Ammonium Hydroxide Solution 19.5%

Safety Data Sheet

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

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : Ammonium Hydroxide Solution 19.5%

Product code : M11007

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

JR Simplot Company

P.O. Box 70013

Boise, ID 83707

T 1-208-336-2110

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute toxicity (oral) Category 4	H302	Harmful if swallowed
Acute toxicity (inhalation:vapour) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation Category 1A	H314	Causes severe skin burns and eye damage

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H302+H332 - Harmful if swallowed or if inhaled
H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS-US) : P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash hands, forearms and face thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301+P312 - If swallowed: Call a poison center/doctor/… if you feel unwell
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a poison center/doctor/…
P312 - Call a poison center/doctor/… if you feel unwell
P321 - Specific treatment (see ... on this label)
P330 - Rinse mouth
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/container to …in accordance with local/regional/national regulations

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Water	(CAS No) 7732-18-5		Not classified
Ammonia Solution*	(CAS No) Trade Secret		Skin Corr. 1B, H314

***Chemical name, CAS number and/or exact concentration have been withheld as a trade secret**

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. 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.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.

First-aid measures after eye contact : 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.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell. Immediately call a poison center or doctor/physician. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed.

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Reactivity : Thermal decomposition generates : Corrosive vapors.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	:	Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
Other information	:	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact during pregnancy/while nursing. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Comply with applicable regulations.
Storage conditions	:	Keep only in the original container in a cool, well ventilated place away from : Keep container tightly closed. Store in a well-ventilated place. Keep cool.
Incompatible products	:	Strong bases. Strong acids.
Incompatible materials	:	Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Ammonia Solution		
ACGIH	ACGIH TWA (ppm)	25 ppm
ACGIH	ACGIH STEL (ppm)	25 ppm

Water (7732-18-5)
Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Materials for protective clothing:

synthetic material. rubber

Hand protection:

Wear protective gloves

Eye protection:

Chemical goggles or face shield. Safety glasses

Skin and body protection:

Chemical protective suite, boots, and gaunlet type gloves

Respiratory protection:

Wear appropriate mask. 0-200 ppm - cartridge type 1/2 mask. 200-500 ppm - "N" mask full face. +500 ppm - SCBA

Other information:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Do not eat, drink or smoke during use. Local exhaust essential. Spark-proof fans desirable with mechanical ventilation. Ducts should be located at ceiling level and lead upward to outside. Local exhaust must be adequate to reduce NH3 concentration below 25ppm.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear, colorless liquid.
Color	:	Colourless
Odor	:	Pungent odor
Odor threshold	:	No data available
pH	:	> 13
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	120oF @ 1 ATM
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	19.1 weight % 4.56 psi at 70 °F
Relative vapor density at 20 °C	:	No data available
Relative density	:	No data available
Specific gravity / density	:	Sp. Gr. 0.9277 @ 60 °F
Solubility	:	Complete.
Log Pow	:	No data available
Auto-ignition temperature	:	850 °C 1560F
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosion limits	:	15 vol. % @ 10.6 g/m3 28 vol. % @ 19.8 g/m3.
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

Additional information	:	Volatiles (by weight) 19.0-19.9%

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapors.

10.2. Chemical stability

Stable. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Heat. Electrical equipment and fixures which are not vapor-proof. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Contact with mercury, chlorine, bromine, iodine, calcium, silver oxide, or hypochlorite can form explosive compounds. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Ammonia. Combustion of ammonia will yeild nitrogen and water. fume. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Inhalation:vapour: Harmful if inhaled.

Ammonium Hydroxide Solution 19.5%	
LD50 oral rat	350 mg/kg
ATE US (oral)	350 mg/kg body weight
ATE US (vapors)	11 mg/l/4h

Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: > 13

Serious eye damage/irritation : Not classified
pH: > 13

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified
Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Reproductive toxicity : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed.

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

12.2. Persistence and degradability

Ammonium Hydroxide Solution 19.5%	
Persistence and degradability	Not established.

Ammonia Solution	
Persistence and degradability	Readily biodegradable in water. Ozonation in water. Biodegradable in the soil. No (test)data on mobility of the components available. Ozonation in the air. Not established.

Water (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Ammonium Hydroxide Solution 19.5%	
Bioaccumulative potential	Not established.

Ammonia Solution	
Log Pow	-1.14

Ammonia Solution	
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

Water (7732-18-5)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

GWPmix comment : No known effects from this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to ...

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2672 Ammonia solutions, 8, III

UN-No.(DOT) : UN2672

Proper Shipping Name (DOT) : Ammonia solutions

Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 8 - Corrosive

Marine pollutant : Yes (IMDG only)

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
IP8 - Ammonia solutions may be transported in rigid or composite plastic IBCs (31H1, 31H2 and 31HZ1) that have successfully passed, without leakage or permanent deformation, the hydrostatic test specified in 178.814 of this subchapter at a test pressure that is not less than 1.5 times the vapor pressure of the contents at 55 C (131 F).
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	60 L
DOT Vessel Stowage Location	:	A - The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel and on a passenger vessel.
Transport/Additional information	:	40 - Stow ''clear of living quarters'',52 - Stow ''separated from'' acids,85 - Under deck stowage must be in mechanically ventilated space
Other information	:	No supplementary information available.

TDG

Transport by sea

Transport document description (IMDG)	:	UN 2672 AMMONIA SOLUTION, 8, III, MARINE POLLUTANT
UN-No. (IMDG)	:	2672
Proper Shipping Name (IMDG)	:	AMMONIA SOLUTION
Class (IMDG)	:	8 - Corrosive substances
Packing group (IMDG)	:	III - substances presenting low danger
Limited quantities (IMDG)	:	5 L
Marine pollutant	:	Yes (IMDG only)

Air transport

Transport document description (IATA)	:	UN 2672 Ammonia solution, 8, III
UN-No. (IATA)	:	2672
Proper Shipping Name (IATA)	:	Ammonia solution
Class (IATA)	:	8 - Corrosives
Packing group (IATA)	:	III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Ammonium Hydroxide Solution 19.5%
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

ammonia, aqueous solutions	CAS No 1336-21-6	%

Ammonia Solution	
CERCLA RQ	1000 lb

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Ammonia Solution
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H-phrases:

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H332	Harmful if inhaled

SDS US (GHS HazCom 2012)

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