

Issue Date 18-Sep-2019

SAFETY DATA SHEET

Version 2.3

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Product identifier Product Name	Nitrogen, Ammonia Standard Solution Ampule 50 mg/L
Other means of identification Product Code(s)	1479120
Safety data sheet number	M00937
<u>Recommended use of the chem</u> Recommended Use Uses advised against Restrictions on use	<u>ical and restrictions on use</u> Standard solution. Water Analysis. None. None.

1. IDENTIFICATION

Revision Date 08-Feb-2023

Details of the supplier of the safety data sheet

Manufacturer Address Hach Company, P.O.Box 389, Loveland, 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)

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>

Percent ranges are used where confidential product information is applicable.

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 a nature of the injury.	d measures. Use first ai	d treatment ac	cording to the
Inhalation	Remove to fresh air.			
Eye contact	Rinse thoroughly with plenty of water fo Consult a physician.	r at least 15 minutes, lifti	ng lower and ι	ıpper eyelids.
Skin contact	Wash skin with soap and water.			
Ingestion	Clean mouth with water and drink afterv	vards plenty of water.		
Most important symptoms and effects, both acute and delayed				
Symptoms	See Section 11 for additional Toxicological Information.			
Indication of any immediate medical attention and special treatment needed				
Note to physicians	Treat symptomatically.			
	5. FIRE-FIGHTING MEASU	JRES		
Suitable Extinguishing Media	Use extinguishing measures that are ap surrounding environment.	propriate to local circum	stances and th	e
Unsuitable Extinguishing Media	Caution: Use of water spray when fighting	ng fire may be inefficient		
Specific hazards arising from the chemical	No information available.			
Hazardous combustion products	Ammonia.			
Special protective equipment for fire-fighters	Firefighters should wear self-contained l Use personal protection equipment.	preathing apparatus and	full firefighting	turnout gear.

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. Outside

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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 Handle in accordance with good industrial hygiene and safety practice. Advice on safe handling Conditions for safe storage, including any incompatibilities **Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Not applicable Flammability class

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Ammonium chloride	STEL: 20 mg/m ³ fume	(vacated) TWA: 10 mg/m ³	TWA: 10 mg/m ³ fume
CAS#: 12125-02-9	TWA: 10 mg/m ³ fume	(vacated) STEL: 20 mg/m ³	STEL: 20 mg/m ³ fume
Appropriate engineering controls			
	given priority over the use of p	al measures and appropriate w ersonal protective equipment. ccording to the concentration a place.	The type of protective
	No protective equipment is need	i <u>pment</u> eded under normal use conditic enced, ventilation and evacuati	
		creams may help to protect the r to use. The selected protective	
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	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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Appearance Odor	Liquid aqueous solution Odorless	Color Odor threshold	colorless No data available
Property_		Values	Remarks • Method
Molecular weight	:	No data available	
рН		5.5	@ 20 °C
Melting point / fre	ezing point	~ 0 °C / 32 °F	
Initial boiling poi	nt and boiling range	~ 100 °C / 212 °F	
Evaporation rate		0.76 (water = 1)	
Vapor pressure		23.777 mm Hg / 3.17 kPa at 2	25 °C / 77 °F
Relative vapor de	ensity	0.62	
Specific Gravity		0.990	
Partition coefficie	ent	Not applicable	
Soil Organic Carl Coefficient	oon-Water Partition	Not applicable	
Autoignition tem	perature	No data available	
Decomposition to	emperature	No data available	
Dynamic viscosit	з у	~ 0.99 cP (mPa s) at 20 °C / 6	58 °F
Kinematic viscos	ity	~ 1 cSt (mm²/s) at 20 °C / 68 °	°F
Solubility/ios)			

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
None reported	No information available	No data available	No information available

Other information

Metal Corrosivity

Steel Corrosion Rate Aluminum Corrosion Rate

No data available 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 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.

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.

Hazardous decomposition products

None known based on information supplied.

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

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 (<0.1%) CAS#: 12125-02-9	Rat LD50	1650 mg/kg	None reported	None reported	IUCLID

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.

Mixture

No data available.

Ingredient Skin Corrosion/Irritation Data

No data available.

Chemical name Test method Species Reported Exposure Results Key literature dose time references and

						sources for data
Ammonium chloride	Existing human	Human	None reported	None reported	Mild skin irritant	RTECS
(<0.1%)	experience					
CAS#: 12125-02-9						

Serious eye damage/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.

