



# SAFETY DATA SHEET

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Preparation Date: 01/01/2019

Revision Date: N/A

Revision Number: 1

## SECTION 1: Identification

### 1.1. Product Identifier

Trade Name or Designation: Ammonia-Cyanide TS

Product Number: TS14030

### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

### 1.3. Details of the Supplier of the Safety Data Sheet

**Dawn Scientific Inc**

121 Liberty Street, Metuchen, NJ, 08840

Tel : 732-902-6300 | Fax : 973-802-1005

sales@dawnscientific.com | www.dawnscientific.com

### 1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

## 2. HAZARDS IDENTIFICATION

### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Gases)	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

### Label elements

**Danger****Hazard statements**

Harmful if swallowed

Harmful if inhaled

Causes severe skin burns and eye damage



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Do not breathe dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response***Immediately call a POISON CENTER or doctor/physician**Specific treatment (see .? on this label)*

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Weight %	Trade Secret
Water 7732-18-5	7732-18-5	75.6-77.9	*

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Ammonia 7664-41-7	7664-41-7	15.4-17.7	*
Ammonium Chloride 12125-02-9	12125-02-9	6.75	*

**4. FIRST AID MEASURES****First aid measures****General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

**Skin Contact:**

Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Immediate medical attention is required. Call a physician or Poison Control Centre immediately. Flush eye with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

**Eye Contact:****Inhalation:**

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Immediate medical attention is required.

<b>Ingestion:</b>	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately.
<b><u>Most important symptoms and effects, both acute and delayed</u></b>	
<b>Symptoms</b>	Causes severe skin burns. Causes serious eye damage. Severe irritation of the upper respiratory tract. Coughing. Choking sensation. Dyspnea (Shortness of breath and difficulty breathing). Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering and itching. Skin contact may result in redness, pain, inflammation, itching, scaling.
<b><u>Indication of any immediate medical attention and special treatment needed</u></b>	
<b>Notes to Physician:</b>	Treat symptomatically

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

## 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**

<b>Suitable Extinguishing Media:</b>	The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.
<b>Unsuitable Extinguishing Media:</b>	No information available.
<b><u>Specific hazards arising from the chemical</u></b>	
<b>Hazardous Combustion Products:</b>	No information available
<b>Specific hazards:</b>	<p>Non-explosive in presence of open flames and sparks, of shocks</p> <p>A sudden increase in temperature and pressure preceded a violent explosion when heating 1-chloro-2,4-dinitrobenzene and ammonia in a direct fired autoclave.</p> <p>Reaction with liquid ammonia and chlorine azide gives an explosive yellow liquid.</p> <p>Liquid ammonia + 1,2 dichloroethane may explode. Passing ammonia gas over magnesium perchlorate dessicant causes intensive drying of ammonia gas which leads to an exotherm, followed by a violent explosion.</p> <p>Ammonia is capable of reacting with some heavy metal compounds (gold, silver, mercury) to produce materials, some of uncertain constitution, whic may explode violently when dry.</p> <p>Action of ammonia or ammonium salts on gold (III) chloride, oxide or other salts under a variety of conditions gives explosive or "fulminating" gold.</p> <p>Halogens or interhalogens + ammonia either reacts violently or produces explosive products.</p> <p>Ammonia + nitrogen trichloride produces endothermic and explosive nitrogen trichloride.</p> <p>Reaction of ammonia + selenium difluoride dioxide is violent and many of the products and derivatives are both shock and heat sensitive explosives. These include ammonium, potasssium silver and thallium salts of the "triselenimide" ion.</p>

Violent explosions with ammonia + nitrogen oxide can occur in ammonia synthesis gas units.

Liquid ammonia + solid dinitrogen tetroxide reacts explosively.

Oxygen + Platinum: oxidation of ammonia to nitric acid over platinum catalysts, substitution of oxygen for air causes fairly vigorous explosions.

Thiocarbonyl azide thiocyanate reacts explosively with ammonia gas.

Thiotriethiazyl chloride will rapidly absorb ammonia gas and then explode.

Tetramethylammonium amide decomposes explosively at ambient temp. in presence of ammonia.

Liquid ammonia + tellurium tetrachloride at -15 C forms tellurium nitride which explodes at 200 C.

Ammonia + tellurium tetrabromide gives a mixture of tritellurium tetramitride and tellurium bromide nitride, which explodes on heating.

Liquid ammonia + ethylene oxide causes violent polymerization and a vapor cloud explosion.

