

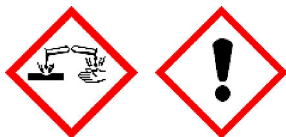
SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 250416
Product Name: CS-200
Category: Corrosion Inhibitor and Scale Stabilizer for Cooling Systems
Company Name: Water Science Technologies, LLC **Phone Number:**
1701 Vanderbilt Road (866)284-9244
Birmingham, AL 35234
Emergency Contact: ChemTel, Inc. (US) (800)255-3924
ChemTel, Inc. (Int'l) (813)248-0585

2. HAZARDS IDENTIFICATION

Skin Corrosion/Irritation, Category 1B
Serious Eye Damage/Eye Irritation, Category 1
Skin Sensitization, Category 1
Aquatic Toxicity (Acute), Category 2
Aquatic Toxicity (Chronic), Category 3



GHS Signal Word: **Danger**

GHS Hazard Phrases: H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H401 - Toxic to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.

GHS Precaution Phrases: P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash hands thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

GHS Response Phrases: P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P333+313 - If skin irritation or rash occurs, seek medical advice/attention.
P363 - Wash contaminated clothing before reuse.

GHS Storage and Disposal Phrases: P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal site.

SAFETY DATA SHEET

Hazard Rating System:

HEALTH	2
FLAMMABILITY	1
PHYSICAL	0
PPE	D

HMIS:

Potential Health Effects
(Acute and Chronic):

- Inhalation:** May cause respiratory irritation.
- Skin Contact:** Irritating to skin. May cause sensitization by skin contact.
- Eye Contact:** Causes serious eye damage.
- Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Ingredient(s)	Concentration
143239-08-1	2-Butenedioic acid (2Z)-, sodium salt (1:2), reaction products with sodium phosphonate (1:2)	2.5 -10.0 %
61791-26-2	Fatty alkylamine, ethoxylated	2.5 -10.0 %
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	2.5 -10.0 %
61791-55-7	Amines, N-tallow alkyltrimethylenedi-	0.1 -1.0 %

4. FIRST AID MEASURES

Emergency and First Aid

Procedures:

- In Case of Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Seek medical advice/attention if you feel unwell.
- In Case of Skin Contact:** Wash exposed area with soap and water thoroughly. Remove contaminated clothing and wash before reuse. Seek medical advice/attention immediately.
- In Case of Eye Contact:** Immediately flush eyes with running water for at least 15 minutes. Remove contact lenses if present after the first 5 minutes. Seek medical advice/attention immediately.
- In Case of Ingestion:** Rinse mouth with water. Do NOT induce vomiting. Give plenty of water. Never give anything to an unconscious person. Seek medical advice/attention immediately.
- Note to Physician:** Based on the individual reactions of the patient, the physician's judgment should be used to treat symptomatically and supportively.

SAFETY DATA SHEET

5. FIRE FIGHTING MEASURES

Flash Pt:	> 200.00 F (93.3 C)	Method Used: ASTM D Closed Cup
Explosive Limits:	LEL: No data.	UEL: No data.
Autoignition Pt:	No data.	
Suitable Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective.	
Fire Fighting Instructions:	Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.	
Flammable Properties and Hazards:	No data available.	

6. ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures:	Avoid contact with spilled material. Avoid breathing vapors, mist, or gas. Ventilate area of leak or spill. Wear appropriate personal protection equipment.
Environmental Precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Steps To Be Taken In Case Material Is Released Or Spilled:	Collect liquid by absorbing with an inert material (e.g. vermiculite, dry sand, earth), clean contaminated surface thoroughly, and place in a container for disposal according to local regulations.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling:	Avoid prolonged or repeated contact with eyes, skin, or clothing. Wash thoroughly after handling. Avoid breathing product vapors or mists. Use with adequate ventilation. Keep containers closed when not in use.
Precautions To Be Taken in Storing:	Store in a dry, cool, and well ventilated area away from heat sources and incompatible materials. Keep containers securely sealed. Protect containers from physical damage and check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Components (Chemical Name)	OSHA TWA	ACGIH TWA	Other Limits
143239-08-1	2-Butenedioic acid (2Z)-, sodium salt (1:2), reaction products with sodium phosphonate (1:2)	No data.	No data.	No data.
61791-26-2	Fatty alkylamine, ethoxylated	No data.	No data.	No data.
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	No data.	No data.	No data.
61791-55-7	Amines, N-tallow alkyltrimethylenedi-	No data.	No data.	No data.

