Safety Data Sheet

Issue Date: 04-02-2014 **Revision Date:** NEW **Version** 1

1: IDENTIFICATION

Product Identifier:
Product Name: **Ty-Ion C-70**

Other Means of Identification:
Part Number: 7597-05, 7597-P3

Recommended Use of the Chemical and Restrictions on Use:
Aqueous cooling tower treatment

Details of the Author of the Safety Data Sheet:
Supplier Address: NU-CALGON WHOLESALER, INC.
2008 Altom Court
St. Louis, MO 63146-4151

Emergency Telephone Number:
Company Phone Number: (314) 469-7000
(800) 554-5499
Emergency Telephone:
Number (24hr): CHEMTREC 800-424-9300

2: HAZARDS IDENTIFICATION

Hazard Classification: Acute toxicity (oral), category 4
Eye irritation, category 2B
Specific target organ toxicity (single exposure), category 3

Signal Word: Warning

Hazard Statements: H303 May be harmful if swallowed
H313 May be harmful in contact with skin
H320 Causes eye irritation.
H335 May cause respiratory tract irritation

Pictograms of Related Hazards:

Precautionary Statements:

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P331 - IF SWALLOWED: Do NOT induce vomiting.
P315: Get immediate medical advice/attention
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P332 + P313: If skin irritation occurs, get medical advice/attention.
P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P313 - Get medical advice/attention
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P315: Get immediate medical advice/attention

Description of Other Hazards: May cause skin irritation.

3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %
Ethylene glycol	107-21-1	5-15
Anionic copolymer, sodium potassium salt	Proprietary	1-10
Aminotri(methylenephosphonic acid), potassium salt	27794-93-0	1-10
1-Hydroxyethylidene-1,1-diphosphonic acid, potassium salt	67953-76-5	1-10

4: FIRST-AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eye lids occasionally. Get medical attention immediately.

Skin Contact: Remove any contaminated clothing. Wash skin thoroughly with plenty of soap and water for at least 15 minutes. Get medical attention if irritation develops.

Inhalation: If inhalation occurs, remove victim to fresh air. If the breathing stops, give artificial respiration. If breathing is difficult, have a trained medical person administer oxygen. Get medical attention.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Rinse out mouth with water. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water fog or fine spray. Dry chemical. Carbon dioxide (CO2). Alcohol resistant foams. Water spray may be used to extinguish surrounding fire and cool exposed containers. Water spray will also reduce fume and irritant gases.

Unsuitable Extinguishing Media: A direct stream of water may cause frothing.

Protective Equipment and Precautions for Firefighters: Firefighters should wear full protective clothing including a self-contained breathing apparatus.

Specific Hazards Arising from the Chemical: Toxic gases and vapors may be released in a fire.

Hazardous Decomposition Products: Thermal decomposition or combustion may produce oxides of carbon, oxides of potassium, oxides of sodium, oxides of nitrogen, and oxides of sulfur as well as acrid smoke and irritating fumes.

6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Ventilate the spill area. Keep unnecessary and unprotected people away from the spill site. Stop or reduce any leaks if is safe to do so. Notify appropriate government, occupational health and safety, and environmental authorities.

Methods for Clean-up:
Small spills: Soak up spill with an inert absorbent material (e.g. vermiculite, sand, or earth). Place residues in a suitable, covered, properly labeled container. Wash the affected area.
Large spills: Contain liquid using an inert absorbent material (e.g. vermiculite, sand, or earth), by digging trenches, or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material.

Disposal: Dispose of material in compliance with federal, state, and local regulations.

Environmental Precautions: Prevent entry into lakes, ponds, streams, waterways, or public water supplies.

7: HANDLING AND STORAGE

Advice on Safe Handling:
Avoid contact with skin, eyes, and clothing.
Avoid breathing vapors or mist.
Use with adequate ventilation.
Wash thoroughly after handling.
Do not take internally.
Keep containers closed when not in use.
Ensure that containers are properly labeled.
Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid).
Observe all warnings and precautions listed for this product.
Have emergency equipment (for fires, spills, leaks, etc.) readily available.

