SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: DCT 1100-L

Trade Name: Scale Retardant, Antifoulant, Corrosion Inhibitor

1.2. Intended Use of the Product

Use of the substance/mixture: Cooling water treatment

1.3. Name, Address, and Telephone of the Responsible Party

USA:

Delta Chemical Corporation
P.O. Box 7430
Metairie, LA 70010-7430
USA
1504 733 0630

1.4. Emergency Telephone Number

Emergency Number: Chem Tel - 1800-255-3924

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Flam. Liq. 4	H227
Met. Corr. 1	H290
Skin Corr. 1A	H314
Eye Dam. 1	H318
Skin Sens. 1	H317
STOT RE 2	H373

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)

GHS05 GHS07 GHS08

Signal Word (GHS-US): Danger

Hazard Statements (GHS-US):
H227 - Combustible liquid.
H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements (GHS-US):
P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.
P234 - Keep only in original container.
P260 - Do not breathe vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P272 - Contaminated work clothing must not be allowed out of the work place.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting. P302+P352 - If on skin: Wash with plenty of water.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - 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.

P314 - Get medical advice/attention if you feel unwell.
P321-Specific treatment (see section 4 on this SOS).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.
P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.
P390 - Absorb spillage to prevent material damage.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P406 - Store in corrosive resistant container with a resistant inner liner.
PS01 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate individuals with pre-existing skin, kidney, liver, and pulmonary disorders. Flammable vapors can accumulate in head space of closed systems.

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product Identifier	%	Classification (GHS-US)
Water	Proprietary*	Proprietary*	Not classified
Inorganic potassium compound*	Proprietary*	Proprietary*	Met. Corr. 1, H290 Acute Tax. 4 (Oral), H302 Skin Corr. 1A, H314 Eye Dam. 1, H318
Alkanolamines*	Proprietary•	Proprietary*	Flam. Liq. 4, H227 Acute Tax. 4 (Oral), H302 Acute Tax. 4 (Dermal), H312 Acute Tax. 4 (Inhalation), H332 Skin Corr. 18, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 3, H402
Phosphonates*	Proprietary•	Proprietary•	Acute Tax. 4 (Oral), H302 Skin Corr. 18, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373
Organophosphoric acid*	Proprietary*	Proprietary*	Met. Corr. 1, H290 Acute Tax. 4 (Oral), H302 Eye Dam. 1, H318
Phosphonates*	Proprietary*	Proprietary*	Met. Corr. 1, H290 Eye Irrit. 2A, H319
Inorganic acids*	Proprietary•	Proprietary•	Not classified
Benzene/toluene derivative•	Proprietary•	Proprietary•	Acute Tax. 4 (Oral), H302 Skin Corr. B, H314 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Inorganic salt*	Proprietary*	Proprietary*	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

*The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret in accordance with Paragraph 1910.1200 of Title 29 of the Code of Federal Regulations.
Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor.
First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 60 minutes. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor.
First-aid Measures After Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 60 minutes. Immediately call a POISON CENTER or doctor.
First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: Causes severe skin burns and eye damage. Harmful if swallowed. Harmful in contact with skin. Corrosive to eyes, respiratory system and skin. Causes damage to organs through prolonged or repeated exposure.
Symptoms/Injuries After Inhalation: Corrosive to mucus membranes.
Symptoms/Injuries After Skin Contact: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin. Causes severe skin burns.
Symptoms/Injuries After Eye Contact: Causes serious eye damage. Redness. Pain. Blurred vision. Severe burns.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Chronic Symptoms: Causes damage to organs through prolonged or repeated exposure.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

No additional information available

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, alcohol-resistant foam, carbon dioxide ($C0_2$), dry chemical powder.
Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Combustible liquid.
Explosion Hazard: May form flammable/explosive vapor-air mixture.
Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion. Thermal decomposition generates corrosive vapours.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.
Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.
Other Information: Do not allow run-off from fire fighting to enter drains or water courses. Do not allow the product to be released into the environment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Use special care to avoid static electric charges. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Avoid all eyes and skin contact and do not breathe vapor and mist.

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).
Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Ventilate area. Eliminate ignition sources.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Do not take up in combustible material such as saw dust or cellulosic material.

