

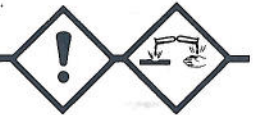


MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name: ChemTreat CL1446
Product Use: Cooling Water Treatment
Supplier's Name: ChemTreat, Inc.
Emergency Telephone Number: (800) 424-9300 (Toll Free)
(703) 527-3887
Address (Corporate Headquarters): 5640 COX ROAD
Glen Allen, VA 23060
Telephone Number for Information: (800) 648-4579
Date of MSDS: January 5, 2012

Section 2. Hazard(s) Identification



Signal Word: DANGER!

Hazard Statement(s): Causes severe skin burns and eye damage.
Causes serious eye damage.
Harmful in contact with skin.
Harmful if inhaled.
Harmful if swallowed.

Precautionary Statement(s): Wear protective gloves/clothing and eye/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Use only outdoors or in a well-ventilated area.

Section 3. Composition/Hazardous Ingredients

Component	CAS Registry #	Wt. %
2-Butenedioic acid (Z)-, homopolymer and 2-butenedioic acid	26099-09-2	5 - 10
2-Phosphono-1,2,4-butane tricarboxylic acid	37971-36-1	1 - 5
Potassium hydroxide	1310-58-3	1 - 5
Sodium molybdate	7631-95-0	1 - 5
Tolyltriazole, sodium salt	64665-57-2	1 - 5



Section 4. First Aid Measures

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
Eyes:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
Skin:	Immediately remove/take off all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before re-use. Immediately call a poison center or doctor/physician.
Ingestion:	DO NOT INDUCE VOMITING. Rinse mouth. Call a POISON CENTER or doctor/physician.
Notes to Physician:	N/A
Additional First Aid Remarks:	N/A

Section 5. Fire Fighting Measures

Flammability of the Product:	Not flammable.
Suitable Extinguishing Media:	Use extinguishing media suitable to surrounding fire.
Specific Hazards Arising from the Chemical:	None known.
Protective Equipment:	If product is involved in a fire, wear full protective clothing including a positive-pressure, NIOSH approved, self-contained breathing apparatus.

Section 6. Accidental Release Measures

Personal Precautions:	Use appropriate Personal Protective Equipment (PPE).
Environmental Precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.
Methods for Cleaning up:	Contain and recover liquid when possible. Flush spill area with water spray.
Other Statements:	If RQ (Reportable Quantity) is exceeded, report to National Spill Response Office at 1-800-424-8802.



Section 7. Handling and Storage

- Handling:** Wear appropriate Personal Protective Equipment (PPE) when handling this product. Do not get in eyes, or on skin and clothing. Wash thoroughly after handling. Do not ingest. Avoid breathing vapors, mist or dust.
- Storage:** Store away from incompatible materials (see Section 10). Store at ambient temperatures. Keep container securely closed when not in use. Label precautions also apply to empty container. Recondition or dispose of empty containers in accordance with government regulations. For Industrial use only.

Section 8. Exposure Controls/Personal Protection

Exposure Limits

Component	Source	Exposure Limits
2-Butenedioic acid (Z)-, homopolymer and 2-butenedioic acid		N/E
2-Phosphono-1,2,4-butane tricarboxylic acid		N/E
Potassium hydroxide	ACGIH TLV	2 mg/m ³ Ceiling
Sodium molybdate		N/E
Tolyltriazole, sodium salt		N/E

Carcinogenicity Category

Component	Source	Code	Brief Description
2-Butenedioic acid (Z)-, homopolymer and 2-butenedioic acid			N/E
2-Phosphono-1,2,4-butane tricarboxylic acid			N/E
Potassium hydroxide			N/E
Sodium molybdate			N/E
Tolyltriazole, sodium salt			N/E

- Engineering Controls:** Use only with adequate ventilation. The use of local ventilation is recommended to control emission near the source.

Personal Protection

- Eyes:** Wear chemical splash goggles or safety glasses with full-face shield. Maintain eyewash fountain in work area.
- Skin:** Maintain quick-drench facilities in work area. Wear butyl rubber or neoprene gloves. Wash them after each use and replace as necessary. If conditions warrant, wear protective clothing such as boots, aprons, and coveralls to prevent skin contact.
- Respiratory:** If misting occurs, use NIOSH approved organic vapor/acid gas dual

cartridge respirator with a dust/mist prefilter in accordance with 29 CFR 1910.134.

Section 9. Physical and Chemical Properties

Physical State and Appearance:	Liquid, Amber, Clear
Specific Gravity:	1.137 @ 20°C
pH:	13.1 @ 20°C, 100.0%
Freezing Point:	28°F
Flash Point:	N/D
Odor:	Strong
Melting Point:	N/A
Boiling Point:	212°F
Solubility in Water:	Complete
Evaporation Rate:	<1
Vapor Density:	N/D
Molecular Weight:	N/D
Viscosity:	N/A
Flammable Limits:	N/A
Autoignition Temperature:	N/A
Density:	9.48 lb/ga
Vapor Pressure:	N/D
% VOC	0

Section 10. Stability and Reactivity

Chemical Stability:	Stable at normal temperatures and pressures.
Incompatibility with Various Substances:	Strong oxidizers, Acids
Hazardous Decomposition Products:	Oxides of carbon, Oxides of nitrogen
Possibility of Hazardous Reactions:	None known.