Ammonia + picric acid forms explosive salts. (Ammonia, anhydrous)

Ammonium Hydroxide Forms explosive compounds with many heavy metals such as silver, lead, zinc and their halide salts.

It can form shock sensitive compounds with halogens, mercury oxide, and silver oxide.

### **Special Protective Actions for Firefighters**

#### **Specific Methods:**

No information available.

#### **Special Protective Equipment for Firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## **6. ACCIDENTAL RELEASE MEASURES**

### **Personal precautions, protective equipment and emergency procedures**

#### **Personal Precautions:**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Evacuate personnel to safe areas. Use spark-proof tools and explosion-proof equipment.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

### **Methods and material for containment and cleaning up**

#### **Methods for containment**

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container.

#### **Methods for cleaning up**

Neutralize the residue with a dilute solution of acetic acid. Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

#### Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not ingest. Do not smoke. Use explosion-proof equipment. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

#### Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store away from incompatible materials. Store at room temperature in the original container.

#### Incompatible Materials:

Oxidizing agents. Metals. Acids. Alkalis.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### National occupational exposure limits

##### United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Water 7732-18-5	None	None	None	None
Ammonia 7664-41-7	50 ppm TWA 35 mg/m <sup>3</sup> TWA	= 25 ppm TWA	= 35 ppm STEL	None

Ammonium Chloride 12125-02-9	None	10 mg/m <sup>3</sup> TWA 20 mg/m <sup>3</sup> STEL	20 mg/m <sup>3</sup> STEL fume 10 mg/m <sup>3</sup> TWA fume	None
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##### Canada

Components	Alberta	British Columbia	Ontario	Quebec
Water 7732-18-5	None	None	None	None
Ammonia 7664-41-7	= 17 mg/m <sup>3</sup> TWA = 25 ppm TWA	= 25 ppm TWA	25 ppm TWA	25 ppm TWAEV 17 mg/m <sup>3</sup> TWAEV 35 ppm STEV 24 mg/m <sup>3</sup> STEV
Ammonium Chloride 12125-02-9	10 mg/m <sup>3</sup> TWA fume 20 mg/m <sup>3</sup> STEL fume	10 mg/m <sup>3</sup> TWA fume 20 mg/m <sup>3</sup> STEL fume	10 mg/m <sup>3</sup> TWA fume	10 mg/m <sup>3</sup> TWAEV fume 20 mg/m <sup>3</sup> STEV fume

##### Australia and Mexico

Components	Australia	Mexico
Water 7732-18-5	None	None
Ammonia 7664-41-7	24 mg/m <sup>3</sup> STEL 35 ppm STEL 25 ppm TWA 17 mg/m <sup>3</sup> TWA	= 18 mg/m <sup>3</sup> TWA = 25 ppm TWA
Ammonium Chloride 12125-02-9	20 mg/m <sup>3</sup> STEL 10 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA 20 mg/m <sup>3</sup> STEL

## Appropriate engineering controls

### Engineering measures to reduce exposure:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

## Individual protection measures, such as personal protective equipment

### Personal Protective Equipment

**Eye protection:** Face-shield Goggles

**Skin and body protection:** Chemical resistant protective suit. Gloves. boots.

**Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Liquid.	<b>Appearance:</b> No information available	<b>Color:</b> Clear. Colorless.
<b>Odor:</b> Ammoniacal.	<b>Taste</b> No information available	<b>Molecular/Formula weight:</b> No information available
<b>Formula:</b> No information available	<b>Flammability:</b> No information available	<b>Flash point (°C):</b> No data available
<b>Flashpoint (°C/°F):</b> No information available.	<b>Flash Point Tested according to:</b> Not available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>pH:</b> Basic
<b>Melting point/range(°C/°F):</b> No information available	<b>Boiling point/range(°C/°F):</b> 100°C/ 212°F (Water)	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Bulk density:</b> No information available	<b>Specific gravity:</b> Weighted average: 0.97 (Water = 1)	<b>Vapor pressure @ 20°C (kPa):</b> 2.3 (Water)
<b>Density (g/cm3):</b> No information available	<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> 0.62 (Air = 1) (Water)
<b>VOC content (g/L):</b> No information available	<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available
<b>Viscosity:</b> No information available	<b>Miscibility:</b> No information available	<b>Solubility:</b> Easily soluble in cold water Easily soluble in hot water Soluble in Methanol Soluble in diethyl ether Insoluble in Acetone

