SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Hyper+Ion® 1000D

Intended Use of the Product

Use of the Substance/Mixture: Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking. Paper machine pitch control.

Name, Address, and Telephone of the Responsible Party

Manufacturer

CHEMTRADE LOGISTICS INC.
155 Gordon Baker Road
Suite 300
Toronto, Ontario M2H 3N5
For SDS Info: (416) 496-5856
www.chemtradelogistics.com

Emergency Telephone Number

Emergency Number : Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300
Chemtrade Emergency Contact: (866) 416-4404
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Acute Tox. 4 (Oral)	H302
Skin Corr. 1B	H314
Eye Dam. 1	H318
STOT RE 1	H372
STOT RE 2	H373
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS05 GHS07 GHS08 GHS09

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H372 - Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation).
H373 - May cause damage to organs (central nervous system) through prolonged or repeated exposure (Oral).
H400 - Very toxic to aquatic life.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary Statements (GHS-US) : P260 - Do not breathe spray, mist, vapors.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.

P280 - Wear protective gloves, protective clothing, eye protection.
P301+P312 - IF SWALLOWED: Call a doctor or POISON CENTER if you feel unwell.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
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).
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulations.

Other Hazards

Other Hazards Not Contributing to the Classification: Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. If involved in a fire and thermal decomposition occurs, or other decomposition occurs corrosive, toxic, and acrid vapors may be released. Corrosive to the respiratory tract.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	60 - 100	Not classified
Aluminum chloride	(CAS No) 7446-70-0	10 - 30	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT RE 1, H372 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

*A range of concentration as prescribed by Controlled Products Regulations has been used where necessary, due to varying composition. The specific chemical identity and/or exact percentage of composition has been withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Using proper respiratory protection, immediately move the exposed person to fresh air. Keep at rest and in a position comfortable for breathing. Seek medical attention immediately. Symptoms may be delayed.

Skin Contact: Immediately flush skin with plenty of water for at least 60 minutes. Wash immediately with plenty of soap and water. Immediately call a POISON CENTER or doctor/physician.

Eye Contact: Immediately rinse with water for a prolonged period while holding the eyelids wide open. 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/physician.

Ingestion: Rinse mouth thoroughly with water. Do NOT induce vomiting. Seek medical attention immediately.

Most Important Symptoms and Effects Both Acute and Delayed

General: Harmful if swallowed. Causes severe skin burns and eye damage. Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation). May cause damage to organs (central nervous system) through prolonged or repeated exposure (Oral).

Inhalation: Inhalation may cause immediate severe irritation progressing quickly to chemical burns. Corrosive to mucus membranes. Corrosive to the respiratory tract. Symptoms may be delayed.

Skin Contact: Causes severe skin burns.

Eye Contact: Causes serious eye damage.

Ingestion: Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation).

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Reacts with (strong) oxidizers: (increased) risk of fire.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Keep upwind. Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Notify appropriate authorities if liquid enter sewers or waterways.

Hazardous Combustion Products: Corrosive vapors. Acrid smoke and irritating fumes. Hydrogen chloride.

Other Information: Do not allow run-off from fire fighting to enter drains or water sources.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all unnecessary exposure. Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel. Keep upwind.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Ventilate area. Eliminate ignition sources.

Environmental Precautions

If spill could potentially enter any waterway, including intermittent dry creeks, contact the U.S. COAST GUARD NATIONAL RESPONSE CENTER at 800-424-8802. In case of accident or road spill notify CHEMTREC at 800-424-9300 (in USA) or CANUTEC at 613-996-6666 (in Canada). In other countries call CHEMTREC at (International code) +1-703-527-3887.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Ventilate area. Cautiously neutralize spilled liquid. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Collect absorbed material and place into a sealed, labeled container for proper disposal. Clear up spills immediately and dispose of waste safely. Practice good housekeeping - spillage can be slippery on smooth surface either wet or dry.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Always wash your hands immediately after handling this product, and once again before leaving the workplace. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke in areas where product is used.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Observe all regulations and local requirements regarding storage of containers.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store away from oxygen and oxidizers. Storage areas should be periodically checked for corrosion and integrity. Detached outside storage is preferable.

Incompatible Materials: Strong bases. Strong oxidizers. Organic materials. Alkalis.

Specific End Use(s)

Municipal and industrial water and wastewater treatment for the removal of turbidity, color, suspended solids and phosphorus. Sludge compaction and volume reduction. Lagoon treatment. Oily wastewater clarification and dissolved air flotation. Emulsion breaking. Paper machine pitch control.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Exposure Controls

Appropriate Engineering Controls: Product to be handled in a closed system and under strictly controlled conditions. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: Avoid all unnecessary exposure. Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.

Materials for Protective Clothing: Corrosion-proof, acid resistnat clothing.

Hand Protection: Impermeable protective gloves.