Storage Conditions:
Store in a cool, dry, well-ventilated area away from incompatible materials.
Protect against the physical damage of containers.

8: EXPOSURE CONTROL / PERSONAL PROTECTION

Chemical Name	NIOSH	OSHA PEL	ACGIH TLV
Ethylene glycol	None established	Ceiling: 50 mg/m^3 vapor	Ceiling: 50 mg/m^3
Anionic copolymer, sodium potassium salt	None established	None established	None established
Aminotri(methylenephosphonic acid), potassium salt	None established	None established	None established
1-Hydroxyethylidene-1,1-diphosphonic acid, potassium salt	None established	None established	None established

Eye/Face Protection: Chemical splash goggles

Skin Protection: Chemical resistant gloves and clean body covering clothing

Respiratory Protection: If airborne concentrations exceed published exposure limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134).

Engineering Controls: Use local exhaust ventilation where mist or spray may be generated.

General Hygiene Considerations Use good industrial hygiene practices in handling this material. When using, do not eat or drink. Wash hands before breaks and immediately after handling the product. Provide a safety shower and eye wash at any location where eye and skin contact can occur.

9: PHYSICAL AND CHEMICAL PROPERTIES

pH: 11.5-12.3

Specific Gravity: 1.090-1.170 g/mL

Flash Point: None

Solubility In Water: Complete

Boiling Point: Not available

Freezing Point: 14.9 ^{o}F / -9.5 ^{o}C

Vapor Pressure: Not available

Vapor Density: Not available

Appearance and Odor: Clear, pale amber liquid with mild ammonia-like odor

10: STABILITY AND REACTIVITY

Chemical Stability: Stable

Hazardous Polymerization: Will not occur.

Reactive Conditions to Avoid: Incompatibles.

Incompatibilities: Oxidizers. Strong acids. Strong bases.

Hazardous Decomposition Products: Thermal decomposition or combustion may produce oxides of carbon, oxides of potassium, oxides of sodium, oxides of nitrogen, and oxides of sulfur as well as acrid smoke and irritating fumes.

11: TOXICOLOGICAL INFORMATION

Likely Routes Of Exposure: Eye contact, skin contact, ingestion, and inhalation of product vapors or mists

Acute Toxicity:

Test Material	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Ethylene glycol	4,700 mg/Kg	9,530 uL/Kg	12,111 mg/L
Anionic copolymer, 28% on an active acid basis	>5,000 mg/Kg	>2,000 mg/Kg	Not available
Aminotri(methylene-phosphonic acid), ATMP	2,910 mg/Kg	>6,310 mg/Kg	Not available
1-Hydroxyethylidene-1,1-diphosphonic acid (HEDP)	2,400 mg/Kg (60% solution)	>7,940 mg/Kg (60% solution)	Not available

Acute Symptoms and Effects:

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: Ingestion may cause irritation of the mucous membranes of the mouth, throat, esophagus, and stomach. Nausea, vomiting, and diarrhea may occur.

This product contains ethylene glycol. Ingestion of large volumes of ethylene glycol may result in central nervous system depression and kidney damage. Cardiac failure and pulmonary edema may develop. Early to moderate CNS depression may be evidenced by

giddiness, headache, dizziness, and nausea. Kidney damage may be evidenced by changes in urine output, urine appearance, or edema (swelling from fluid retention).

Inhalation: May cause respiratory tract irritation. Exposure to vapors or mists may cause throat irritation, coughing, sneezing, runny nose, headache, nausea, vomiting, dizziness, drowsiness, central nervous system depression, pulmonary edema, involuntary eye movement, and/or coma.

Chronic: No information is available for this product. Information on components follows: Repeated small exposures to the ethylene glycol by any route can cause severe kidney problems. Brain damage may also occur. Skin allergy can develop. Exposure may damage a developing fetus. Ethylene glycol has shown teratogenic (reproductive) effects in laboratory animals.

