



Be Right™

SAFETY DATA SHEET

This safety data sheet complies with the requirements of: GB/T 17519-2013 and GB/T 16483-2008

Issue Date 27-07-2017

Version 2.5

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Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name Ammonia Standard Solution 1000 mg/l as NH₃ (N)

Other means of identification

Product Code(s) 2354153

Safety data sheet number M00946

Alternate CAS Number Not applicable

Other Information

Not applicable

Details of the supplier of the safety data sheet

Supplier Address

HACH CHINA Floor 23, Saite Building, Jianguomenwai Street
No.22, Beijing 100004 Tel: 400-686-8899, 800-840-6026

Manufacturer Address

Hach Company, P.O. Box 389, Loveland, CO 80539, USA,
+1(970) 669-3050

Emergency Telephone - China

400-007-0792 - 24 Hour Service

Recommended use of the chemical and restrictions on use

Recommended Use Standard solution. Water Analysis.

Uses advised against None.

Restrictions on use None.

Section 2: HAZARDS IDENTIFICATION

Appearance aqueous solution **Physical state** Liquid. **Odor** Odorless

GHS Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Hazard statements

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

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Physical Hazards

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.

Chronic effects: Not applicable.

Environmental hazards

This material is a water pollutant. Keep out of drains, sewers, ditches and waterways. Minimize use of water to prevent environmental contamination. Hazardous to the ozone layer.

Other hazards which do not result in classification

Not applicable

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Mixture

Substance

Not applicable

Mixture

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Chemical name	Percent Range	Formula	Molecular weight	CAS No	EC No
Ammonium chloride	<1%	NH ₄ Cl	53.50	12125-02-9	235-186-4

Section 4: FIRST AID MEASURES

Description of necessary first aid measures

General advice No hazards which require special first aid measures. Use first aid treatment according to the nature of the injury.

Inhalation Remove to fresh air.

Skin contact In the case of skin irritation or allergic reactions see a physician. Wash skin with soap and water.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion Clean mouth with water and drink afterwards plenty of water.

For emergency responders

Self-protection of the first aider No information available.

Most important symptoms/effects, acute and delayed

Symptoms No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

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Suitable Extinguishing Media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Product itself does not burn.

Unsuitable Extinguishing Media

No information available

Specific hazards arising from the chemical

Specific hazards arising from the chemical

No information available.

Explosive properties

Not classified according to GHS criteria.

Hazardous combustion products

No information available.

Specific/special fire-fighting measures

Specific/special fire-fighting measures

No information available.

Special protective equipment and precautions for fire-fighters

Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation.

For emergency responders

Use personal protective equipment as required.

Environmental precautions

Environmental precautions

See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Pick up and transfer to properly labeled containers.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections

See section 8 for more information.
See section 13 for more information.

Section 7: HANDLING AND STORAGE

Preventive measures for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice.

Precautions for safe handling

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

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Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Exposure Limits

Chemical name	CAS No	Percent Range	China	ACGIH TLV	OSHA PEL
Ammonium chloride	12125-02-9	<1%	TWA: 10 mg/m ³ STEL: 20 mg/m ³	STEL: 20 mg/m ³ fume TWA: 10 mg/m ³ fume	(vacated) TWA: 10 mg/m ³ (vacated) STEL: 20 mg/m ³

Legend

See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering Controls

Showers
 Eyewash stations
 Ventilation systems. Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Individual protection measures, such as personal protective equipment

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Ensure adequate ventilation.

Hand Protection

Wear suitable gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

No special protective equipment required. Avoid contact with eyes, skin and clothing.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

Thermal hazards

None under normal processing.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state

Liquid

Appearance

aqueous solution

Color

colorless

Odor

Odorless

Odor threshold

No data available

Property

Values

Remarks • Method

Molecular weight

No data available

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pH	5.34	@ 20 °C
Melting point/freezing point	~ 0 °C / 32 °F	
Boiling point / boiling range	~ 100 °C / 212 °F	
Evaporation rate	1 (water = 1)	
Vapor pressure	24.002 mm Hg / 3.2 kPa at 25 °C / 77 °F	
Relative vapor density	0.62	
Specific gravity (water = 1 / air = 1)	1	
Partition Coefficient (n-octanol/water)	Not applicable	
Soil Organic Carbon-Water Partition Coefficient	Not applicable	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	1 cP (mPa s) at 20 °C / 68 °F	
Kinematic viscosity	1 cSt (mm ² /s) at 20 °C / 68 °F	

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

Solubility in other solvents

Solvent	Solubility	Water Solubility Temperature
Acid	Soluble	> 1000 mg/L 25 °C / 77 °F
Most Polar Organic Solvents	Soluble	> 1000 mg/L 25 °C / 77 °F

Other information

Metal Corrosivity

Steel Corrosion Rate	No data available
Aluminum Corrosion Rate	No data available

Volatile Organic Compounds (VOC) Content

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
Ammonium chloride	12125-02-9	No data available	-

Explosive properties

Upper explosion limit	No data available
Lower explosion limit	No data available

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Flammable properties

Flash point

No data available

Flammability Limit in Air

Upper flammability limit:

No data available

Lower flammability limit:

No data available

Oxidizing properties

No data available.

Bulk density

No data available

Section 10: STABILITY AND REACTIVITY

Reactivity

Not applicable.

