



MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name: ChemTreat CL5634
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: September 18, 2013

Section 2. Hazard(s) Identification

Signal Word: WARNING!

Hazard Statement(s): Causes eye irritation.
May be harmful in contact with skin.
May be harmful if inhaled.
May be harmful if swallowed.

Precautionary Statement(s): Wash hands thoroughly after handling.



Section 3. Composition/Hazardous Ingredients

Component	CAS Registry #	Wt. %
Citric acid	77-92-9	1 - 5
2-Butenedioic acid (Z)-, homopolymer and 2-butenedioic acid	26099-09-2	3 - 7

Section 4. First Aid Measures

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Skin: Wash with plenty of soap and water. Call a poison center or doctor/physician if you feel unwell.



Ingestion: DO NOT INDUCE VOMITING. Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

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.

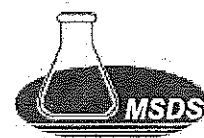
Methods for Cleaning up: Contain and recover liquid when possible. Flush spill area with water spray.

Other Statements: None.

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
Citric acid		N/E
2-Butenedioic acid (Z)-, homopolymer and 2-butenedioic acid		N/E

Carcinogenicity Category

Component	Source	Code	Brief Description
Citric acid			N/E
2-Butenedioic acid (Z)-, homopolymer and 2-butenedioic acid			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:	1.107 @ 20°C
pH:	3.5 @ 20°C, 100.0%
Freezing Point:	N/D
Flash Point:	N/A
Odor:	Mild
Melting Point:	N/A
Boiling Point:	N/D
Solubility in Water:	Complete
Evaporation Rate:	N/D
Vapor Density:	N/D
Molecular Weight:	N/D



Viscosity: <100 CPS @ 20°C
Flammable Limits: N/A
Autoignition Temperature: N/A
Density: 9.23 lb/ga
Vapor Pressure: N/D
% VOC: N/D

Section 10. Stability and Reactivity

Chemical Stability: Stable at normal temperatures and pressures.
Incompatibility with Various Substances: Strong oxidizers, Strong bases
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
N/D				

Comments: None.

Section 12. Ecological Information

Species	Duration	Type of Effect	Test Results
Ceriodaphnia dubia	48h	LC50	3759 mg/l
Fathead Minnow	96h	LC50	6373 mg/l

Comments: None.



Section 13. Disposal Considerations

Dispose of in accordance with local, state and federal regulations.

Section 14. Transport Information

DOT

Proper Shipping Name: COMPOUND, INDUSTRIAL WATER TREATMENT, LIQUID
Technical Name: N/A
Hazard Class: Not D.O.T. Regulated
UN/NA#: N/A
Packing Group: N/A

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
Citric acid	N/A	N/A	N/A
2-Butenedioic acid (Z)-, homopolymer and 2-butenedioic acid	N/A	N/A	N/A

Comments: None.



State Regulations

California Proposition 65: None known.

Special Regulations

Component	States
Citric acid	None
2-Butenedioic acid (Z)-, homopolymer and 2-butenedioic acid	None

International Regulations

Canada

WHMIS Classification: D2B (Toxic 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: 1
Flammability: 0
Physical Hazard: 0
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/USDA/GRAS: N/A

KOSHER: This product has not been evaluated for Kosher approval.

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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Shipment Receipt

Transaction Date: 14 Nov 2014

Tracking Number:

1Z2328960190375340

Address Information		
Ship To: DEP Bureau of Point and Non-Point Division of Planning & Permitting Rachel Carson State Office Building 400 Market Street 11th Floor HARRISBURG PA 171012301 Telephone:(717) 787-8184	Ship From: Old Dominion Electric Cooperative David Smith 4201 Dominion Boulevard Power Supply GLEN ALLEN VA 23060 Telephone:(804) 968-4024	Return Address: Old Dominion Electric Cooperative David Smith 4201 Dominion Boulevard Power Supply GLEN ALLEN VA 23060 Telephone:(804) 968-4024

Package Information			
Weight	Dimensions / Packaging	Declared Value	Reference Numbers
1. Letter (Letter billable)	UPS Letter		

UPS Shipping Service and Shipping Options	
Service:	UPS Next Day Air
Guaranteed By:	10:30 AM Monday, Nov 17, 2014
Shipping Fees Subtotal:	26.61 USD
Transportation	24.30 USD
Fuel Surcharge	2.31 USD
Additional Shipping Options	
Quantum View Notify E-mail Notifications: 1 ahines@odec.com: Delivery	No Charge

Payment Information	
Bill Shipping Charges to:	Shipper's Account 232896
A discount has been applied to the Daily rates for this shipment	
Total Charged:	26.61 USD
Negotiated Total:	24.97 USD

Note: Your invoice may vary from the displayed reference rates.
 * For delivery and guarantee information, see the UPS Service Guide. To speak to a customer service representative, call 1-800-PICK-UPS for domestic services and 1-800-782-7892 for international services.

Responsibility for Loss or Damage
 UPS's liability for loss or damage to each domestic package or international shipment is limited to \$100. Unless a greater value is recorded in the declared value field of the UPS shipping system used, the shipper agrees that the released value of each package covered by this receipt is no greater than \$100, which is a reasonable value under the circumstances surrounding the transportation. To increase UPS's limit of liability for loss or damage above \$100, the shipper must declare a higher value and pay an additional charge. See the UPS Tariff/Terms and Conditions of Service at www.ups.com for UPS's liability limits, maximum declared values, and other terms of service. UPS does not accept for transportation and shippers are prohibited from shipping packages with a value of more than \$50,000. Claims not made within nine months after delivery of the package (sixty days for international shipments), or in the case of failure to make delivery, nine months after a reasonable time for delivery has elapsed (sixty days for international shipments), shall be deemed waived. The entry of a C.O.D. amount is not a declaration of value for carriage purposes. All checks or other negotiable instruments tendered in payment of C.O.D. will be accepted by UPS at shipper's risk. UPS shall not be liable for any special, incidental, or consequential damages. All shipments are subject to the terms and conditions contained in the UPS Tariff/Terms and Conditions of Service (available at www.ups.com).