Eye Protection: A full face shield is recommended. Chemical goggles.

Skin and Body Protection: Wear suitable protective clothing. Chemical resistant suit. Rubber apron, boots.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Environmental Exposure Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Consumer Exposure Controls: Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Liquid
Appearance	:	Colorless to yellow colored
Odor	:	Not available
Odor Threshold	:	Not available
pH	:	< 2
Melting Point	:	Not applicable
Freezing Point	:	-30 °C (-22 °F)

Boiling Point	:	Not available
Flash Point	:	Not applicable
Auto-ignition Temperature	:	Not applicable
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not applicable
Lower Flammable Limit	:	Not applicable
Upper Flammable Limit	:	Not applicable
Vapor Pressure	:	Not available
Relative Vapor Density at 20 °C	:	Not available
Relative Density	:	Not available
Specific Gravity	:	1.25 - 1.30
Solubility	:	100%
Partition Coefficient: N-octanol/water	:	Not available
Viscosity	:	Not available
Explosive properties	:	Product is not explosive
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Reacts with (strong) oxidizers: (increased) risk of fire.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight, extremely high or low temperatures, open flames, sources of ignition and incompatible materials.

Incompatible Materials: Strong bases. Strong oxidizers. Organic materials. Alkalis.

Hazardous Decomposition Products: Corrosive vapors. Acrid smoke and irritating fumes. Hydrogen chloride.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Harmful if swallowed.

LD50 and LC50 Data:

Hyper+Ion® 1000D	
ATE US (Oral)	500.00 mg/kg body weight

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

pH: < 2

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: < 2

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (Inhalation). May cause damage to organs (central nervous system) through prolonged or repeated exposure (Oral).

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Inhalation may cause immediate severe irritation progressing quickly to chemical burns. Corrosive to mucus membranes. Corrosive to the respiratory tract. Symptoms may be delayed.

Symptoms/Injuries After Skin Contact: Causes severe skin burns.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: Harmful if swallowed. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Aluminum chloride (7446-70-0)	
LD50 Oral Rat	380 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Aluminum chloride (7446-70-0)	
LC50 Fish 1	0.584 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 Daphnia 1	3.9 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC 50 Fish 2	6.2 - 11.9 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

Persistence and Degradability

Not available

Bioaccumulative Potential

Aluminum chloride (7446-70-0)	
BCF Fish 1	(no bioaccumulation)

Mobility in Soil

Not available

Other Adverse Effects

Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Treatment Methods: Dispose of waste material in accordance with all local, regional, national, and international regulations.

Sewage Disposal Recommendations: Do not dispose of waste into sewer. Do not empty into drains; dispose of this material and its container in a safe way.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name : ALUMINUM CHLORIDE, SOLUTION

Hazard Class : 8

Identification Number : UN2581

Label Codes : 8

Packing Group : III

Marine Pollutant : Marine pollutant

ERG Number : 154

14.2 In Accordance with IMDG

Proper Shipping Name : ALUMINIUM CHLORIDE, SOLUTION

Hazard Class : 8

Identification Number : UN2581

Packing Group : III

Label Codes : 8

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-B

Marine pollutant : Marine pollutant

14.3 In Accordance with IATA

Proper Shipping Name : ALUMINIUM CHLORIDE, SOLUTION
Packing Group : III
Identification Number : UN2581
Hazard Class : 8
Label Codes : 8
ERG Code (IATA) : 8L

14.4 In Accordance with TDG

Proper Shipping Name : ALUMINUM CHLORIDE, SOLUTION
Packing Group : III
Hazard Class : 8
Identification Number : UN2581
Label Codes : 8
Marine Pollutant (TDG) : Marine pollutant

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Hyper+Ion® 1000D	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

Aluminum chloride (7446-70-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

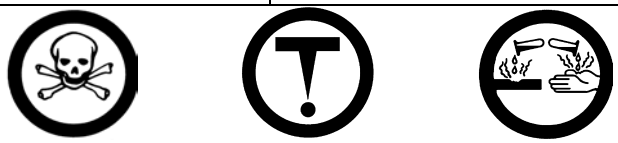
Water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Aluminum chloride (7446-70-0)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Canadian Regulations

Hyper+Ion® 1000D	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material



Aluminum chloride (7446-70-0)	
Listed on the Canadian DSL (Domestic Sustances List) Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class E - Corrosive Material Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Water (7732-18-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

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

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

Revision date : 05/01/15

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 4 (Oral)	Acute toxicity (Oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Party Responsible for the Preparation of This Document

CHEMTRADE LOGISTICS, INC.

For SDS Info: (416) 496-5856

Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA'S "Right to Know" (29 CFR 1910.1200) and Canada's WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.

Responsible Care® Our commitment to sustainability. Gestion responsable™ Notre engagement envers le développement durable.

Chemtrade North America SDS Template