

## SAFETY DATA SHEET

Preparation Date: 08/04/2015

Revision date 11/21/2019

Revision Number: G2

### 1. IDENTIFICATION

#### Product identifier

**Product code:** A-266  
**Product Name:** AMMONIA-AMMONIUM CHLORIDE BUFFER TS, (U.S.P. TEST SOLUTION)

#### Other means of identification

**Synonyms:** No information available  
**CAS #:** Mixture  
**RTECS #** Not available  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** Laboratory reagent.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Tom Tyner (USA - West Coast)  
**Contact Person:** Ibad Tirmiz (USA - East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

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

#### Label elements

##### **Danger**

##### **Hazard statements**

Harmful if swallowed or if inhaled  
 Causes severe skin burns and eye damage

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**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 mist or vapors  
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

*Immediately call a POISON CENTER or physician*  
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 physician.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water  
Wash contaminated clothing before reuse  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. Immediately call a POISON CENTER or physician.  
IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell  
Rinse mouth  
Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS No	Weight-%
Water	7732-18-5	75.6-77.9
Ammonia	7664-41-7	15.4-17.7
Ammonium Chloride	12125-02-9	6.75

**4. FIRST AID MEASURES**

**First aid measures**

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**General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. First aider needs to protect himself. 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 center immediately.

**Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

**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.

**Ingestion:** 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.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**  
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

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** 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**

**Suitable Extinguishing Media:** 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.

**Unsuitable Extinguishing Media:** No information available.

**Specific hazards arising from the chemical**

**Hazardous combustion products** No information available.

## Specific hazards

Non-explosive in presence of open flames and sparks, of shocks. 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.

Reaction with liquid ammonia and chlorine azide gives an explosive yellow liquid.

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.

Ammonia is capable of reacting with some heavy metal compounds (gold, silver, mercury) to produce materials, some of uncertain constitution, which may explode violently when dry.

Action of ammonia or ammonium salts on gold (III) chloride, oxide or other salts under a variety of conditions gives explosive or "fulminating" gold.

Halogens or interhalogens + ammonia either reacts violently or produces explosive products.

Ammonia + nitrogen trichloride produces endothermic and explosive nitrogen trichloride.

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, potassium silver and thallium salts of the "triselenimidate" ion.

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

Liquid ammonia + solid dinitrogen tetraoxide 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.

Thiothiazyl 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**

<b>Specific Methods:</b>	No information available
<b>Special Protective Equipment for Firefighters:</b>	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. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

**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. 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**

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## National occupational exposure limits

### United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
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

### Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - 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	20 mg/m <sup>3</sup> STEL	10 mg/m <sup>3</sup> TWAEV fume 20 mg/m <sup>3</sup> STEV fume

### Australia and Mexico

Component	CAS No	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:

Ensure adequate ventilation. 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> Clear.	<b>Color:</b> Colorless.
<b>Odor:</b> Ammoniacal.	<b>Taste</b> No information available.	<b>Formula</b> No information available
<b>Molecular/Formula weight (g/mole):</b> No information available	<b>Flammability (solid, gas)</b> no data available	<b>Flashpoint (°C/°F):</b> No information available
<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> No information available	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 100°C/ 212°F (Water)	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> No information available
<b>Specific gravity:</b> Weighted average: 0.97 (Water = 1)	<b>pH</b> Basic	<b>Vapor pressure @ 20°C (kPa):</b> 2.3 (Water)
<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, trioxigen difluoride, selenium difluoride dioxide, nitric acid, hydrogen peroxide, nitrogen oxide, dinitrogen tetraoxide, 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 hydropentachloride, 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

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

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

**Conditions to avoid:** Heat. Incompatible materials. Ignition sources.

**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	
CAS No	7732-18-5

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

Ammonia	
CAS No	7664-41-7

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

**Product code:** A-266

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**Other LD50 or LC50 information =** No information available

Ammonium Chloride	
CAS No	12125-02-9

**LD50/oral/rat =** 1650 mg/kg Oral LD50 Rat; 1410 mg/kg  
**LD50/oral/mouse =** 1300 mg/kg (RTECS)  
**LD50/dermal/rabbit =** No information available  
**LD50/dermal/rat =** No information available  
**LC50/inhalation/rat =** No information available  
**LC50/inhalation/mouse =** No information available  
**Other LD50 or LC50 information =** No information available

**Product Information**

**LD50/oral/rat =**  
**Value - Acute Toxicity =** No information available

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

**LD50/dermal/rabbit**  
**Value - Acute Toxicity =** No information available

**LD50/dermal/rat**  
**VALUE - Acute Tox =** 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**

**Skin Contact:** 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.

**Eye Contact:** Causes severe irritation and burns. May cause irreversible eye damage. May cause corneal injury. May cause cataracts.