Section 11. Toxicological Information

Chemical Name	Exposure	Type of Effect	Concentration	Species
2-Phosphono-1,2,4-butane tricarboxylic acid	Oral	LD50	>6500 mg/kg	Rat
Potassium hydroxide	Oral	LD50	365 mg/kg	Rat
Sodium molybdate	Oral	LD50	2810 mg/kg	Rat
Tolyltriazole, sodium salt	Oral	LD50	920 mg/kg	Rat
	Dermal	LD50	>2 g/kg	Rabbit

Comments: None.



Section 12. Ecological Information

Species	Duration	Type of Effect	Test Results
Fathead Minnow	96h	LC50	>1000 mg/l
Ceriodaphnia dubia	48h	LC50	>1000 mg/l
Sheepshead Minnow	96h	LC50	>1000 mg/l
Mysid Shrimp	48h	LC50	>1000 mg/l
Fathead Minnow	7d	NOEC	1000 mg/l
Ceriodaphnia dubia	6d	NOEC	1000 mg/l

Comments: NOEC effect = Survival

Section 13. Disposal Considerations

Dispose of in accordance with local, state and federal regulations.
EPA corrosivity characteristic hazardous waste D002 when disposed of in the original product form.

Section 14. Transport Information

DOT

Proper Shipping Name: POTASSIUM HYDROXIDE SOLUTION
Technical Name: N/A
Hazard Class: Corrosive
UN/NA#: UN1814
Packing Group: PGII

IMDG

Proper Shipping Name: POTASSIUM HYDROXIDE SOLUTION
Technical Name: N/A
Hazard Class: Corrosive
UN/NA#: UN1814
Packing Group: PGII

ICAO

Proper Shipping Name: POTASSIUM HYDROXIDE SOLUTION
Technical Name: N/A
Hazard Class: Corrosive
UN/NA#: UN1814
Packing Group: PGII

TDG

Proper Shipping Name: POTASSIUM HYDROXIDE SOLUTION
Technical Name: N/A
Hazard Class: Corrosive
UN/NA#: UN1814
Packing Group: PGII

Section 15. Regulatory Information

Inventory Status

United States (TSCA): All ingredients listed.
Canada (DSL/NDSL): All ingredients listed.

Federal Regulations

SARA Title III Rules

Sections 311/312 Hazard Classes

Fire Hazard: No
Reactive Hazard: No
Release of Pressure: No
Acute Health Hazard: Yes
Chronic Health Hazard: No

Other Sections

Component	Section 313 Toxic Chemical	Section 302 EHS TPQ	CERCLA RQ
2-Butenedioic acid (Z)-, homopolymer and 2-butenedioic acid	N/A	N/A	N/A
2-Phosphono-1,2,4-butane tricarboxylic acid	N/A	N/A	N/A
Potassium hydroxide	N/A	N/A	1000
Sodium molybdate	N/A	N/A	N/A
Tolyltriazole, sodium salt	N/A	N/A	N/A

Comments: None.



State Regulations

California Proposition 65: None known.

Special Regulations

Component	States
2-Butenedioic acid (Z)-, homopolymer and 2-butenedioic acid	None
2-Phosphono-1,2,4-butane tricarboxylic acid	None
Potassium hydroxide	MA, MN, NY, PA, WA
Sodium molybdate	None
Tolyltriazole, sodium salt	None

International Regulations

Canada

WHMIS Classification: D2B (Toxic Material)
E (Corrosive Material)

Controlled Product Regulations (CPR): This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Section 16. Other Information

HMIS Hazard Rating

Health:	3
Flammability:	0
Physical Hazard:	1
PPE:	X

Notes: The PPE rating depends on circumstances of use. See Section 8 for recommended PPE.

The Hazardous Material Information System (HMIS) is a voluntary, subjective alpha-numeric symbolic system for recommending hazard risk and personal protection equipment information. It is a subjective rating system based on the evaluator's understanding of the chemical associated risks. The end-user must determine if the code is appropriate for their use.

NSF: N/A

FDA: N/A

KOSHER: This product is certified by the Orthodox Union as Kosher for Passover and year-round use.



Only when prepared by the following ChemTreat facilities: Ashland, VA; Eldridge, IA; Nederland, TX; Vernon, CA.

FIFRA: N/A
Other: None

Abbreviations

Abbreviation	Definition
<	Less Than
>	Greater Than
ACGIH	American Conference of Governmental Industrial Hygienists
EHS	Environmental Health and Safety Dept
N/A	Not Applicable
N/D	Not Determined
N/E	Not Established
OSHA	Occupational Health and Safety Dept
PEL	Personal Exposure Limit
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weight Average
UNK	Unknown

Prepared by: Regulatory Affairs Department

Disclaimer

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