## 10. STABILITY AND REACTIVITY

### **Reactivity**

Incompatible with Halogens, salts of silver and zinc, air and hydrocarbons, calcium, 1-chloro-2,4-dinitrobenzene, chloroformamidinium nitrate, 2-chloronitrobenzene, chlorine azide, magnesium perchlorate, halogens or interhalogens, iodine, potassium, nitrogen trichloride, potassium chlorate, nitryl chloride, chromyl chloride, chromium trioxide, trioxxygen difluoride, selenium difluoride dioxide, nitric acid, hydrogen peroxide, nitrogen oxide, dinitrogen tetroxide, oxygen, platinum, silver chloride, thiocarbonyl azide thiocyanate, sulfinyl chloride, thiotriazyl chloride, tetramethylammonium amide, tellurium tetrachloride, tellurium tetrabromide, silver (I) oxide, dichlorine oxide, silver nitrate, ethylene oxide, acetaldehyde, acrolein, boron triiodide, bromine, bromine pentafluoride, fluorine, chloric acid, chlorine monoxide, chlorine trifluoride, chlorites, chlorosilane, chromic anhydride, ethylene dichloride, hydrogen bromide, hypochlorous acid, nitrogen peroxide, fluorine, some heavy metals (gold, silver, mercury), hexachloromelamine, hydrazine, alkali metals, nitrogen trifluoride, oxygen difluoride, phosphorous trioxide, potassium and arsine, potassium and phosphine, potassium and sodium nitrite, potassium ferricyanide, potassium mercuricyanide, sodium and carbon monoxide, stibine, sulfur, sulfur dichloride, tellurium hypopentachloride, trichloromelamine, Organic acids, amides, organic anhydrides, isocyanates, vinyl acetate, epichlorhydrin, aldehydes, Acrylic acid, chlorosulfonic acid, dimethyl sulfate, gold + aqua regia, hydrochloric acid, hydrofluoric acid, hydrogen peroxide, oleum, propiolactone, propylene oxide, silver oxide + ethyl alcohol, nitromethane, silver permanganate, sulfuric acid. Forms explosive compounds with many heavy metals (silver, lead, zinc) and halide salts.

### **Chemical stability**

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Incompatible materials.

**Incompatible Materials:** Oxidizing agents. Metals. Acids. Alkalis.

**Hazardous decomposition products:** No information available.

### **Other Information**

**Corrosivity:**

- Extremely corrosive in presence of zinc
- Extremely corrosive in presence of copper
- Non-corrosive in the presence of glass
- Non-corrosive in presence of stainless steel (304)
- Non-corrosive in presence of stainless steel (316)

**Special Remarks on Corrosivity:**

- Dissolves copper and zinc.
- Corrosive to aluminum and its alloys.
- Corrosive to galvanized surfaces.
- Severe corrosive effect on brass and bronze (Ammonium Hydroxide)

## 11. TOXICOLOGICAL INFORMATION

### **Information on likely routes of exposure**

#### **Principal Routes of Exposure:**

Skin. Eyes. Inhalation. Ingestion.

### **Acute Toxicity**

### **Component Information**

*Water - 7732-18-5*

**LD50/oral/rat** = > 90 mL/kg Oral LD50 Rat  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rat** = No information available  
**LD50/dermal/rabbit** = No information available  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50information** = No information available

*Ammonia - 7664-41-7*

**LD50/oral/rat** = 350 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rat** = No information available  
**LD50/dermal/rabbit** = No information available  
**LC50/inhalation/rat** = 2000 ppm Inhalation LC50 Rat 4 h  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50information** = No information available

*Ammonium Chloride - 12125-02-9*

**LD50/oral/rat** = 1410 mg/kg Oral LD50 Rat (LOLI; European Chemicals Bureau ( IUCLID Dataset)  
1650 mg/kg (RTECS; European Chemicals Bureau ( IUCLID Dataset)  
**LD50/oral/mouse** = 1300 mg/kg (RTECS)  
**LD50/dermal/rat** = No information available  
**LD50/dermal/rabbit** = No information available  
  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50information** = No information available

**Product Information**

**LD50/oral/rat** =  
**VALUE- Acute Tox Oral** = No information available

**LD50/oral/mouse** =  
**Value - Acute Tox Oral** = No information available

**LD50/dermal/rabbit**  
**VALUE-Acute Tox Dermal** = No information available

**LD50/dermal/rat**  
**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**  
**VALUE-Vapor** = No information available  
**VALUE-Gas** = No information available  
**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor** = No information available  
**VALUE - Gas** = No information available