**Inhalation** 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) [Ammonium Hydroxide].

**Ingestion** 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).

**Aspiration hazard** No information available.

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

**Chronic Toxicity** Ingestion: May cause effects similar to those of acute ingestion.  
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.  
Eye: May cause corneal damage and the development of cataracts and glaucoma.  
Skin: Repeated skin contact to low concentrations may cause dryness, itching, and redness (dermatitis)  
[Ammonium Hydroxide].

**Sensitization:** No information available.

**Mutagenic Effects:** May affect genetic material based on animal test data  
Experiments with bacteria and/or yeast have shown mutagenic effects

**Carcinogenic effects:** May cause cancer based on animal test data.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Ammonia	7664-41-7	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Ammonium Chloride	12125-02-9	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available  
**Developmental Effects:** No information available  
**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Target Organs:** Mucous membrane. Skin. Eyes.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** Aquatic environment.

*Ammonia - 7664-41-7*

**Fish** 0.73 - 2.35 mg/L LC50 Pimephales promelas 96 h 1

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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  
 25.4 mg/L LC50 Daphnia magna 48 h

**Crustacea**

Ammonium Chloride - 12125-02-9

**Fish**

LC50: =209mg/L (96h, Cyprinus carpio) LC50: =725mg/L (24h, Lepomis macrochirus)

**Crustacea**

LC50: =202mg/L (24h, Daphnia magna)

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility in soil** No information available

**Other adverse effects** 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

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Water	7732-18-5	None	None	None	None
Ammonia	7664-41-7	None	None	None	None
Ammonium Chloride	12125-02-9	None	None	None	None

**14. TRANSPORT INFORMATION**

**DOT**

**UN-No:** UN1760  
**Proper Shipping Name:** Corrosive liquids, n.o.s.  
**Hazard Class** 8  
**Subsidiary Class** No information available  
**Packing group:** III  
**Emergency Response Guide Number** 154  
**Marine Pollutant** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions** IB3, T7, TP1, TP28  
**Symbol(s):** [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.  
**Description:** UN1760, Corrosive liquids, n.o.s. (Ammonia), 8, III

**TDG (Canada)**

**Product code:** A-266

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 SOLUTION)

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

#### ADR

**UN Number:** UN1760  
**Proper Shipping Name:** Corrosive liquid, n.o.s.  
**Transport hazard class(es):** 8  
**Packing group:** III  
**Subsidiary Risk:** No information available  
**Special Provisions:** 274  
**Description:** UN1760, Corrosive liquid, n.o.s. (Ammonia), 8, III, ENVIRONMENTALLY HAZARDOUS

#### IMDG

**UN-No:** UN1760  
**Proper Shipping Name:** Corrosive liquids, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant:** No information available  
**EMS:** F-A  
**Special Provisions:** 274, 223  
**Description:** UN1760, Corrosive liquid, n.o.s. (AMMONIA), 8, III, Marine pollutant

#### RID

**UN Number:** UN1760  
**Proper Shipping Name:** Corrosive liquid, n.o.s.  
**Transport hazard class(es):** 8  
**Subsidiary Risk:** No information available  
**Packing group:** III  
**Special Provisions:** 274  
**Description:** UN1760, Corrosive liquid, n.o.s. (Ammonia), 8, III, ENVIRONMENTALLY HAZARDOUS

#### ICAO (air)

**UN-No:** UN1760  
**Proper Shipping Name:** Corrosive liquid, n.o.s.  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Description:** UN1760, Corrosive liquid, n.o.s. (Ammonia), 8, III  
**Special Provisions:** A3

#### IATA

**UN Number:** UN1760  
**Proper Shipping Name:** Corrosive liquid, n.o.s.  
**Transport hazard class(es):** 8  
**Subsidiary Risk:** No information available  
**Packing group:** III  
**Precautionary Statements - Response:** 8L

