

Issue Date 13-Feb-2018

SAFETY DATA SHEET

Version 2.4

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1. IDENTIFICATION			
<u>Product identifier</u> Product Name	Nitrogen, Ammonia Standard Solution 100 mg/L as NH ₃ -N		
Other means of identification Product Code(s)	2406549		
Safety data sheet number	M00894		
<u>Recommended use of the chemica</u> Recommended Use Uses advised against Restrictions on use	<u>I and restrictions on use</u> Standard solution. None. None.		
Details of the supplier of the safety data sheet			
Manufacturer Address Hach Company P.O.Box 389 Lovela	nd, CO 80539 USA +1(970) 669-3050		

Emergency telephone number

+1(303) 623-5716 - 24 Hour Service

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

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Hazards not otherwise classified (HNOC) Not applicable

Label elements

Signal word None

Hazard statements

The product contains no substances which at their given concentration, are considered to be hazardous to health

Other Hazards Known

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

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Substance

Not applicable

<u>Mixture</u>

Chemical Family

Mixture.

Chemical name	CAS No.	Percent Range	HMRIC #
Ammonium chloride	12125-02-9	<0.1%	-

4. FIRST AID MEASURES

Description of 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.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Clean mouth with water and drink afterwards plenty of water.
Most important symptoms and effe	cts, both acute and delayed
Symptoms	See Section 11 for additional Toxicological Information.
Indication of any immediate medica	l attention and special treatment needed
Note to physicians	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	Caution: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	No information available.
Hazardous combustion products	This material will not burn.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

U.S. Notice	Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.

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Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

Personal precautions, protective equipment and emergency procedures			
Personal precautions	Ensure adequate ventilation.		
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.		

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	safe handling 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.			

Flammability class

Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

ACGIH TLV	OSHA PEL	NIOSH			
STEL: 20 mg/m ³ fume	(vacated) TWA: 10 mg/m ³	TWA: 10 mg/m ³ fume			
TWA: 10 mg/m ³ fume	(vacated) STEL: 20 mg/m ³	STEL: 20 mg/m3 fume			
Showers					
Eyewash stations					
Ventilation systems.					
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.					
Wear suitable gloves.					
Wear safety glasses with side shields (or goggles).					
No special protective equipment required.					
	STEL: 20 mg/m ³ fume TWA: 10 mg/m ³ fume Showers Eyewash stations Ventilation systems. :h as personal protective equi No protective equipment is nee exceeded or irritation is experie Wear suitable gloves. Wear safety glasses with side	STEL: 20 mg/m³ fume TWA: 10 mg/m³ fume (vacated) TWA: 10 mg/m³ (vacated) STEL: 20 mg/m³ Showers Eyewash stations Ventilation systems. th as personal protective equipment No protective equipment is needed under normal use condition exceeded or irritation is experienced, ventilation and evacuation Wear suitable gloves. Wear safety glasses with side shields (or goggles).			

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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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Appearance Odor	aqueous solution Slight ammonia	Liquid		Color Odor threshold	colorless No data available
Property_			Values		Remarks • Method
Molecular weight			No data availat	ble	
рН			6.10		
Melting point/free	zing point		2 °C / 36 °	F	
Boiling point / bo	iling range		99 °C / 210	°F	
Evaporation rate			1 (water = 1)		
Vapor pressure			17.027 mm Hg	/ 2.27 kPa at 2	0°C / 68°F
Vapor density (ai	r = 1)		0.62 (Air = 1)		
Specific gravity (water = 1 / air = 1)		0.9997		
Partition Coefficie	ent (n-octanol/wate	er)	Not applicable		
	oon-Water Partitior	1	Not applicable		
Coefficient Autoignition tem	perature		No data availat	ble	
Decomposition te	emperature		No data availat	ble	
Dynamic viscosit	у		1 cP (mPa s)	at 20 °C / 68 °F	
Kinematic viscos	ity		1 cSt (mm²/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

Chemical Name	Solubility classification	<u>Solubility</u>	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F
Ethyl alcohol	Soluble	> 1000 mg/L	25 °C / 77 °F
Methanol	Soluble	> 1000 mg/L	25 °C / 77 °F

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Other Information

Metal Corrosivity

Steel Corrosion Rate	0.33 mm/yr / 0.01 in/yr
Aluminum Corrosion Rate	0.51 mm/yr / 0.02 in/yr

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 Lower explosion limit	No data available No data available
Flammable properties	
Flash point	No data available
Flammability Limit in Air Upper flammability limit Lower flammability limit	No data available No data available
Oxidizing properties	No data available.
Bulk density	No data available

10. STABILITY AND REACTIVITY

Reactivity Not applicable.

<u>Chemical stability</u> Stable under normal conditions.

Stable under normal conditions

Explosion data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Possibility of Hazardous Reactions None under normal processing.

Hazardous polymerization

None under normal processing.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

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Hazardous Decomposition Products

Ammonia. Hydrogen chloride. Hydrogen chloride. Nitrogen oxides.