**VALUE - Dust/Mist** = No information available  
**Symptoms**



<b>Skin Contact:</b>	Causes severe irritation and burns. May cause deep penetrating ulcers of the skin. Contact with skin may cause staining, inflammation, and thickening of the skin.
<b>Eye Contact:</b>	Causes severe irritation and burns. May cause irreversible eye damage. May cause corneal injury. May cause cataracts.
<b>Inhalation</b>	Causes severe irritation of the upper respiratory tract with coughing, burns, breathing difficulty. May cause acute pulmonary edema, pneumoconiosis, fibrosis, and even coma. It is a respiratory stimulant when inhaled at lower concentrations. It may also affect behavior/central nervous system (convulsions, seizures, ataxia, tremor), cardiovascular system (increase in blood pressure and pulse rate).
<b>Ingestion</b>	Harmful if swallowed. Affects the Gastrointestinal tract (burns, swelling of the lips, mouth, and larynx, throat constriction, nausea, vomiting, convulsions, shock, and may cause severe and permanent damage), liver, and urinary system (kidneys) May affect behavior (convulsions, seizures, ataxia, excitement).
<b>Aspiration hazard</b>	No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Chronic Toxicity</b>	<p>Ingestion: May cause effects similar to those of acute ingestion.</p> <p>Inhalation: Repeated exposure to low concentrations may cause bronchitis with cough, phlegm, and/or shortness of breath. May also cause liver and kidney damage, and affect the brain, and blood.</p> <p>Eye: May cause corneal damage and the development of cataracts and glaucoma.</p> <p>Skin: Repeated skin contact to low concentrations may cause dryness, itching, and redness (dermatitis)</p> <p>(Ammonium Hydroxide).</p>
<b>Sensitization:</b>	No information available
<b>Mutagenic Effects:</b>	<p>May affect genetic material based on animal test data</p> <p>Experiments with bacteria and/or yeast have shown mutagenic effects</p>
<b>Carcinogenic effects:</b>	May cause cancer based on animal test data.

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Water	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Ammonia	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Ammonium Chloride	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

**Reproductive toxicity** No data is available

<b>Reproductive Effects:</b>	No information available
<b>Developmental Effects:</b>	No information available
<b>Teratogenic Effects:</b>	No information available

**Specific Target Organ Toxicity**

<b>STOT - single exposure</b>	No information available
<b>STOT - repeated exposure</b>	No information available
<b>Target Organs:</b>	Mucous membrane. Skin. Eyes.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Ecotoxicity effects:

*Ammonia* - 7664-41-7

**Freshwater Fish Species Data:** 0.73 - 2.35 mg/L LC50 Pimephales promelas 96 h 1  
0.44 mg/L LC50 Cyprinus carpio 96 h 1  
5.9 mg/L LC50 Pimephales promelas 96 h static 1  
0.26 - 4.6 mg/L LC50 Lepomis macrochirus 96 h 1  
1.5 mg/L LC50 Poecilia reticulata 96 h 1  
1.19 mg/L LC50 Poecilia reticulata 96 h static 1  
1.17 mg/L LC50 Lepomis macrochirus 96 h flow-through 1  
**Water Flea Data:** 25.4 mg/L LC50 Daphnia magna 48 h

*Ammonium Chloride* - 12125-02-9

**Freshwater Fish Species Data:** 209 mg/L LC50 Cyprinus carpio 96 h static 1

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available

**Mobility:** No information available

## 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

#### Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

#### Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Water	None	None	None	None
Ammonia	None	None	None	None
Ammonium Chloride	None	None	None	None

## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** UN1760  
**Proper Shipping Name:** Corrosive liquids, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:**  
**Packing Group:** III  
**ERG No:** 154  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Symbol(s):** G

**TDG (Canada)**  
**UN-No:** UN1760  
**Proper Shipping Name:** Corrosive liquid, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Description:** No information available

**ADR**  
**UN-No:** UN1760  
**Proper Shipping Name:** Corrosive liquid, n.o.s.  
**Hazard Class:** 8  
**Packing Group:** III  
**Subsidiary Risk:** No information available  
**Classification Code:** No information available  
**Description:** No information available  
**CEFIC Tremcard No:** No information available

**IMO / IMDG**  
**UN-No:** UN1760  
**Proper Shipping Name:** Corrosive liquid, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III

#### 14. TRANSPORT INFORMATION

**Description:** No information available  
**IMDG Page:** No information available  
**Marine Pollutant** No information available  
**EMS:** F-A  
**MFAG:** No information available  
**Maximum Quantity:** No information available

**RID**  
**UN-No:** UN1760  
**Proper Shipping Name:** Corrosive liquid, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Classification Code:** No information available  
**Description:** No information available

**ICAO**  
**UN-No:** UN1760  
**Proper Shipping Name:** Corrosive liquid, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Description:** No information available