**Special Provisions Description:**

No information available  
UN1760, Corrosive liquid, n.o.s. (Ammonia), 8, III

**15. REGULATORY INFORMATION**

**International Inventories**

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
Water	7732-18-5	PresentACTIVE	Present KE-35400	Present	Not present	Present	Present	Present 231-791-2
Ammonia	7664-41-7	Present	Present KE-01625	Present	Present (1)-391	Present	Present	Present 231-635-3
Ammonium Chloride	12125-02-9	PresentACTIVE	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
- 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**

**- List Sourced from EAFUS**

*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 (also listed as Ammonia (also includes Ammonium chloride))
- List Sourced from EAFUS

**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:

**Product code:** A-266

**Product name:**  
AMMONIA-AMMONIUM CHLORIDE  
BUFFER TS, (U.S.P. TEST  
SOLUTION)

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

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Water	7732-18-5	Not Listed	Not Listed	Not Listed	Not Listed
Ammonia	7664-41-7	Not Listed	Not Listed	Not Listed	Not Listed
Ammonium Chloride	12125-02-9	Not Listed	Not Listed	Not Listed	Not Listed

#### CERCLA/SARA

Component	CAS No	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 de minimis
Water	7732-18-5	None	None	None	None	None
Ammonia	7664-41-7	= 45.4 kg final RQ	500 lb TPQ 100	None	None	1.0 % de minimis concentration
Ammonium Chloride	12125-02-9	5000 lb final RQ 2270 kg final RQ	None	None	None	None

#### U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) - Health and Safety Reporting
Water	7732-18-5	Not Applicable	Not Applicable
Ammonia	7664-41-7	Not Applicable	Not Applicable
Ammonium Chloride	12125-02-9	Not Applicable	Not Applicable

#### Canada

##### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Water  
7732-18-5 ( 75.6-77.9 )  
Ammonia  
7664-41-7 ( 15.4-17.7 )

Ammonium Chloride  
12125-02-9 ( 6.75 )

WHMIS 2015 Hazard Classification  
Not a dangerous product according to HPR classification criteria

Flammable gases - Category 1: H220 Extremely flammable gas.; Gases under pressure - Dissolved gas: H280 Contains gas under pressure, may explode when heated. (Ammonia solution, in water, with 35 - 50% Ammonia); Gases under pressure - Liquefied gas: H280 Contains gas under pressure, may explode when heated.; Acute toxicity - Inhalation - Category 3: H331 Toxic if inhaled. (Ammonia solution, in water, with more than 50% Ammonia; releases a toxic gas (Ammonia)); Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage. Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.; Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.; Combustible Dust - Category 1: May form combustible dust concentrations in air (factors such as combustibility and explosiveness of dusts including composition and shape and size of particles could cause substance to belong to 'Combustible dust' hazard class)

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

**DSL/NDSL**

Component	CAS No	Canada (DSL)	Canada (NDSL)
Water	7732-18-5	Present	Not Listed
Ammonia	7664-41-7	Present	Not Listed
Ammonium Chloride	12125-02-9	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Water	7732-18-5	Not listed
Ammonia	7664-41-7	Present
Ammonium Chloride	12125-02-9	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Water	7732-18-5	Not listed
Ammonia	7664-41-7	Not listed
Ammonium Chloride	12125-02-9	Not listed

**EU Classification****EU GHS - SV - CLP 1272/2008**

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Water	7732-18-5	
Ammonia	7664-41-7	
Ammonium Chloride	12125-02-9	Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification); Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye irritation.017-014-00-8

**EU - CLP (1272/2008)****R-phrase(s)**

R34 - Causes burns

R41 - Risk of serious damage to eyes

R20/22 - Harmful by inhalation and if swallowed

**S -phrase(s)**

S 7 - Keep container tightly closed.

S 9 - Keep container in a well-ventilated place.

S36 - Wear suitable protective clothing

S39 - Wear eye/face protection

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)

S38 - In case of insufficient ventilation, wear suitable respiratory equipment

S24/25 - Avoid contact with skin and eyes

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

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Water	7732-18-5		No information	
Ammonia	7664-41-7	C;R34 N;R50	0.5%≤C<5% Xn;R20-36/37/38	S(1/2)-S9-S16-S26-S3 6/37/39-S45-S61

		R10 T;R23	5%<=C T;R23-34	
Ammonium Chloride	12125-02-9	Xn; R22 Xi; R36	No information	

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

**Indication of danger:**

C - Corrosive

Xn - Harmful



**16. OTHER INFORMATION**

**Preparation Date:** 08/04/2015  
**Revision date** 11/21/2019  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**