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

Based on available data, the classification criteria are not met

Product Acute Toxicity Data

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	Rat	1650 mg/kg	None	None reported	IUCLID (The International
(<0.1%)	LD50		reported		Uniform Chemical Information
CAS#: 12125-02-9					Database)

Unknown Acute Toxicity

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

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	Existing human	Human	None	None	Mild skin irritant	RTECS (Registry of

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(<0.1%)	experience	reported	reported	Toxic Effects of
CAS#: 12125-02-9				Chemical Substances)

Serious eye damage/irritation

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

Product Serious Eye Damage/Eye Irritation Data

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.

Product Sensitization Data

No data available.

Ingredient Sensitization Data

No data available.

-	Chemical name	Test method	Species	Results	Key literature references and sources for data
	mmonium chloride (<0.1%) 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.

Product Specific Target Organ Toxicity Single Exposure Data 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 (<0.1%) CAS#: 12125-02-9	Domestic mammal - Not specified LDLo	1500 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)

STOT - repeated exposure

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

Product Specific Target Organ Toxicity Repeat Dose Data 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 (<0.1%) CAS#: 12125-02-9	Rat TD∟₀	3500 mg/kg	7 days	No toxicological effects observed	RTECS (Registry of Toxic Effects of Chemical Substances)

Carcinogenicity

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

Product Carcinogenicity Data

No data available.

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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 (Occupational Safety and Health Administration of the US Department of	Does not apply
Labor)	

Germ cell mutagenicity

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

Product Germ Cell Mutagenicity invitro Data

No data available.

Ingredient Germ Cell Mutagenicity invitro Data

No data available.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Ammonium chloride (<0.1%) CAS#: 12125-02-9	OECD 471	Salmonella typhimurium	5 mg/plate	72 hours	Negative test result for mutagenicity	RTECS (Registry of Toxic Effects of Chemical Substances)

Product Germ Cell Mutagenicity invivo Data

No data available.

Ingredient Germ Cell Mutagenicity invivo Data

No data available.

Reproductive toxicity

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

Product Reproductive Toxicity 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 (<0.1%) CAS#: 12125-02-9	Rat NOAEL	1500 mg/kg	16 days	None reported	ECHA (The European Chemicals Agency)

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

Unknown aquatic toxicity

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

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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 (<0.1%) CAS#: 12125-02-9	96 hours	Oncorhynchus mykiss	LC50	42.91 mg/L	ECHA (The European Chemicals Agency)
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Ammonium chloride (<0.1%) CAS#: 12125-02-9	48 Hours	Daphnia magna	LC ₅₀	161 mg/L	IUCLID (The International Uniform Chemical Information Database)

Aquatic Chronic Toxicity

No data available.

Persistence and degradability

Product Biodegradability Data No data available.

Bioaccumulation

Product Bioaccumulation Data No data available.

Partition Coefficient (n-octanol/water)

Mobility

Soil Organic Carbon-Water Partition Coefficient

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

Not applicable

Not applicable

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Special instructions for disposal If permitted by regulation. Open cold water tap completely, slowly pour the material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
IATA	Not regulated
IMDG	Not regulated
Note:	No special precautions necessary.

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.

15. REGULATORY INFORMATION

National Inventories	
TSCA	Complies
DSL/NDSL	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories

EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
Existing substances	Complies
PICCS	Complies
TCSI	Complies
AICS	Complies
NZIoC	Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances **ENCS** - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing 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

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
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Ammonium chloride (CAS #: 12125-02-9)		1.0	
SARA 311/312 Hazard Categories			
Acute health hazard	No		
Chronic Health Hazard	No		
Fire hazard	No		
Sudden release of pressure hazard	No		
Reactive Hazard	No		

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

	Quantities		Pollutants	Substances
Ammonium chloride 12125-02-9	5000 lb	-	-	Х

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonium chloride	5000 lb	-	RQ 5000 lb final RQ
12125-02-9			RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ammonium chloride	Х	X	Х
12125-02-9			
LO EDA Laballatamatian		•	

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Ammonium chloride	180.0920	21 CFR 184.1138

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Special Comments

Additional information

Global Automotive Declarable Substance List (GADSL) Not applicable NFPA and HMIS Classifications

NFPA	Health hazards - 0	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS				

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	Health	hazards - 0	Flammability - 0	Physical hazards - 0	Personal protection - X	
Key or legend t	o abbreviations and	d acronyms used	in the safety data she	et		
NIOSH IDLH ACGIH NDF		Immediately Dangerous to Life or Health ACGIH (American Conference of Governmental Industrial Hygienists) no data				
Legend - Section	on 8: EXPOSURE C	ONTROLS/PERS	ONAL PROTECTION	-		
TWA	TWA (time-weighted average)		STEL	STEL (Short Term	STEL (Short Term Exposure Limit)	
MAC	Maximum Allowa	Maximum Allowable Concentration		Ceiling Limit Value		
X	Listed		Vacated	binding levels of co listed in the final OS for reference purpo some reference sta	no official status. The only ntaminants are those SHA PEL. These lists are ses only. Please note that te regulations of these e limits in their state	
SKN* RSP+ C M	Skin designation Respiratory sens Carcinogen mutagen	itization	SKN+ ** R	Skin sensitization Hazard Designation Reproductive toxica		
Prepared By		Hach Product Compliance Department				
Issue Date		13-Feb-2018				
Revision Date		28-Apr-2020				
Revision Note		None				

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End of Safety Data Sheet

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.

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