**IATA**  
**UN-No:** UN1760  
**Proper Shipping Name:** Corrosive liquid, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**ERG Code:** 8L  
**Description:** No information available

## 15. REGULATORY INFORMATION

### International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Water</i>	Present	Present KE-35400	Present	Not present	Present	Present	Present 231-791-2
<i>Ammonia</i>	Present	Present KE-01625	Present	Present (1)-391	Present	Present	Present 231-635-3
<i>Ammonium Chloride</i>	Present	Present KE-01645	Present	Present (1)-218	Present	Present	Present 235-186-4

### U.S. Regulations

#### *Ammonia*

**Massachusetts RTK:** Present  
**Massachusetts EHS:** extraordinarily hazardous  
**New Jersey RTK Hazardous Substance List:** 0084  
**New Jersey (EHS) List:** 0084 500 lb TPQ  
**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present  
**New Jersey TCPA - EHS:** =10000lbTQ  
 =20000lbTQ  
 =5200lbTQ

#### *Ammonia*

**Pennsylvania RTK:** Environmental hazard  
**Pennsylvania RTK - Environmental Hazard List** Present  
**Pennsylvania RTK - Special Hazardous Substances** Present  
**Michigan PSM HHC:** = 10000 lb TQ anhydrous  
 = 15000 lb TQ solutions greater than 44% ammonia by weight  
**Minnesota - Hazardous Substance List:** Present  
**New York Release Reporting - List of Hazardous Substances:**  
 = 100 lb RQ  
**Louisiana Reportable Quantity List for Pollutants:** Listed  
**California Directors List of Hazardous Substances:** Present

**FDA - 21 CFR - Total Food Additives** Present

#### *Ammonium Chloride*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 0093  
**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present  
**Pennsylvania RTK:** Environmental hazard  
**Pennsylvania RTK - Environmental Hazard List** Present  
**Minnesota - Hazardous Substance List:** Present  
**New York Release Reporting - List of Hazardous Substances:**  
 5000 lb RQ  
 100 lb RQ  
**Louisiana Reportable Quantity List for Pollutants:** 5000lbfinal RQ  
 2270kgfinal RQ  
**California Directors List of Hazardous Substances:** Present  
**FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 184.1138

**FDA - 21 CFR - Total Food Additives** 178.1010 184.1138

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

#### **Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

#### **Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Water	Not Listed	Not Listed	Not Listed	Not Listed
Ammonia	Not Listed	Not Listed	Not Listed	Not Listed
Ammonium Chloride	Not Listed	Not Listed	Not Listed	Not Listed

## CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
Water	None	None	None	None	None
Ammonia	= 45.4 kg final RQ	500 lb TPQ 100	None	None	1.0 % de minimis concentration
Ammonium Chloride	5000 lb final RQ 2270 kg final RQ	None	None	None	None

## U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Water	Not Applicable	Not Applicable
Ammonia	Not Applicable	Not Applicable
Ammonium Chloride	Not Applicable	Not Applicable

### WHMIS hazard class:

E Corrosive material

D2B Toxic materials

### Water

Uncontrolled product according to WHMIS classification criteria

### Ammonia

A B1 D1A E

E Ammonia solution, in water, 10-35% Ammonia, 35-50% Ammonia, >50% Ammonia

A B1 D1A E

### Ammonium Chloride

D2B

### Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Ammonia	1 %
Ammonium Chloride	1 %

## Inventory

Components	Canada (DSL)	Canada (NDSL)
Water	Present	Not Listed
Ammonia	Present	Not Listed
Ammonium Chloride	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Water	Not listed	Not listed
Ammonia	Present	Not listed
Ammonium Chloride	Not listed	Not listed

## EU Classification

### R-phrase(s)

R34 - Causes burns.

R50 - Very toxic to aquatic organisms.

### S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

S24/25 - Avoid contact with skin and eyes.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	Classification	Concentration Limits:	Safety Phrases
Water		No information	
Ammonia	C;R34 N;R50 R10 T;R23	0.5%≤C<5% Xn;R20-36/37/38 5%≤C T;R23-34	S(1/2)-S9-S16-S26-S36/37/39-S45-S61
Ammonium Chloride	Xn; R22 Xi; R36	No information	S2 S22

The product is classified in accordance with Annex VI to Directive 67/548/EEC

### Indication of danger:

C - Corrosive.

N - Dangerous for the environment.



## 16. OTHER INFORMATION

### DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and Dawn Scientific Inc assumes no legal responsibility or liability whatsoever resulting from its use.