

Preparation Date: 01/01/2019

Revision Date: N/A

Revision Number: N/A

**1. IDENTIFICATION****Product identifier**

Product code: C1660

Product Name: AMMONIUM HYDROXIDE, REAGENT, ACS

**Other means of identification**

Synonyms: L'hydroxyde d'ammonium(French)  
Aqueous Ammonia  
Aqua ammonia  
Ammonium Hydroxide with 27-31% Ammonia and 69-73% Water  
Hidróxido de amonio (Spanish)

CAS #: 1336-21-6  
RTECS # BQ9625000  
CI#: Not available

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

Recommended use: Bleaching agent. In the manufacturer of textiles. Detergent.

Uses advised against: No information available

**Supplier:**

**Dawn Scientific Inc**  
121 Liberty Street, Metuchen, NJ, 08840  
Tel : 732-902-6300 | Fax : 973-802-1005  
sales@dawnscientific.com | www.dawnscientific.com

**Emergency telephone number** Chemtrec 1-800-424-9300**2. HAZARDS IDENTIFICATION****Classification**

This chemical is considered hazardous according to 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 (Gases)	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

**Label elements****Danger****Hazard statements**

Harmful if swallowed  
Harmful if inhaled  
Causes severe skin burns and eye damage  
May cause respiratory irritation



#### **Hazards not otherwise classified (HNOC)**

Not Applicable

#### **Other hazards**

Very toxic to aquatic life with long lasting effects

Very toxic to aquatic life

#### **Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

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

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

Use only outdoors or in a well-ventilated area

#### **Precautionary Statements - Response**

*Immediately call a POISON CENTER or doctor/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 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 person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell.

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

Store in a well-ventilated place. Keep container tightly closed

#### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Components</b>	<b>CAS-No.</b>	<b>Weight %</b>
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	100

## 4. FIRST AID MEASURES

### First aid measures

<b>General Advice:</b>	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. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.
<b>Skin Contact:</b>	Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.
<b>Eye Contact:</b>	Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.
<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. 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. 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. Immediate medical attention is required. Call a physician immediately.
<b>Ingestion:</b>	Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If victim is conscious, give water or milk. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

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

<b>Symptoms</b>	Severe skin and eye irritation or burns May cause inflammation and cause deep, penetrating ulcers of the skin, staining of the skin, and thickening of the skin Causes digestive (gastrointestinal) tract irritation May cause gastrointestinal (digestive) tract burns Severe irritation of the upper respiratory tract May cause chemical burns to the respiratory tract May cause central nervous system effects May affect the cardiovascular system
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### Indication of any immediate medical attention and special treatment needed

<b>Notes to Physician:</b>	Treat symptomatically.
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### 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>	Ammonia. Nitrogen Oxides.

**Specific hazards:**

No information available.

### **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:**

Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not let product enter drains. Do not flush into surface water or sanitary sewer system. 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).

**Methods for cleaning up**

Dilute with water. 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:**

Use only in area provided with appropriate exhaust ventilation. Keep away from incompatible materials.

#### **Safe Handling Advice**

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

### **Conditions for safe storage, including any incompatibilities**

#### **Technical Measures/Storage Conditions:**

Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature in the original container. Keep at temperatures below 26 °C. Store in a segregated and approved area. Store away from incompatible materials.

#### **Incompatible Materials:**

Oxidizing agents  
Acids  
Metals  
Powdered metals

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Control parameters**

## National occupational exposure limits

### United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	None	None	None	None

### Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	None	None	None	None

### Australia and Mexico

Components	CAS-No.	Australia	Mexico
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	None	None

## 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.

**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

**Physical state:**  
Liquid

**Appearance:**  
No information available.

**Color:**  
Clear. Colorless.

**Odor:**  
Strong. Ammonia.

**Taste**  
Acrid.

**Formula:**  
NH<sub>4</sub>OH

<b>Molecular/Formula weight (g/mole):</b> 35.05	<b>Flammability:</b> No information 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> -69.2 °C/-92.6 °F	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 31-38 °C/87.8-100.4 °F	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> No information available
<b>Specific gravity:</b> 0.898	<b>pH:</b> 11.6 - this is the actual pH in a 1 N solution	<b>Vapor pressure @ 20°C (kPa):</b> 287.9 @ 25 °C
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> 5-50 (as ammonia)	<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	

