

Strong Ammonia Solution, NF MSDS

spectrum

chemicals & laboratory products

A Division of Spectrum Chemical Mfg. Corp.

Dear Customer,

This File Contains Both The ANSI Material Safety Data Sheet and The GHS Safety Data Sheet For The Same Product

Spectrum is currently transitioning all chemical product labeling from the ANSI¹ format to the GHS² format (see note below). In order to ensure that you receive complete labeling during the transition, we have included both the ANSI MSDS and the GHS SDS in a single file. The ANSI MSDS is given first, followed by the GHS SDS. Please use whichever matches the container label.

Why It Matters:

The complete precautionary labeling for this chemical consists of BOTH the label on the container AND the matching Material Safety Data Sheet (for ANSI labels) or Safety Data Sheet (for GHS labels). Both elements of the labeling [Label + (M)SDS] are written to be read and understood together, so as to provide complete precautionary information. It is intended for you to read and understood BOTH before handling or using the chemical.

Picking the Right One: 2 Easy Ways To Tell Whether Your Container Has an ANSI Label or a GHS Label

- 1) GHS labels: any pictogram displayed in the upper left-hand corner will be inside a red diamond.
ANSI labels: pictograms, if present, will be inside individual black boxes.
- 2) GHS labels: on the bottom of the right-hand panel of the label, locate the Lot Number. Directly to the left will be a string of control characters, followed by a single letter.
For GHS labels, the string of characters will end in "GHS:"

Label in ANSI Format

<p>CAUTION! MAY BE HARMFUL IF SWALLOWED MAY CAUSE EYE AND SKIN IRRITATION MAY AFFECT BEHAVIOR AND METABOLISM</p> <p>Do not taste or swallow. Avoid contact with eyes, skin and clothing. Avoid breathing mist or vapor. Avoid prolonged or repeated exposure. Use with adequate ventilation. Wash thoroughly after handling.</p> <p>FIRST AID: In case of contact, flush affected area with plenty of water for at least 15 minutes. Remove if worn. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If irritation persists, call a physician.</p> <p>KEEP FROM CHILDREN</p>	<p>SPECTRUM CHEMICALS & LABORATORY PRODUCTS</p> <p>BE159 SIZ SY</p> <p>Benzyl Benzoate (Benzoic Acid Phenylmethyl Ester)</p> <p>U.S.P. CAS 120-51-4</p> <p>CAUTION: For manufacturing, processing or repacking. Read and understand the label and Material Safety Data Sheet (MSDS) prior to use.</p> <p>For chemical emergency, call (800)424-9300</p> <p>www.SpectrumChemical.com</p>	<p>$C_{11}H_{12}O_2$ F.W. 212.24</p> <p>Assay 99.0-100.5% Specific Gravity @ 25°C 1.116-1.120 Congealing Temperature Min: 18.0°C Refractive Index @ 20°C 1.565-1.570 Acidity To pass test</p> <p>MAXIMUM LIMITS</p> <p>Aldehyde 0.05% Residual Solvents To pass test</p> <p>LIGHT SENSITIVE. Keep tightly closed in light-resistant containers.</p> <p>FLUSHED WITH NITROGEN</p>
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Lot No. XQ###

SPECTRUM CHEMICAL MFG. CORP. Gardena, CA 90248 • New Brunswick, NJ 08901

CORPORATE OFFICES
14422 South San Pedro Street
Gardena, California 90248
PHONE 310.516.8000
FAX 310.516.9843

Label in GHS Format

WARNING!

- May irritate or sensitize • May cause central nervous system effects based on animal data
- Do not use or inhale • Wear protective gloves
- After handling
- WASH AND IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Avoid reuse!

KEEP FROM CHILDREN

BE159 SIZ SY

SPECTRUM™

Benzyl Benzoate
(Benzoic Acid Phenylmethyl Ester)

U.S.P.

CAS 129-51-4

CAUTION: For manufacturing processing or shipping, read and understand the label and Safety Data Sheet (SDS) prior to use.