Reproductive Effects: Not established

Teratogenicity: Not established

Mutagenicity: Not established

Embryotoxicity: Not established

Sensitization to Product: Not established

Synergistic Products: Not established

Carcinogenicity: Not established

The toxicological properties of this material have not been fully investigated.

12: ECOLOGICAL INFORMATION

Chemical Fate and Pathway:
Data on this material and/or its components are summarized below.

Data for Ethylene Glycol (107-21-1):

Toxicity:
Toxicity to fish:
96 hr LC50 (Rainbow trout, Oncorhynchus mykiss): 18,500 mg/L
48 hr LC50 (Golden orfe, Leuciscus idus): >10,000 mg/L
7 d NOEC (Fathead minnow, Pimephales promelas): 32,000 mg/L
96 hr NOEC (Fathead minnow, Pimephales promelas): 39,140 mg/L

Toxicity to daphnia and other aquatic invertebrates:
24 hr EC50 (Water flea, Daphnia magna): 74,000 mg/L
48 hr NOEC (Water flea, Daphnia magna): 24,000 mg/L
48 hr LC50 Water flea, Daphnia magna): 41,000 mg/L

Persistence and Degradability:
No data available

Bioaccumulative Potential:
Does not bioaccumulate.
Bioaccumulation other fish - 61 d
Bioconcentration factor (BCF): 0.60

Mobility in Soil:
No data available

Other Adverse Effects:
No data available

Data for Similar Anionic copolymer, 39.5% on an Active Acid Basis:

Toxicity:
Toxicity to fish:
96 hr LC50 (Bluegill): >1,000 mg/Kg
96 hr LC50 (Trout): >1,000 mg/Kg

Toxicity to daphnia and other aquatic invertebrates:
48 hr LC50 (Daphnia magna): >1,000 mg/Kg

Persistence and Degradability:
No data available

Bioaccumulative Potential:
No data available

Mobility in Soil:
No data available

Other Adverse Effects:
No data available

No Data Available for:
Aminotri(methylenephosphonic acid), potassium salt
1-Hydroxyethylidene-1,1-diphosphonic acid, potassium salt

13: DISPOSAL INFORMATION

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

14: TRANSPORT INFORMATION

Please see current shipping paper for most up-to-date shipping information, including exemptions and special circumstances.

US Department of Transportation (DOT):
Not regulated

International Maritime Dangerous Goods Code (IMDG):
Not regulated

15: REGULATORY INFORMATION

US Federal Regulations:

OSHA Hazard Communication Status: Hazardous

TSCA: The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CERCLA: EPA Hazardous Substances (40 CFR 302):

Chemical Name	CERCLA Reportable Quantity (RQ)
Ethylene glycol	5,000 lb
Product	50,000 lb
	(Notify the EPA of spills exceeding this amount.)

SARA TITLE III (Sections 302, 311, 312, and 313):

Section 302 Extremely Hazardous Substances (40 CFR 355):

Chemical Name	CAS#	RQ	TPQ
None			

Section 311 and 312 Health and Physical Hazards:

Immediate	Delayed	Fire	Pressure	Reactivity
yes	yes	no	no	no

Section 313 Toxic Chemicals (40 CFR 372):

Chemical Name	CAS Number	Percent by Weight
Ethylene glycol	107-21-1	5-15

US State Regulations:
California Proposition 65: This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

International Inventories:
No data

16: OTHER INFORMATION

Other Classifications:

HMIS Ratings: Health = 2 Flammability = 1 Reactivity = 0

NFPA Ratings: Health = 2 Flammability = 1 Reactivity = 0

Hazard Rating Scale: 0=Minimal; 1=Slight; 2=Moderate; 3=Serious; 4=Severe

WHIMS (Canada): CLASS D-2B: Material causing other toxic effects (TOXIC).

While the information and recommendations set forth herein are believed to be accurate as of the date thereof, NU-CALGON WHOLESALER, INC MAKES NO WARRANTY WITH RESPECT HERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.