SAFETY DATA SHEET

11. TOXICOLOGICAL INFORMATION

Toxicological Information: The product has not been tested. Any statements on toxicology have been derived from products of a similar structure and composition.

CAS# 61791-26-2:

Acute toxicity, LD50, Oral, Rat, 620.0 MG/KG.

Result:

Gastrointestinal: Nausea or vomiting.

- Farm Chemicals Handbook., Meister Pub., 37841 Euclid Ave., Willoughby, OH 44094, Vol/p/yr: -, C147, 1991

Acute toxicity, LD50, Skin, Rat, > 10.00 GM/KG.

Result:

Skin and Appendages: Skin: After systemic exposure: Dermatitis, other.

- Farm Chemicals Handbook., Meister Pub., 37841 Euclid Ave., Willoughby, OH 44094, Vol/p/yr: -, C147, 1991

CAS# 68424-85-1:

Acute toxicity, LD50, Oral, Rat, 426.0 MG/KG.

Result:

Tumorigenic: Carcinogenic by RTECS criteria.

Lungs, Thorax, or Respiration: Tumors.

- U.S. Army, Environmental Hygiene Agency Reports., Vol/p/yr: 5177T7-66, 1967

CAS #	Ingredient(s)	NTP	IARC	ACGIH	OSHA
143239-08-1	2-Butenedioic acid (2Z)-, sodium salt (1:2), reaction products with sodium phosphonate (1:2)	n.a.	n.a.	n.a.	n.a.
61791-26-2	Fatty alkylamine, ethoxylated	n.a.	n.a.	n.a.	n.a.
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	n.a.	n.a.	n.a.	n.a.
61791-55-7	Amines, N-tallow alkyltrimethylenedi-	n.a.	n.a.	n.a.	n.a.

12. ECOLOGICAL INFORMATION

General Ecological Information: The product has not been tested. Any statements on eco-toxicology have been derived from products of a similar structure and composition.

Results of PBT and vPvB assessment:

CAS# 61791-26-2:

LC50, Bluegill (*Lepomis macrochirus*), 1300. UG/L, 96 H, Mortality, pH: 6.50, Water Hardness: 40.00 MG/L.

Result:

Age Effects.

- Toxicity of the Herbicide Glyphosate and Several of Its Formulations to Fish and Aquatic Invertebrates, Folmar, L.C., H.O. Sanders, and A.M. Julin, 1979

LC50, Water Flea (*Daphnia pulex*), 66090. UG/L, 48 H, Mortality, Water temperature: 20.00 C (68.0 F) - 21.00 C (69.8 F) C, pH: 8.00.

Result:

Age Effects.

- Aquatic Toxicities of Textile Surfactants, Moore, S.B., R.A. Diehl, J.M. Barnhardt, and

SAFETY DATA SHEET

G.B. Avery, 1987

CAS# 68424-85-1:

Effective concentration to {0} % of test organisms, Bluegill (*Lepomis macrochirus*), 250.0 UG/L, 60 D, Accumulation, Water temperature: 18.00 C (64.4 F) C, pH: 6.80, Hardness: 25.00 MG/L.

Result:

Affected fish lost equilibrium prior to death.

- A Pharmacokinetic Model for Predicting Pesticide Residues in Fish, Krzeminski, S.F., J.T. Gilbert, and J.A. Ritts, 1977

LC50, Rainbow Trout (*Oncorhynchus mykiss*), 923.2 PPB, 96 H, Mortality.

Result:

Age Effects.

- Pesticide Ecotoxicity Database (Formerly: Environmental Effects Database (EEDB)), Office of Pesticide Programs, 2000

Effective concentration to 50% of test organisms., Water Flea (*Daphnia magna*), 5.900 PPB, 48 H, Intoxication,.

Result:

Age Effects.

- Pesticide Ecotoxicity Database (Formerly: Environmental Effects Database (EEDB)), Office of Pesticide Programs, 2000

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

RCRA: It is the responsibility of the product user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste (40 CFR 261.20-24).