Chemical Emergency: (800)424-9088

www.SpectrumChemical.com

$C_{15}H_{14}O_2$ F.W. 212.24

Assay 99.0-100.5%
 Specific Gravity @ 25°C 1.116-1.120
 Freezing Temperature Min. 18.0°C
 Refractive Index @ 20°C 1.568-1.570
 Acidity To pass test

MAXIMUM LIMITS

Aldelyde 0.05%
 Residual Solvents To pass test

LIGHT SENSITIVE: Keep tightly closed in light-resistant containers.

FLUSHED WITH NITROGEN

Lot No. XQ####

¹ American National Standards Institute

² Globally Harmonized System for Hazard Communication

Sincerely,

Regulatory Affairs

MATERIAL SAFETY DATA SHEET

NFPA	HMIS	Personal Protective Equipment
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Health Hazard	3
Fire Hazard	0
Reactivity	0



See Section 8.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product code:	AM180
Product Name:	STRONG AMMONIA SOLUTION, NF
Chemical Name:	No information available
Synonyms:	Aqueous Ammonia Aqua ammonia Ammonium Hydroxide with 27-31% Ammonia and 69-73% Water
Recommended use:	Bleaching agent. In the manufacturer of textiles. Detergent.
CAS #:	1336-21-6
RTECS #	BQ9625000
Formula:	NH4OH
CI#:	Not available
Supplier:	Spectrum Chemicals and Laboratory Products, Inc. 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:	Ibad Tirmiz (East Coast)
Contact Person:	Martin LaBenz (West Coast)

2. HAZARDS IDENTIFICATION

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER CORROSIVE!

The product causes burns of eyes, skin and mucous membranes

May be harmful if swallowed

Odor:
Strong. Ammonia.

Physical state:
Liquid.

Appearance:
No information available

Color:
Clear. Colorless.

OSHA Regulatory Status

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

POTENTIAL HEALTH EFFECTS

Principal Routes of Exposure:

Skin. Inhalation. Ingestion. Eyes.

Acute Potential Health Effects:

Skin Contact:

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.

Eye Contact:

Severe eye irritation. Causes eye burns. May cause irreversible eye damage. May cause corneal damage. May cause cataracts.

Inhalation:

Causes severe irritation to the respiratory tract. May cause chemical burns to the respiratory tract. May cause pulmonary edema.

Ingestion:

Causes burns. Can burn mouth, throat, and stomach. May cause nausea and vomiting. Harmful if swallowed. It may affect the kidneys. May affect the liver. May cause central nervous system effects.

Chronic Potential Health Effects:

Component

Ammonium Hydroxide (CAS no. 1336-21-6)
[Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]
(100)

Carcinogen Status:

No information available

Target Organs:

Skin. Eyes. Respiratory system.

Mutagenic Effects:

May affect genetic material
Mutations in microorganisms

Teratogenic Effects:

No information available

Aggravated Medical Conditions: No information available

See Section 11 for additional Toxicological Information

POTENTIAL ENVIRONMENTAL EFFECTS

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	1336-21-6	100

4. FIRST AID MEASURES

General Advice:	Poison information centres 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. First aider needs to protect himself.
Skin Contact:	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.
Eye Contact:	Flush eye with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.
Inhalation:	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.
Ingestion:	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 Centre immediately.
Notes to Physician:	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties

Flashpoint (°C/°F):	No information available.
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Flash Point Tested according to: Not available
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Lower Explosion Limit (%):	No information available
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Upper Explosion Limit (%):	No information available
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Autoignition Temperature (°C/°F):	No information available
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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.
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Unsuitable Extinguishing Media:	No information available.
Hazardous Combustion Products:	ammonia; nitrogen oxides
Specific hazards:	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
Specific Methods:	No information available.

6. ACCIDENTAL RELEASE MEASURES

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 for Cleaning Up:

Absorb spill with inert material (e.g. vermiculite, dry sand or earth). Dilute with water. Neutralize the 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

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.

Storage

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

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.

