



Material Safety Data Sheet

Mirachem® 500 Cleaner/Degreaser

(Formulation No. 2500)

Section I - Chemical Product and Company Identification

Manufacturer Name:	The Mirachem Corporation P.O. Box 14059 Phoenix, Arizona 85063-4059	Date Prepared:	9/24/93
		Revision Date:	4/10/12
Emergency Phone:	1-(800) 847-3527		

Section II - Composition/Information on Ingredients

<u>Hazardous Components</u>	<u>CAS Number</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>	<u>% by wt.</u>
None	N/A	N/A	N/A	N/A	N/A

N/A = Not Applicable

N.E. = Not Established

Section III - Hazards Identification

Emergency Overview:	Clear, non-flammable, water based cleaner with a light citrus odor.
Potential Health Effects:	
Eye Contact:	May cause mild temporary irritation.
Skin Contact:	Prolonged or repeated exposure may cause mild irritation.
Inhalation:	No adverse effects expected.
Ingestion:	No adverse health effects are anticipated to occur as a result of acute ingestion. Chronic effects are not known.
Carcinogenicity:	None of the components in this material are listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.
Signs/Symptoms of Overexposure:	Prolonged contact may cause mild irritation or dryness to sensitive skin.
Medical Conditions Generally Aggravated by Exposure:	None known.

Section IV - First Aid Measures

Eyes:	Immediately flush with clean water. Consult physician if necessary.
Skin:	Rinse with water.
Ingestion:	If swallowed, treat symptomatically and supportively. Do not induce vomiting. If victim conscious and alert, give two glasses of water or milk to drink. If vomiting occurs, keep head below hips to prevent aspiration. Contact Physician.
Inhalation:	No adverse effects anticipated.

Section V - Fire and Explosion Hazard

Flash Point (Method Used):	>212°F (PMCC, nonflammable)	Explosive Limits:	N/A
Extinguishing Media:	N/A	Autoignition Temperature:	N/A
Special Fire Fighting Procedures:	N/A	Unusual Fire Fighting and Explosion Hazards:	N/A

Section VI - Accidental Release

Small Spills:	Flush with water into containing area or to sewer where applicable within Federal, State or Local disposal requirements.
Large Spills:	Dike and pump into suitable containers, clean up residual with absorbent material and wash with water. Dispose of in accordance with Federal, State or Local disposal requirements.

Section VII - Handling & Storage

Handling & Storage	Wear protective goggles or face shield if splashing or spraying liquid. Protect from freezing.
Precautions:	
Other Precautions:	Keep container tightly closed. Keep out of reach of children.

Section VIII - Exposure Controls, Personal Protection

Respiratory Protection: No respiratory protection is necessary.
Ventilation: Good general ventilation is sufficient.
Protective Clothing: When prolonged skin contact is expected, wear protective gloves (nitrile, vinyl or latex of 4 mil thickness or greater).
Eye Protection: Wear safety glasses.
Work/Hygienic Practices: Use good personal hygiene practices, wash hands before eating, drinking, smoking, or using toilet facilities.

Section IX - Physical/Chemical Characteristics

Boiling Point:	>212°F	Specific Gravity (H ₂ O = 1):	0.997
Vapor Pressure, mm Hg @ 20°C	0.0018	pH:	8.7-9.5
(absolute, calculated) @ 37°C	0.0021	Evaporation Rate (Butyl Acetate = 1):	> 1
Vapor Density (AIR =1):	> 1	Freezing Point, °F:	32
Solubility in Water:	Complete	VOC undiluted *	80 g/l (0.67 lbs/gal)
Appearance and Odor:	Clear liquid with a mild citrus odor	2:1 dilution	25 g/l (0.21 lbs/gal)

* The VOC in this product has a vapor pressure of less than 0.1 mm Hg. Under many jurisdictions, this is classified as low vapor pressure VOC. This material is not listed as a "Hazardous Air Pollutant (HAP)" under the Clean Air Act (CAA) list of volatile or organic hazardous air pollutants.

N/A = Not Applicable

N.E. = Not Established

Section X - Stability & Reactivity

Stability:	Unstable Stable	X	Incompatibility (Materials to Avoid):	Strong Acids and Alkalies demulsify product.
Hazardous Decomposition or By-products:	Thermal decomposition may produce CO ₂			
Hazardous Polymerization:	May Occur		Will Not Occur	X

Section XI - Toxicological Information

Acute Oral:	LD ₅₀ > 13.0 g/kg
Acute Dermal:	LD ₅₀ > 5.0 g/kg
Primary Eye Irritation	No evidence of corrosion. All corneal involvement or irritation cleared within 72 hours.
Primary Skin Irritation	Primary Irritation Index (PII) = 2.6 based on erythema and edema . No corrosion was found.