## 10. STABILITY AND REACTIVITY

### Reactivity

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, nitril 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, thiotriethiazyl chloride, tetramethylammonium amide, tellurium tetrachloride, tellurium tetrabromide, silver (I) oxide, dichlorine oxide, silver nitrate, ethylene oxide, acetaldehyde, acrolein, boron, 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, fluorine, gold + aqua regia, hydrochloric acid, hydrofluoric acid, hydrogen peroxide, iodine, nitric acid, oleum, propiolactone, propylene oxide, silver nitrate, silver oxide + ethyl alcohol, nitromethane, silver permanganate, sulfuric acid, gold, mercury, and halide salts. Forms explosive compounds with many heavy metals (silver, lead, zinc). 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

### 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  
Acids  
Metals  
Powdered metals

**Hazardous decomposition products:** Ammonia gas may be liberated at high temperatures. Nitrogen oxides (NOx).

#### Other Information

##### **Corrosivity:**

Severe corrosive effect on Brass  
Severe corrosive effect on Bronze

**Special Remarks on Corrosivity:** Corrosive to galvanized surfaces. Severe corrosive effect on brass and bronze. Liquid Ammonia or Ammonium Hydroxide will attack some forms of plastics, rubber and coatings such as ABS, Acetal, Hytrel, Buna (Nitrile), Natural Rubber, LDPE, Nylon, Polycarbonate, Hypalon, and Viton.

## 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

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

Skin. Inhalation. Ingestion. Eyes.

#### Acute Toxicity

#### **Component Information**

Ammonium Hydroxide

[Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]

CAS-No.	1336-21-6
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**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** = No information available

**LC50/inhalation/mouse** = No information available

**Other LD50 or LC50 information** = 2000 ppm 4 hours LC50 inhalation Rat (for Ammonia)  
4230 ppm 1 hour LC50 inhalation Mouse (for Ammonia)

#### **Product Information**

**LD50/oral/rat** =

**VALUE- Acute Tox Oral** = 350 mg/kg

**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** = 6452-7407 ppm (4-hr)

**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>	Severe skin irritation. Causes skin 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>	Severe eye irritation. Causes eye burns. May cause irreversible eye damage. May cause corneal damage. May cause cataracts.
<b>Inhalation</b>	Causes severe irritation of the respiratory tract and mucous membranes with coughing, burns, breathing difficulty, and possible coma. Irritation may lead to chemical pneumonitis, pneumoconiosis, fibrosis, and pulmonary edema. Can cause chemical burns to the respiratory tract and mucous membranes. 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. Causes gastrointestinal tract corrosion, burns, swelling of the lips, mouth, and larynx, throat constriction, nausea, vomiting, convulsions, shock and may cause severe and permanent damage to the digestive tract with perforation of the digestive tract. It may also affect the liver, and urinary system (kidneys), behavior/central nervous system (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>	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).
<b>Sensitization:</b>	No information available.
<b>Mutagenic Effects:</b>	May affect genetic material Mutations in microorganisms
<b>Carcinogenic effects:</b>	Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	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** Respiratory system.  
**STOT - repeated exposure** No information available.  
**Target Organs:** Skin. Eyes. Respiratory system.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity effects:** Aquatic environment.

#### *Ammonium Hydroxide*

[Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water] -

**Freshwater Fish Species Data:** 8.2 mg/L LC50 Pimephales promelas 96 h 1

**Water Flea Data:** 0.66 mg/L EC50 water flea 48 h 0.66 mg/L EC50 Daphnia pulex 48 h

**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	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	None	None	None	None

## 14. TRANSPORT INFORMATION

### **DOT**

**UN-No:** UN2672  
**Proper Shipping Name:** Ammonia solution  
**Hazard Class:** 8  
**Subsidiary Class** No information available  
**Packing group:** III  
**Emergency Response Guide Number** 154  
**Marine Pollutant** No data available