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.

National occupational exposure limits**United States**

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)] -	None	None	None	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	None	None	None	None

Australia and Mexico

Components	Australia	Mexico
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Liquid.

Appearance:

No information available

Color:

Clear. Colorless.

Odor:

Strong. Ammonia.

Taste

acid.

Molecular/Formula weight:

35.05

Flash point (°C):

No data available

Lower Explosion Limit (%):

No information available

Upper Explosion Limit (%):

No information available

Autoignition Temperature (°C/°F):

No information available

Melting point/range(°C/°F):

-69.2 °C/-92.6 °F

Boiling point/range(°C/°F):

31-38 °C/87.8-100.4 °F

pH:

11.6 - this is the actual pH in a 1 N solution

Specific gravity:

0.898

Density (g/cm³):

No information available

Decomposition temperature(°C/°F):

No information available

Bulk density:

No information available

Vapor pressure @ 20°C (kPa):

287.9 @ 25 °C

Evaporation rate:

No information available

Vapor density:

No information available

VOC content (g/L):

No information available

Odor threshold (ppm):

5-50 (as ammonia)

Partition coefficient**(n-octanol/water):**

No information available

Miscibility:

No information available

Solubility:

Easily soluble in cold water

10. STABILITY AND REACTIVITY

Stability:

Stable at normal conditions

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 (NO_x).

Possibility of Hazardous Reactions:

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, trioxygen difluoride, selenium difluoride dioxide, nitric acid, hydrogen peroxide, nitrogen oxide, dinitrogen tetroxide, oxygen, platinum, silver chloride, thiocarbonyl azide thiocyanate, sulfinyl chloride, thiothiazyl 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 hypopentachloride, 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

Polymerization: Hazardous polymerisation does not occur

Corrosivity: Severe corrosive effect on Brass. Severe corrosive effect on Bronze.

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
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

Acute Toxicity

Component Information

Ammonium Hydroxide (CAS no. 1336-21-6)

[Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)] -

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 = 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

Product code: AM180

Product name: STRONG AMMONIA
SOLUTION, NF

7 / 13

LC50/inhalation/rat No information available
LC50/Inhalation/mouse No information available
LD50/dermal/rabbit No information available
LD50/dermal/rat No information available
LD50/oral/mouse = No information available
LD50/oral/rat = 350mg/kg

Local Effects

Skin irritation: Corrosive. Severe skin irritation. Causes burns. May cause deep penetrating ulcers of the skin. Contact with skin may cause staining, inflammation, and thickening of the skin.

Eye irritation: Severe eye irritation. Causes burns. May cause reversible eye damage. May cause corneal damage. May cause cataracts.

Inhalation: 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).

Ingestion: 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)..

Sensitization: No information available

Chronic Toxicity

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) .

Carcinogenic effects: Not considered carcinogenic

Components	NTP	IARC	OSHA HCS - Carcinogens	ACGIH - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects: May affect genetic material
 Mutations in microorganisms

Reproductive Effects: No information available

Teratogenic Effects: No information available
Target Organs: Skin. Eyes. Respiratory system.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Toxicity to terrestrial and aquatic plants and animals: Information given is based on data on the components and the ecotoxicology of similar products

Ecotoxicity effects: Aquatic environment.

Aquatic toxicity:

Ammonium Hydroxide (CAS no. 1336-21-6)

[Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)] -

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

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

0.66 mg/L EC50 water flea 48 h

Mobility: No information available

Persistence and degradability: No information available

Bioaccumulative potential: No information available

13. DISPOSAL CONSIDERATIONS

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
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN2672
Proper Shipping Name: Ammonia solution
Hazard Class: 8
Packing Group: III
Subsidiary Risk: Not applicable
Marine Pollutant: No data available
ERG No: 154
DOT RQ (lbs): No information available

Symbol(s): R3

TDG (Canada)

UN-No: UN2672
Proper Shipping Name: Ammonia solution

Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available
Description: No information available