Disposal: Whatever cannot be saved for recovery or recycling should be disposed of in accordance with local, state, and federal regulations. Consult state or local regulation for any additional handling, treatment, or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal, or recycling facility.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Amines, liquid, corrosive, n.o.s., (Alkyl dimethyl benzyl ammonium chloride, Tallow Amines)

DOT Hazard Class: 8 CORROSIVE

UN/NA Number: UN2735 **Packing Group:** III



LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Amines, liquid, corrosive, n.o.s., (Alkyl dimethyl benzyl ammonium chloride, Tallow Amines)

UN Number: 2735 **Packing Group:** III

Hazard Class: 8 - CORROSIVE **TDG Classification:**

SAFETY DATA SHEET

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Amines, liquid, corrosive, n.o.s., (Alkyl dimethyl benzyl ammonium chloride, Tallow Amine)
UN Number: 2735 **Packing Group:** III
Hazard Class: 8 - CORROSIVE **IMDG MFAG Number:**
IMDG EMS Page:

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Amines, liquid, corrosive, n.o.s., (Alkyl dimethyl benzyl ammonium chloride, Tallow Amine)
UN Number: 2735 **Packing Group:** III
Hazard Class: 8 - CORROSIVE

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Ingredient(s)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
143239-08-1	2-Butenedioic acid (2Z)-, sodium salt (1:2), reaction products with sodium phosphonate (1:2)	No	No	No
61791-26-2	Fatty alkylamine, ethoxylated	No	No	No
68424-85-1	Quaternary ammonium compounds,benzyl-C12-16-alkyldimethyl, chlorides	No	No	No
61791-55-7	Amines, N-tallow alkyltrimethylenedi-	No	No	No

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:
 Yes No Acute (immediate) Health Hazard
 Yes No Chronic (delayed) Health Hazard
 Yes No Fire Hazard
 Yes No Sudden Release of Pressure Hazard
 Yes No Reactive Hazard

CAS #	Ingredient(s)	Canadian NPRI	Canadian IDL	Canadian DSL
143239-08-1	2-Butenedioic acid (2Z)-, sodium salt (1:2), reaction products with sodium phosphonate (1:2)	No	No	No
61791-26-2	Fatty alkylamine, ethoxylated	No	No	Yes
68424-85-1	Quaternary ammonium compounds,benzyl-C12-16-alkyldimethyl, chlorides	No	No	Yes
61791-55-7	Amines, N-tallow alkyltrimethylenedi-	No	No	Yes

CAS #	Ingredient(s)	Other US EPA or State Lists
143239-08-1	2-Butenedioic acid (2Z)-, sodium salt (1:2), reaction products with sodium phosphonate (1:2)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No
61791-26-2	Fatty alkylamine, ethoxylated	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
68424-85-1	Quaternary ammonium compounds,benzyl-C12-16-alkyldimethyl, chlorides	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 4 Test; CA PROP.65: No
61791-55-7	Amines, N-tallow alkyltrimethylenedi-	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No

SAFETY DATA SHEET

CAS #	Ingredient(s)	International Regulatory Lists
143239-08-1	2-Butenedioic acid (2Z)-, sodium salt (1:2), reaction products with sodium phosphonate (1:2)	
61791-26-2	Fatty alkylamine, ethoxylated	
68424-85-1	Quaternary ammonium compounds,benzyl-C12-16-alkyldimethyl, chlorides	
61791-55-7	Amines, N-tallow alkyltrimethylenedi-	

Canadian WHMIS Classification:



CLASS E: Corrosive Materials

CLASS D, DIVISION 2: Materials Causing Other Toxic Effects

Regulatory Information: Canadian regulations: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

16. OTHER INFORMATION

Revision Date: 09/26/2016
Additional Information About This Product: No data available.

Company Policy or Disclaimer: The information accumulated herein is believed to be accurate based on the information provided, although no guarantee or warranty, either expressed or implied is made as to the accuracy or completeness of this information, whether originating with this company or not. Recipients are advised to confirm in advance of need that the information is correct, applicable and suitable to their circumstances. The conditions or methods of handling, storage, use and disposal of the product and container are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage or use of this information or product. If the product is used as a component in another product, this information may not be applicable.