Methods for Cleaning Up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Use only non-sparking tools.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. Fire will produce Irritating, corrosive and/or toxic gases.

Precautions for Safe Handling: Use only outdoors or in a well-ventilated area. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use only non-sparking tools. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Do not breathe vapors, mist, spray.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating and lighting equipment. Comply with applicable regulations.

Storage Conditions: Keep/Store away from extremely high or low temperatures, ignition sources, direct sunlight, incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers Metals.

7.3. Specific End Use(s)

Cooling water treatment

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

Inorganic potassium compound (1310-58-3)		
USA ACGIH	ACGIH Ceiling (mg/m^3)	2 mg/m^3
USA NIOSH	NIOSH REL (ceiling) (mg/m^3)	2 mg/m^3
Inorganic salt (7631-95-0)		
USA ACGIH	ACGIH TWA (mg/m3	0.5 mg/m^3 TLV (as Mo, soluble compounds, resoirable fraction)
USA ACGIH	ACGIH chemical category	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans (Soluble Molybdenum Compounds)
Alkanolamines (141-43-5)		
USA ACGIH	ACGIH TWA (ppm)	3 pom
USA ACGIH	ACGIH STEL (ppm)	6 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m^3)	8 mg/m^3
USA NIOSH	NIOSH REL (TWA) (ppm)	3 pom
USA NIOSH	NIOSH REL (STEL) (mg/m^3)	15 mg/m^3
USA NIOSH	NIOSH REL (STEL) (porn)	6 ppm
USA IDLH	US IDLH (ppm)	30 ppm
USA OSHA	OSHA PEL (TWA) (mg/m^3)	6 mg/m^3
USA OSHA	OSHA PEL (TWA) (ppm)	3 ppm

8.2. Exposure Controls

Appropriate Engineering Controls : Ensure adequate ventilation, especially in confined areas. Emergency eyewash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment	Avoid all unnecessary exposure. Protective goggles. Corrosionproof clothing. Gloves. Face shield.
Materials for Protective Clothing	Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing. Corrosion proof clothing.
Hand Protection	Wear protective gloves. Wear chemically resistant protective gloves.
Eye Protection	Chemical safety goggles and face shield.
Skin and Body Protection	Corrosion proof clothing.
Respiratory Protection	Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.
Other Information	When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	Liquid
Appearance	Brown liquid
Odor	No distinct odor
Odor Threshold	No data available
pH	≈12
Evaporation Rate	No data available
Melting Point	No data available
Freezing Point	No data available
Boiling Point	> 104.44 °C (> 220 °F)
Flash Point	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Flammability (solid, gas)	No data available
Vapor Pressure	No data available
Relative Vapor Density at 20 °C	No data available
Relative Density	No data available
Specific Gravity	1.06
Solubility	Water: Complete
Partition Coefficient: N-Octanol/Water	No data available
Viscosity	No data available

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion. Thermal decomposition generates corrosive vapours.

10.2. Chemical Stability: Combustible liquid. May form flammable/explosive vapor-air mixture.

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks. Incompatible materials, and other ignition sources.

10.5. Incompatible Materials: Strong acids. Strong bases. Strong oxidizers. Metals. May be corrosive to metals.

10.6. Hazardous Decomposition Products: Carbon oxides (CO, CO_2). Phosphines. May release flammable gases. Thermal decomposition generates : Corrosive vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

Inorganic potassium compound (1310-58-3)	
LD50 Oral Rat	333 mg/kg

Benzene/toluene derivative (64665-57-2)	
LD50 Oral Rat	735 mg/kg (Species: Sprague-Dawley
Inorganic salt (7631-95-0)	
LD50 Oral Rat	4000 mg/kg
LC50 Inhalation Rat	> 2080 mg/m^3 (Exposure time: 4 h)
Phosphonates (23783-26-8)	
ATE (Oral)	500.00 mg/kg body weight
Alkanolamines (141-43-5)	
LD50 Oral Rat	1720 mg/kg
LD50 Dermal Rabbit	2.46 - 2.83 ml/kg
ATE (Gases)	4,500.00 ppmV/4h
ATE (Vapors)	11.00 mg/l/4h
ATE (Dust/Mist)	1.50 mg/l/4h
Organophosphoric acid (2809-21-4)	
LD50 Oral Rat	1878 mg/kg
LD50 Dermal Rabbit	> 7940 mg/kg
Phosphonates (37971-36-1)	
LD50 Oral Rat	> 4000 mg/kg
LD50 Dermal Rat	> 4000 mg/kg
LC50 Inhalation Rat	> 1979 mg/m^3 (Exposure time: 4 h)