Chemical stability

Stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Possibility of hazardous reactions

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization

None under normal processing.

Conditions to avoid

Conditions to avoid

None known based on information supplied.

Incompatible materials

Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

Hazardous decomposition products

None known based on information supplied.

Section 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation

No known effect based on information supplied.

Eye contact

No known effect based on information supplied.

Skin contact

No known effect based on information supplied.

Ingestion

No known effect based on information supplied.

Symptoms

No information available.

Acute toxicity

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Based on available data, the classification criteria are not met

Mixture

No data available.

Ingredient Acute Toxicity Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Ammonium chloride (<1%) CAS#: 12125-02-9	Rat LD ₅₀	1650 mg/kg	None reported	None reported	IUCLID

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 0% of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)
- 0% of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 0% of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

Acute Toxicity Estimations (ATE)

ATEmix (oral)	No information available
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Product Skin Corrosion/Irritation Data

No data available.

Ingredient Skin Corrosion/Irritation Data

No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Ammonium chloride (<1%) CAS#: 12125-02-9	Existing human experience	Human	None reported	None reported	Mild skin irritant	RTECS

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Eye Damage/Eye Irritation Data

No data available.

Respiratory or skin sensitization

Based on available data, the classification criteria are not met.

Mixture

No data available.

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Ingredient Sensitization Data

No data available.

Chemical name	Test method	Species	Results	Key literature references and sources for data
Ammonium chloride (<1%) CAS#: 12125-02-9	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	OECD 429: Skin Sensitization: Local Lymph Node Assay

STOT - single exposure

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Single Exposure Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Ammonium chloride (<1%) CAS#: 12125-02-9	Domestic mammal - Not specified LD _{Lo}	1500 mg/kg	None reported	None reported	RTECS

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Ammonium chloride (<1%) CAS#: 12125-02-9	Rat TD _{Lo}	3500 mg/kg	7 days	No toxicological effects observed	RTECS

Carcinogenicity

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Ammonium chloride	12125-02-9	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA	Does not apply

Mutagenicity

Based on available data, the classification criteria are not met.

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Mixture invitro Data

No data available.

Substance invitro Data

No data available.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Ammonium chloride (<1%) CAS#: 12125-02-9	OECD 471	<i>Salmonella typhimurium</i>	5 mg/plate	72 hours	Negative	RTECS

Mixture invivo Data

No data available.

Substance invivo Data

No data available.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Product Skin Corrosion/Irritation Data

No data available.

Ingredient Reproductive Toxicity Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Ammonium chloride (<1%) CAS#: 12125-02-9	Rat NOAEL	1500 mg/kg	16 days	None reported	ECHA

Aspiration hazard

Based on available data, the classification criteria are not met.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Unknown Aquatic Toxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Product Ecological Data

Aquatic Acute Toxicity

No data available.

Aquatic Chronic Toxicity

No data available.

Ingredient Ecological Data

Aquatic Acute Toxicity

No data available.

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Ammonium chloride	96 hours	<i>Oncorhynchus mykiss</i>	LC ₅₀	42.91 mg/L	ECHA

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Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
(<1%) CAS#: 12125-02-9 Ammonium chloride (<1%) CAS#: 12125-02-9	48 Hours	<i>Daphnia magna</i>	LC ₅₀	161 mg/L	IUCLID

Aquatic Chronic Toxicity

No data available.

Persistence and degradability

Product Biodegradability Data

No data available.

Product Bioaccumulation Data

No data available.

Partition Coefficient (n-octanol/water)

Not applicable

Mobility

Soil Organic Carbon-Water Partition Coefficient

Not applicable

Other adverse effects

No information available

Section 13: DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues/unused products

Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging

Do not reuse empty containers.

Section 14: TRANSPORTATION INFORMATION

DOT

Not regulated

IMDG

Not regulated

IATA

Not regulated

Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.

If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

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Section 15: REGULATORY INFORMATION

National Regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalogue of occupational hazard factors: Not applicable.

Catalogue of occupational diseases: Not applicable.

Chemical name	Category
Ammonium chloride	Chemical hazards

Regulations on the Control over Safety of Hazardous Chemicals

Inventory of hazardous chemicals Not applicable.

GB 18218-2009 Identification of major hazard installations for dangerous chemicals Not applicable.

List of hazardous chemicals under priority management Not applicable.

Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used

Inventory of highly toxic goods Not applicable.

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

List of toxic chemicals severely restricted for import and export in China Not applicable.

Measures for the Environmental Management of New Chemical Substances

IECSC Complies

IECSC - *China Inventory of Existing Chemical Substances*

International Inventories

TSCA Complies

DSL/NDSL Complies

EINECS/ELINCS Complies

ENCS Complies

KECL - Existing substances Complies

PICCS Complies

TCSI Complies

AICS Complies

NZIoC Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substances Inventory

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

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The Rotterdam Convention Not applicable

Section 16: OTHER INFORMATION

Prepared By Hach Product Compliance Department

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Revision Note

Reference Sources for Section 11 See Section 11: TOXICOLOGICAL INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that

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some reference state regulations of these
"liberated" exposure limits in their state
regulations.

SKN* Skin designation
RSP+ Respiratory sensitization
C Carcinogen
M mutagen

SKN+ Skin sensitization
** Hazard Designation
R Reproductive toxicant

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations. **THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. HACH COMPANY©2022**

End of Safety Data Sheet