5	1,2,4-Trichlorobenzene	nd<5

REPORT OF RESULTS
MIRACHEM 500 CLEANER/DEGREASER
EPA METHOD 625 GC/MS FRACTION-ACID COMPOUNDS (PHENOLS)
* * * ALL VALUES REPORTED IN ug/L (ppb) * * *
Note: ND=Not Detected

Compound	
2-Chlorophenol	nd<5
2,4-Dichlorophenol	nd<5
2,4-Dimethylphenol	nd<5
4,6-Dinitro-o-cresol	nd<25
2,4-Dinitrophenol	nd<40
2-Nitrophenol	nd<5
4-Nitrophenol	nd<5
p-Chloro-m-cresol	nd<5
Pentachlorophenol	nd<5
Phenol	nd<5
2,4,6-Trichlorophenol	nd<5

REPORT OF RESULTS
MIRACHEM 500 CLEANER/DEGREASER
* * * ALL RESULTS REPORTED IN ug/L(ppb) * * *
EPA Method 624 via GC/MS
NOTE: nd = not detected

Compound:	
chloromethane	nd<10
bromomethane	nd<10
bromoform	nd<5
vinyl chloride	nd<10
chloroethane	nd<10
methylene chloride	nd<5
trichlorofluoromethane	nd<10
11 dichloroethane	nd<5
11 dichloroethene	nd<5
t-12 dichloroethene	nd<5
chloroform	nd<5
12 dichloroethane	nd<5
111 trichloroethane	nd<5
carbon tetrachloride	nd<5
bromodichloromethane	nd<5
12 dichloropropane	nd<10
t-13 dichloropropene	nd<5
trichloroethylene (TCE)	nd<5
dibromochloromethane	nd<5
112 trichloroethane	nd<5
c-13 dichloropropene	nd<10
2 chloroethyl vinyl ether	nd<10
1122 tetrachloroethane	nd<10
tetrachloroethylene (PCE)	nd<5
benzene	nd<5
chlorobenzene	nd<10
13 dichlorobenzene	nd<10
12 dichlorobenzene	nd<10
14 dichlorobenzene	nd<10
ethylbenzene	nd<10
toluene	nd<10

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SURFACE CLEANING LABORATORY--CLEANING CHEMICAL QUESTIONNAIRE

Use a separate questionnaire for each cleaning chemical you want listed in the Directory.

MSDS sheets and any technical data sheets must be submitted.

Company Name: [redacted]

Product Name: Mirachem 500

Meets Specified Standard(s): ASTM: MIL Spec: FDA: Other Standards: USDA, SCAQMD

Primary Cleaner Classification (Check only one)

- ☐ Acidic Aqueous
- ☐ Neutral Aqueous
- ☑ Alkaline Aqeuous
- ☐ Caustic
- ☐ Semi-Aqueous
- ☐ Terpene
- ☐ Petroleum Distillate
- ☐ Organic
- ☐ Powder Detergent
- ☐ Enzymatic/Microbial
- ☐ Blasting
- ☐ Extracting
- ☐ HCFC
- ☐ Alcohol

Other Classification:

Chemical Constituents (Check all that apply and Specify)

Cleaner Containing:

Builder:
Surfactant:
Emulsifier:
Saponifier:
Rinse Aid/Silicate:

At Least Some Water (___%)

Water Conditioner/Sequestering/ Chelating Agent:
Corrosion Inhibitor/ Rust Prohibitor:
Anti-Microbial:

OR

No/Minimal Water

Supercritical Fluid:
Blasting Media:
Other Constituents:

Industrial Applications (Number all that apply, Most Used = 1)

- 1 Aerospace/Military:
- ☐ Cleanrooms:
- ☐ Basic Electronics:
- ☐ Medical:
- ☐ Metal Finishing:
- 1 Metal Fabrication:
- ☐ Optics:
- ☐ Painting:
- 1 Printed Circuit Boards:
- ☐ Plastics:
- ☐ Precision Instruments:
- 1 Printing:
- ☐ Semiconductors:
- 1 General Cleaning:
- 1 MaintRepair:

Other Applications: Marine, Utilities

Contaminant Removal (Check all that apply and specify, if possible)

- ☐ Adhesive
- ☐ Buffing/Polishing Compounds
- ☑ Carbon Deposits
- ☐ Coatings
- ☑ Cutting/Tapping Fluids
- ☐ Fluxes
- ☑ Greases
- ☐ Inks
- ☑ Lubricating/ Lapping Oils
- ☐ Mold Releases/ Silicones
- ☐ Paints
- ☐ Resins/Rosins
- ☐ Rust/Scale
- ☐ Waxes

Other Contaminants: Tar

Substrate Compatibility (Check all that apply)

- ☑ Aluminum
- ☐ Alloys Specify
- ☑ Brass
- ☑ Carbon Steel
- ☑ Ceramics
- ☑ Copper
- ☑ Galvinized Steel
- ☑ Glass/Quartz
- ☐ Gold
- ☑ Plastic Specify:
- ☐ Rubber
- ☑ Stainless Steel
- ☑ Steel
- ☐ Sterling/Silver
- ☐ Nickel
- ☐ Tin

Other Substrate: fabric, fiberglass

Equipment Compatibility (Check all that apply Specify, if applicable)

- ☐ Cold Solvent
- ☐ Vapor Degreasing
- ☑ Manual Wipe
- ☑ Immersion/Soak
- ☑ Mechanical Agitation
- ☑ Ultrasonics
- ☐ Media Blasting
- ☐ Supercritical Extract
- ☑ Low Pressure Spray
- ☑ High Pressure Spray

High-Low Pressure Range: psi

Other Equipment:

Recommended Concentrations: 5-100 Percent Volume (range)

Recommended Temperatures: 80-105 Deg. F (range)

Important Physical and Chemical Properties:

pH: 9.1

Hazardous Material Information System: Health 1 Fire 0 Reactivity 0

National Fire Protection Association: Health Fire Reactivity

Maximum Theoretical VOC content

Global Warming Potential:

Ozone Depletion Potential:

Cost per pound/gallon:

Surface Tension:

Kb value:

Density: 0.997 sp gr

Other Characteristics:

Additional Information: Multi-Micro Emulsifactant Technology (TM)