ADR

UN-No: UN2672
Proper Shipping Name: Ammonia solution
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: UN2672
Proper Shipping Name: Ammonia solution
Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available
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: UN2672
Proper Shipping Name: Ammonia solution
Hazard Class: 8
Packing Group: III
Subsidiary Risk: 8
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN2672
Proper Shipping Name: Ammonia solution
Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available
Description: No information available

IATA

UN-No: UN2672
Proper Shipping Name: Ammonia solution
Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available
ERG Code: 8L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	Philippines (PICCS)	KOREA KECL	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	Present	Present	Present KE-01688	Present (1)-314	Present [27662]	Present	Present 215-647-6

U.S. Regulations

Ammonium Hydroxide (CAS no. 1336-21-6)
[Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]

- Massachusetts RTK: Present
- New Jersey RTK Hazardous Substance List: Present (sn 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
- Pennsylvania RTK - Special Hazardous Substances Present
- New York Release Reporting - List of Hazardous Substances: 1000 lb RQ (air); 100 lb RQ (land/water)
- Louisiana Reportable Quantity List for Pollutants: Listed
- California Directors List of Hazardous Substances: Present
- FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1139

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:
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	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 de minimis
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	1000 lb final RQ; 454 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
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

E Corrosive material

Ammonium Hydroxide (CAS no. 1336-21-6)

[Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]

E

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 -
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	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.

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	Classification	Concentration Limits:	Safety Phrases
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	C; R34 N; R50	25%≤C: C,N; R34-50 10%≤C<25%: C; R34 5%≤C<10%: Xi; R36/37/38	S1/2 S26 S36/37/39 S45 S61

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

Indication of danger:

C - Corrosive.



16. OTHER INFORMATION

The MSDS format complies with ANSI Z400.1/Z129.1-2010 standards.

Preparation Date: 23-Dec-2014
Reason for revision: Not applicable
Prepared by: Sonia Owen
Literature reference: No information available

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. The physical properties reported in this MSDS 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 MSDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

SAFETY DATA SHEET

Preparation Date: 11/03/2014

Revision Date: 12/23/2014

Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: AM180
Product Name: STRONG AMMONIA SOLUTION, NF

Other means of identification

Synonyms: Aqueous Ammonia
Aqua ammonia
Ammonium Hydroxide with 27-31% Ammonia and 69-73% Water

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: Spectrum Chemicals and Laboratory Products, Inc.
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: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

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 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
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. 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

Components	CAS-No.	Weight %	Trade Secret
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	1336-21-6	100	*
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4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centres 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. First aider needs to protect himself.

Skin Contact:

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.

Eye Contact:

Flush eye with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation:

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.

Ingestion:

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 Centre immediately.

Most important symptoms and effects, both acute and delayed

Symptoms

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.

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:	ammonia; nitrogen oxides
Specific hazards:	No information available.
<u>Special Protective Actions for Firefighters</u>	
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 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	OSHA	NIOSH	ACGIH	AIHA WHEEL
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)] -	None	None	None	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)] -	None	None	None	None

Australia and Mexico

Components	Australia	Mexico
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)] -	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

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid.	Appearance: No information available	Color: Clear. Colorless.
Odor: Strong. Ammonia.	Taste: acid.	Formula: NH ₄ OH
Molecular/Formula weight: 35.05	Flash point (°C): No data available	Flashpoint (°C/°F): No information available.
Flash Point Tested according to: Not available	Lower Explosion Limit (%): No information available	Upper Explosion Limit (%): No information available
Autoignition Temperature (°C/°F): No information available	pH: 11.6 - this is the actual pH in a 1 N solution	Melting point/range(°C/°F): -69.2 °C/-92.6 °F
Boiling point/range(°C/°F): 31-38 °C/87.8-100.4 °F	Decomposition temperature(°C/°F): No information available	Specific gravity: 0.898
Density (g/cm³): No information available	Bulk density: No information available	Vapor pressure @ 20°C (kPa): 287.9 @ 25 °C
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): 5-50 (as ammonia)	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: Easily soluble in cold water	