<b>DOT RQ (lbs):</b>	No information available
<b>Special Provisions</b>	336, IB3, IP8, T7, TP2
<b>Symbol(s):</b>	[DOT]: (R3) - Identifies a material that is a hazardous substance that has a reportable quantity (RQ) of 100 pounds (45.4 Kilograms).
<b>Description:</b>	UN2672, Ammonia solution, 8, III
<b>TDG (Canada)</b>	
<b>UN-No:</b>	UN2672
<b>Proper Shipping Name:</b>	Ammonia solution
<b>Hazard Class:</b>	8
<b>Subsidiary Risk:</b>	No information available
<b>Packing Group:</b>	III
<b>Marine Pollutant</b>	No Information available
<b>Description:</b>	UN2672, Ammonia solution, 8, III
<b>ADR</b>	
<b>UN-No:</b>	UN2672
<b>Proper Shipping Name:</b>	Ammonia solution
<b>Hazard Class:</b>	8
<b>Packing Group:</b>	III
<b>Subsidiary Risk:</b>	No information available
<b>Special Provisions</b>	543
<b>Description:</b>	UN2672, Ammonia solution, 8, III, ENVIRONMENTALLY HAZARDOUS
<b>IMO / IMDG</b>	
<b>UN-No:</b>	UN2672
<b>Proper Shipping Name:</b>	Ammonia solution
<b>Hazard Class:</b>	8
<b>Subsidiary Risk:</b>	No information available
<b>Packing Group:</b>	III
<b>Marine Pollutant</b>	No information available
<b>EMS:</b>	F-A
<b>Description</b>	UN2672, Ammonia solution (AMMONIUM HYDROXIDE CONSISTING OF 27-31% AMMONIA (CAS NO. 7664-41-7) IN 69-73% WATER (CAS NO. 7732-18-5)), 8, III, Marine pollutant
<b>RID</b>	
<b>UN-No:</b>	UN2672
<b>Proper Shipping Name:</b>	Ammonia solution
<b>Hazard Class:</b>	8
<b>Subsidiary Risk:</b>	8
<b>Packing Group:</b>	III
<b>Special Provisions</b>	543
<b>Description:</b>	UN2672, Ammonia solution, 8, III, ENVIRONMENTALLY HAZARDOUS
<b>ICAO</b>	
<b>UN-No:</b>	UN2672
<b>Proper Shipping Name:</b>	Ammonia solution
<b>Hazard Class:</b>	8
<b>Subsidiary Risk:</b>	No information available
<b>Packing Group:</b>	III
<b>Description:</b>	UN2672, Ammonia solution, 8, III
<b>Special Provisions</b>	A64
<b>IATA</b>	
<b>UN-No:</b>	UN2672
<b>Proper Shipping Name:</b>	Ammonia solution
<b>Hazard Class:</b>	8
<b>Subsidiary Risk:</b>	No information available

**Packing Group:** III  
**ERG Code:** 8L  
**Special Provisions** No information available  
**Description:** UN2672, Ammonia solution, 8, III

## 15. REGULATORY INFORMATION

### International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	PresentACTIVE	Present KE-01688	Present	Present (1)-314	Present	Present	Present 215-647-6

### U.S. Regulations

#### Ammonium Hydroxide

[Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]

**Massachusetts RTK:** Present

**New Jersey RTK Hazardous Substance List:** 0103

**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present

**New Jersey TCPA - EHS:** 19000lbTQ

**Pennsylvania RTK:** Environmental hazard

**Pennsylvania RTK - Environmental Hazard List** Present

**New York Release Reporting - List of Hazardous Substances:**

1000 lb RQ

100 lb RQ

**Louisiana Reportable Quantity List for Pollutants:** 1000lbfinal RQ

454kgfinal RQ

**California Directors List of Hazardous Substances:** Present

**FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 184.1139

**FDA - 21 CFR - Total Food Additives** 163.110, 163.111, 163.112, 177.1600, 184.1139, 73.85

**- 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:

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

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	Not Listed	Not Listed	Not Listed	Not Listed

### CERCLA/SARA

Components	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
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	1000 lb final RQ 454 kg final RQ	None	None	None	None

## U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	Not Applicable	Not Applicable

## Canada

### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Ammonium Hydroxide  
[Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]  
( 100 )

WHMIS 2015 Hazard Classification  
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.

**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

Components	WHMIS Ingredient Disclosure List -
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1 %

### Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	Not listed

## EU Classification

### EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage.; Hazardous to aquatic environment - acute hazard - Aquatic Acute 1: H400 Very toxic to aquatic life.007-001-01-2 Specific target organ toxicity - Single exposure - STOT SE 3: H335 May cause respiratory irritation. (C >= 5

EU - CLP (1272/2008)

**R-phrases(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.

S 1/2 - Keep locked up and out of the reach of children.

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

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Ammonium Hydroxide [Consists of 27-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water]	1336-21-6	C; R34 N; R50	5%≤C<10% Xi; R36/37/38 10%≤C C; R34	S:(1/2)-26-36/37/39-45 -61

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**

Preparation Date: 01/01/2019

Revision Date: N/A

Prepared by: -

**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. Dawn Scientific Inc Chemicals & Laboratory Products, 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, Dawn Scientific Inc assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**