Skin Corrosion/Irritation: Causes severe skin burns and eye damage.
pH: ≈ 12

Serious Eye Damage/Irritation: Causes serious eye damage.
pH: ≈ 12

Respiratory or Skin Sensitization: May cause an allergic skin reaction.
Germ Cell Mutagenicity: Not classified
carcinogenicity: Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Specific Target Organ Toxicity (Repeated Exposure): May cause damage to organs through prolonged or repeated exposure.
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: Corrosive to mucus membranes.
Symptoms/Injuries After Skin Contact: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin. Causes severe skin burns.
Symptoms/Injuries After Eye Contact: Causes serious eye damage. Redness. Pain. Blurred vision. Severe burns. Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Chronic Symptoms: Causes damage to organs through prolonged or repeated exposure.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Inorganic salt (7631-95-0)	
LC50 Fish 1	609.1 mg/l LC50/96h/Pimphales promelas
LC 50 Fish 2	800 mg/l LC50/96h/Oncorhynchus mykiss
Alkanolamines (141-43-5)	
LC50 Fish 1	227 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	65 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	3684 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
Organophosphoric acid {2809-21-4)	
LC50 Fish 1	868 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	527 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	360 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
NOEC (acute)	1000 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])

12.2 Persistence and Degradability

DCT 1100-L	
Persistence and Degradability	Not established.

12.3 Bioaccumulative Potential

DCT 1100-L	
Bioaccumulative Potential	Not established.
Inorganic potassium compound (1310-58-3)	
Log Pow	I 0.65
Alkanolamines (141-43-5)	
Log Pow	-1.91(at 25 ℃)
Organophosphoric acid (2809-21-4)	
BCF fish 1	< 50
Log Pow	3.49
Phosphonates (37971-36-1)	
BCF fish 1	(no bioaccumulation expected)

12.4 Mobility in Soil
No additional information available

12.5 Other Adverse Effects
Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste Disposal Recommendations: Dispose of waste material in accordance with all local,regional,national, and International regulations.
Additional Information: Handle empty containers with care because residual vapors are flammable.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT

Proper Shipping Name	CORROSIVE LIQUID, N.O.S. Inorganic potassium compound.
Hazard Class	8
Identification Number	UN1760
Label Codes	8
Packing Group	III

14.2. In Accordance with IMDG

Proper Shipping Name	CORROSIVE LIQUID, N.O.S. Inorganic potassium compound
Hazard Class	8
Identification Number	UN1760
Packing Group	III
Label Codes	8
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-B

14.3. In Accordance with IATA

Packing Group	CORROSIVE LIQUID, N.O.S. Inorganic potassium compound
Identification Number	UN1760
Hazard Class	8
Label Codes	8
ERG Code (IATA)	8L

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

DCT1100-L	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
Water (7732 18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Inorganic potassium compound (1310-58-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Benzene/toluene derivative (64665-57-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Inorganic salt (7631-95-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Phosphonates (23783-26-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Alkanolamines (141-43-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Organophosphoric acid (2809-21-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Phosphonates (37971-36-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2 US State Regulations

Inorganic potassium compound (1310-58-3)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List
Alkanolamines (141-43-5)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsvlvanla - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date	03/10/2015
Other Information	This document has been prepared in accordance with the SOS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 4	Flammable liquids Category 4
Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. A	Skin corrosion/irritation Category A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Skin sensitization Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H227	Combustible liquid
H290	May be corrosive to metals
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction

H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure
H402	Harmful to aquatic life
H411	Toxic to aquatic life with long lasting effects

This information is based on our current knowledge and is intended to *describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

SOS US (GHS HazCom)