10. STABILITY AND REACTIVITY

Reactivity

Halogen, 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, 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, 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, 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 at normal 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: Dissolves copper and zinc.
Corrosive to aluminum and its alloys.
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 (CAS no. 1336-21-6)

[Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)] -

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 = 350mg/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 = 6666-1000ppm (4-hr)

VALUE-Dust/Mist = No information available

Product code: AM180

Product name: STRONG AMMONIA
SOLUTION, NF

7 / 14

LC50/Inhalation/mouse**VALUE-Vapor** = No information available**VALUE - Gas** = No information available**VALUE - Dust/Mist** = No information available**Symptoms****Skin Contact:** 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.**Eye Contact:** Severe eye irritation. Causes eye burns. May cause irreversible eye damage. May cause corneal damage. May cause cataracts.**Inhalation** 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).

Ingestion 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).**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)**Sensitization:** No information available**Mutagenic Effects:** May affect genetic material
Mutations in microorganisms**Carcinogenic effects:** Not considered carcinogenic

Components	ACGIH - Carcinogens	IARC	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

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 (CAS no. 1336-21-6)
[Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)] -*

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

Water Flea Data: 0.66 mg/L EC50 Daphnia pulex 48 h
0.66 mg/L EC50 water flea 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	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	None	None	None	None

14. TRANSPORT INFORMATION

DOT
UN-No: UN2672
Proper Shipping Name: Ammonia solution
Hazard Class: 8
Subsidiary Risk: Not applicable
Packing Group: III
Marine Pollutant No data available
ERG No: 154

14. TRANSPORT INFORMATION

DOT RQ (lbs): No information available
Symbol(s): R3

TDG (Canada)

UN-No: UN2672
Proper Shipping Name: Ammonia solution
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

ADR

UN-No: UN2672
Proper Shipping Name: Ammonia solution
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: UN2672
Proper Shipping Name: Ammonia solution
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
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: UN2672
Proper Shipping Name: Ammonia solution
Hazard Class: 8
Subsidiary Risk: 8
Packing Group: III
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN2672
Proper Shipping Name: Ammonia solution
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

IATA

UN-No: UN2672
Proper Shipping Name: Ammonia solution
Hazard Class: 8
Subsidiary Risk: No information available

14. TRANSPORT INFORMATION

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.
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	Present	Present KE-01688	Present	Present (1)-314	Present [27662]	Present	Present 215-647-6

U.S. Regulations

Ammonium Hydroxide (CAS no. 1336-21-6)
 [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]

- Massachusetts RTK:** Present
- New Jersey RTK Hazardous Substance List:** Present (sn 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**
- Pennsylvania RTK - Special Hazardous Substances Present**
- New York Release Reporting - List of Hazardous Substances:**
1000 lb RQ (air); 100 lb RQ (land/water)
- Louisiana Reportable Quantity List for Pollutants:** Listed
- California Directors List of Hazardous Substances:** Present
- FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 184.1139

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:
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	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 de minimis
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	1000 lb final RQ; 454 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
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

E Corrosive material

Ammonium Hydroxide (CAS no. 1336-21-6)

[Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]

E

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 -
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	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.

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	Classification	Concentration Limits:	Safety Phrases
Ammonium Hydroxide (CAS no. 1336-21-6) [Consists of 20-31% Ammonia (CAS no. 7664-41-7) in 69-73% Water (CAS no. 7732-18-5)]	C; R34 N; R50	25%≤C: C,N; R34-50 10%≤C<25%: C; R34 5%≤C<10%: Xi; R36/37/38	S1/2 S26 S36/37/39 S45 S61

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

Indication of danger:

C - Corrosive.



16. OTHER INFORMATION

16. OTHER INFORMATION

NFPA	HMIS	Personal Protective Equipment
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Health Hazard	3
Fire Hazard	0
Reactivity	0



Preparation Date: 11/03/2014
Revision Date: 12/23/2014
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

Contact Distributor

www.qualityexcipients.com
info@qualityexcipients.com

