



Material Safety Data Sheet

Mirachem 250 Rust & Scale Remover

(Formulation No. 2250)

Section I - General

Manufacturer Name: The Mirachem Corporation
P.O. Box 14059
Phoenix, Arizona 85063-4059

Date Prepared: 9/1/93
Revision Date: 8/8/02

Emergency Phone: 1(800) 847-3527

Section II - Hazardous Ingredients/Identity Information

<u>Hazardous Component (CAS #)</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits</u>	<u>% (Optional)</u>
Phosphoric Acid (CAS #7664-38-2)		1 mg/m ³	none	10

N.E. = None Established

Section III - Hazards Identification

Emergency Overview: Amber to dark brown phosphoric acid based liquid with essentially no odor

Potential Health Effects:

Eye Contact: May cause mild temporary irritation.

Skin Contact: Prolonged or repeated exposure may cause mild irritation.

Inhalation: Essentially non-irritating. No adverse effects are 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, mild burning 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 is 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

Special Fire Fighting Procedures: N/A Unusual Fire Fighting and Explosion Hazards: N/A

Section VI - Accidental Release

Small Spills: Neutralize with alkaline material such as lime or soda ash. Flush with water into containing area or to sewer where applicable within Federal, State or Local disposal requirements.

Large Spills: Dike and neutralize with alkaline material such as lime or soda ash. 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 Precautions: Avoid prolonged contact with skin. Use acid resistant metals, plastic, glass, fiberglass or rubber lined materials for storage and handling equipment. Wear protective goggles or face shield if splashing or spraying liquid. Protect from freezing.

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. A NIOSH certified self-contained respirator is recommended, but not required.

Ventilation: Good general ventilation is sufficient.

Protective Clothing: Rubber or neoprene gloves are recommended. Rubber apron and boots are recommended although not required.

Eye Protection: Anti-splash goggles are recommended.

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):	1.105
Vapor Pressure (mm Hg.) @ 20°C	0.004	pH:	1.0 - 2.0
Vapor Density (AIR =1):	1.0	Evaporation Rate (Butyl Acetate = 1):	N/A
Solubility in Water:	Complete	Melting Point:	N/A
Appearance and Odor:	Amber to dark brown liquid with essentially no odor		

N/A = Not Applicable N.E. = Not Established

Section X - Reactivity

Stability:	Unstable Stable X	Incompatibility (Materials to Avoid):	High strength alkaline materials will neutralize product.
Hazardous Decomposition or By-products:	Thermal decomposition may produce CO ₂ .		
Hazardous Polymerization:	May Occur	Will Not Occur	X

Section XI - Toxicological Information

Test	Results	Category
Acute Oral Toxicity in Rats (16 CFR 1500.3)	LD ₅₀ > 6.0g/kg	Non-Toxic
D.O.T. Corrosivity (Skin Irritation on Rabbits, 49 CFR 173.240)	Irritation Index = 0.0	Non-Irritating
Eye Irritation Test - EPA on rabbits (40CFR 163.81-4 and 16 CFR 1500.42)	Cornea and Iris cleared at 48 hours. All irritation cleared in 7 days or less	Non-Irritating to Eyes
Inhalation Toxicity - EPA on rats (40 CFR 163.81-3)	LD ₅₀ > 133 mg/L	No further testing necessary

Section XII - Ecological Information

No data available.

Section XIII - Disposal Considerations

Waste Disposal: Neutralize with alkaline material such as lime or soda ash. Flush material to sewer where applicable within
(Unused Material) 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.

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- 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.

Federal Regulations:

Workplace Classification	This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200)
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SARA Title III

Section 311/312	This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:
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Phosphoric acid (planning threshold of 10,000 pounds)
Immediate and acute health hazard

Section 313	This product contains phosphoric acid (CAS No. 7664-38-2) at a 10% level.
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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.
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Waste Classification	When a decision is made to discard unused portions of this product, it does not meet RCRA's characteristic definition for ignitability, or reactivity, and none of the materials used in this product are listed in 40 CFR 261.33. The pH of this product is equal to or less than 2.0 and is therefore characterized under RCRA as a corrosive. Neutralization as indicated in Section XIII prior to disposal is required. The toxicity characteristic (TC), has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).
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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.

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) No Volatile Organic Compounds (VOC) are present in this formulation under the existing California Air Resources Board (CARB) regulations.

SQAQMD This product is certified by the South Coast Air Quality Management District as a Clean Air Solvent (CAS). The VOC content as determined by SCAQMD is 0 g/L (0 lbs./gal.) with a composite partial pressure at 20°C of less than 1 mm Hg.

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.

Canada Non-controlled under WHMIS.

European Union There are no other components present which, to the best of our current knowledge and in the concentrations applied, are hazardous to health or environment. All materials in this formulation are EINECS listed. Not a hazardous preparation according to the EC-Directive 88/379/EEC.