Section XII - Ecological Information

Aerobic Aquatic Biodegradation (EPA Method 796.3100)	The percentage biodegradation in 28 days was 85.8%.
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Section XIII - Disposal Considerations

Waste Disposal: (Unused Material)	Flush uncontaminated material to sewer where applicable within Federal, State or Local disposal requirements. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, State and local waste disposal requirements may be more restrictive or otherwise different from Federal laws and regulations.
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Section XIV - Transportation Information

D.O.T Shipping Name:	Not Regulated	D.O.T Hazard Class:	None
UN Shipping Name:	N/A	UN/NA Number:	N/A
UN Class or Division	N/A	UN Packing Group:	None
NMFC Freight Class	Compound, Cleaning Fluid, NOI 48580 Sub 3		

Section XV - US Regulatory Information

Notice: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warrantee, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state, and local laws. The following specific information is made for the purpose of complying with numerous federal, state, and local laws and regulations.

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Federal Regulations:

Workplace Classification	This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200)			
SARA Title III				
Section 311/312	This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.			
Section 313	This product does not contain a chemical, which is listed in Section 313 at or <u>above de minimis</u> concentrations.			
CERCLA Information (40CFR 302.4)	Releases of this product to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.			
Waste Classification	When a decision is made to discard unused portions of this product, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and none of the materials used in this product are listed in 40 CFR 261.33. The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP). Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, State and local waste disposal requirements may be more restrictive or otherwise different from Federal laws and regulations.			
TSCA	All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act.			
NFPA Ratings	Health = 1	Flammability = 0	Reactivity = 0	Special = 0
NPCA-HMIS Ratings	Health = 1	Flammability = 0	Reactivity = 0	Protective Equipment = None

State Regulations:

Arizona

Maricopa County	Under the definitions of Rule 331, this product is considered a Low-VOC Cleaner.
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California

California Safe Drinking Water and Toxic Enforcement - Prop. 65	This product does not contain any materials currently listed by California as chemicals known to cause cancer or known to have reproductive toxicity under Proposition 65.
Volatile Organic Compounds (VOC)	The VOC content of this product is 80 grams/Liter (0.67 pounds/gallon) with a composite partial pressure at 20°C of less than 1 mm Hg.
BAAQMD	This product meets the requirements of the Bay Area Air Quality Management District Regulation 8, Rule 16 when used at a 1:1 dilution with water. The VOC content at this dilution is 40 grams/Liter (0.33 pounds/gallon) with a composite partial pressure at 20°C of less than 1 mm Hg.
SCAQMD	This product, when used at normal use dilutions of 2:1 or greater is certified by the South Coast Air Quality Management District as a Clean Air Solvent (CAS). The VOC content at a 2:1 dilution as determined by SCAQMD is 25 g/L (0.21 lbs./gal.) with a composite partial pressure at 20°C of less than 1 mm Hg.

Georgia

Rule 391-3-02	At use dilution, this product is greater than 80% water which qualifies this as an "Aqueous Cleaning Solvent". As an "Aqueous Cleaning Solvent" this product is exempt from Rule 391-3-02.
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Rule R 336.1281 & R 336.1212	The absolute (composite) vapor pressure of this product in either concentrated or diluted form is less than 0.1 mm Hg under standard conditions. Part (e) under R 336.1281 exempts this product from the requirement for a "Permit to Install". The vapor pressure for this product exempts it from the recordkeeping requirements of R 336.1212 as indicated in Part (3)(b) and clarified by MDEQ interoffice communication of July 5, 2011.
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Texas

Texas Rule 106.454 – Degreasing Units	Under this rule, Mirachem 500 is classified as a zero VOC product. The true vapor pressure is calculated to be < 0.6 pounds per square inch, absolute (psia) at an operating temperature of 100°F. This product meets the requirements of section (2)(C) for a remote reservoir cleaner and as such Section (1)(A) (i) and (ii) do not apply. Completion of Form PI-7 and monthly record keeping is not required.
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Section XVI - International Regulatory Information

Notice: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warrantee, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with their federal, state/province, and local laws. The following specific information is made for the purpose of complying with numerous specific foreign regulations.

Australia	This product is not classified as hazardous according to criteria of Worksafe Australia. Mirachem has reviewed Australia's List of Hazardous Substances and Australia's Standard of the Uniform Scheduling of Drugs and Poisons and determined that no ingredient in this product is listed in either listing. We have also verified with NICNAS at the Australian National Occupational Health & Safety Commission (NOHSC) that all of the components in this formulation are listed in the Australian Inventory of Chemical Substances (AICS) and that no notification will be necessary under the Industrial Chemicals (Notification and Assessment) Act 1989.
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Canada	Non-controlled under WHMIS. All of the components in this product are listed in the Canadian "Domestic Substances List" (DSL).
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European Union	All materials in this formulation are listed in the "European Inventory of Existing Commercial Chemical Substances" (EINECS). This product is not a hazardous preparation according to the EC-Directive 88/379/EEC.
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Korea	All materials in this formulation are listed in the Korean "Existing Chemicals List" (ECL). No material in this product is made from animal by-products.
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Philippines	All materials in this formulation are listed in the "Philippines Inventory of Chemicals and Chemical Substances" (PICCS).
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Japan	All materials in this formulation are listed in Japan's Inventory of "Existing and New Chemical Substances" (ENCS). This product meets the requirements of the Chemical Substance Control Law (MITI)
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China	All materials in this formulation are listed in China's "Inventory of Existing Chemical Substances in China" (IECSC).
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