Ingredient Sensitization Data

No data available.

1	Chemical name	Test method	Species	Results	Key literature references and
					sources for data
	Ammonium chloride (<0.1%)	OECD Test No. 406: Skin	Guinea pig	Not confirmed to be a skin sensitizer	OECD 429: Skin Sensitization: Local Lymph Node Assay
	CAS#: 12125-02-9	Sensitization			

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.

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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 LD⊾₀	0 0	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 (<0.1%) CAS#: 12125-02-9	Rat TD⊾	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

Germ cell mutagenicity

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

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 (<0.1%) CAS#: 12125-02-9	OECD 471	Salmonella typhimurium	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.

Mixture

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

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 environment.

Mixture

Aquatic Acute Toxicity No data available.

Aquatic Chronic Toxicity No data available.

Substance

Aquatic Acute Toxicity No data available.

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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	LC ₅₀	42.91 mg/L	ECHA
Chemical name	Exposure	Species	Endpoint	Reported dose	Key literature references and
	time	Opecies	type	Reported dose	sources for data

Aquatic Chronic Toxicity

No data available.

Persistence and degradability

Mixture

No data available.

Bioaccumulation MATERIAL DOES NOT BIOACCUMULATE Mixture No data available.

Partition coefficient

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.
Special instructions for disposal	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.

Not applicable

Not applicable

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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
KECL - 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

<u>SARA 313</u>

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 %
Ammonium chloride (CAS #: 12125-02-9)	1.0
SARA 311/312 Hazard Categories	
Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No

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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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous 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			

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

None

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	Health hazards - 0	Flammability - 0	Physical hazards - 0	Personal protection - X - I

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

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ACGIH ATSDR CCRIS CDC CEPA CICAD ECHA EEA EPA ERMA ECOSARS FDA GESTIS HSDB INERIS IPCS INCHEM IUCLID NITE NIH NIOSH LOLI NDF NICNAS NIOSH IDLH OSHA PEEN RTECS SIDS SYKE USDA USDC WHO		ACGIH (American Conference of Governmental Industrial Hygienists) ATSDR (Agency for Toxic Substances and Disease Registry) CCRIS (Chemical Carcinogenesis Research Information System) CDC (Center for Disease Control) CEPA (Canadian Environmental Protection Agency) CICAD (Concise International Chemical Assessment Documents) ECHA (The European Chemicals Agency) EFA (European Environment Agency) EFA (European Environment Agency) ERMA (New Zealands Environmental Risk Management Authority) Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Su FDA (Food & Drug Administration) GESTIS (Information System on Hazardous Substances of the German Social Accider Insurance) HSDB (Hazardous Substances Data Bank) INERIS (The National Industrial Environment and Risks Institute) IPCS INCHEM (International Programme on Chemical Safety) IUCLID (The International Uniform Chemical Information Database) Japan National Institute of Technology and Evaluation (NITE) NIH (National Institute of Technology and Evaluation (NITE) NIH (National Institute of Technology and Evaluation to the US Department of Labor) PEEN (National Industrial Chemicals Notification and Assessment Scheme (NICNAS) Immediately Dangerous to Life or Health OSHA (Occupational Safety and Health Administration of the US Department of Labor) PEEN (Pan European Ecological Network) RTECS (Registry of Toxic Effects of Chemical Substances) SIDS (Screening Information Dataset) for High Volume Chemicals The Finnish Environment Institute (SYKE) USDA (United States Department of Agriculture) USDC (United States Department of Commerce) WHO (World Health Organization)		Disease Registry) ch Information System) Agency) ssessment Documents) Management Authority) of the Estimation Programs Interface (EPI) Suite™ us Substances of the German Social Accident) ent and Risks Institute) on Chemical Safety) al Information Database) I Evaluation (NITE) Safety and Health) cal Regulatory Database) tification and Assessment Scheme (NICNAS) dministration of the US Department of Labor) ical Substances) High Volume Chemicals ulture)
TWA	TWA (time-weight	ONTROLS/PERSONAL	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowat		Ceiling	Ceiling Limit Value
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 some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN* RSP+ C M	Skin designationSKN+Respiratory sensitization**CarcinogenRmutagen**		SKN+ ** R	Skin sensitization Hazard Designation Reproductive toxicant
Prepared By		Hach Product Complia	nce Department	
Issue Date		18-Sep-2019		
Revision Date		08-Feb-2023		
Revision Note		None		
r				1

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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.

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End of Safety Data Sheet