

Ammonium chloride**09725-25G**

Version 1.2

Revision Date 05/19/2022

Print Date 05/11/2023

SECTION 1. IDENTIFICATION

Product name : Ammonium chloride

Number : 000000020685

Product Use Description : Laboratory chemicals, Industrial use

Manufacturer or supplier's details : Honeywell International Inc.
1953 South Harvey Street
Muskegon, MI 49442

For more information call : 1-800-368-0050
+1-231-726-3171(Monday-Friday, 9:00am-5:00pm)

In case of emergency call : **Medical: 1-800-498-5701 or +1-303-389-1414**
: **Transportation (CHEMTREC): 1-800-424-9300 or**
: **+1-703-527-3887**
:
: (24 hours/day, 7 days/week)

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Form : solid

Color : colourless

Odor : odourless

Classification of the substance or mixture

Classification of the substance or mixture : Acute toxicity, Category 4, Oral
Eye irritation, Category 2A

GHS Label elements, including precautionary statements

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Symbol(s)

:



Signal word

:

Warning

Hazard statements

:

Harmful if swallowed.
Causes serious eye irritation.

Precautionary statements

:

Prevention:Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.**Response:**

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Rinse mouth.

If eye irritation persists: Get medical advice/ attention.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula

:

H₄CIN

Chemical nature

:

Substance

Chemical name

CAS-No.

Concentration

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Ammonium chloride

12125-02-9

<=100.00 %

SECTION 4. FIRST AID MEASURES

- General advice : First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately. Show this safety data sheet to the doctor in attendance.
- Inhalation : If inhaled, remove to fresh air. If symptoms persist, call a physician.
- Skin contact : After contact with skin, wash immediately with plenty of water. If symptoms persist, call a physician.
- Eye contact : Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Consult a physician.
- Ingestion : If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. If victim is fully conscious, give a cupful of water. Call a physician immediately.

Notes to physician

- Most important symptoms/effects, acute and delayed : No information available.
- Indication of immediate medical attention and special treatment needed, if necessary : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Foam
Carbon dioxide (CO2)
Dry powder
- Specific hazards during firefighting : In case of fire hazardous decomposition products may be produced such as:

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Ammonia
Gaseous hydrogen chloride (HCl).

Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.
Wear personal protective equipment. Unprotected persons must be kept away.
Ensure adequate ventilation.
Avoid dust formation.
Avoid breathing dust.
Avoid contact with skin, eyes and clothing.

Environmental precautions : Should not be released into the environment.

Methods and materials for containment and cleaning up : Use mechanical handling equipment.
Sweep up and shovel into suitable containers for disposal.
Dispose of in accordance with local regulations.

SECTION 7. HANDLING AND STORAGE**Handling**

Precautions for safe handling : Wear personal protective equipment.
Use only in well-ventilated areas.
Avoid inhalation, ingestion and contact with skin and eyes.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Storage

Conditions for safe storage, including any incompatibilities : Store in original container.
Keep container tightly closed in a dry and well-ventilated place.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.
Avoid breathing dust.
- Engineering measures : Use with local exhaust ventilation.
- Eye protection : Safety goggles
- Hand protection : Latex gloves
Gloves must be inspected prior to use.
Replace when worn.
- Skin and body protection : Protective suit
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.
- Hygiene measures : Remove and wash contaminated clothing before re-use.
Wash hands before breaks and at the end of workday.
When using do not eat or drink.
Avoid contact with the skin and the eyes.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
Ammonium chloride	12125-02-9	STEL : Short term exposure limit	20 mg/m ³	2008	ACGIH:US. ACGIH Threshold Limit Values, as amended
Further information	:	Form of exposure : Fume.			
Ammonium chloride	12125-02-9	TWA : Time weighted average	10 mg/m ³	2008	ACGIH:US. ACGIH Threshold Limit Values, as amended
Further information	:	Form of exposure : Fume.			

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Ammonium chloride	12125-02-9	STEL : Short term exposure limit	20 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
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Further information	:	Form of exposure : Fume.			
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Ammonium chloride	12125-02-9	REL : Recommended exposure limit (REL):	10 mg/m3	2005	NIOSH/GUIDE:US. NIOSH: Pocket Guide to Chemical Hazards, as amended
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Further information	:	Form of exposure : Fume.			
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Ammonium chloride	12125-02-9	PEL : Permissible exposure limit	15 mg/m3	01 2017	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
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Further information	:	Form of exposure : Total dust.			
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Ammonium chloride	12125-02-9	PEL : Permissible exposure limit	5 mg/m3	01 2017	OSHA_TRANS:US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
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Further information	:	Form of exposure : Respirable fraction.			
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Ammonium chloride	12125-02-9	STEL : Short term exposure limit	20 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
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Further information	:	Form of exposure : Fume.
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Ammonium chloride	12125-02-9	TWA : Time weighted average	10 mg/m3	1989	Z1A:US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended
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Further information	:	Form of exposure : Fume.
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Ammonium chloride	12125-02-9	TWA : Time weighted average	5 mg/m3	03 2016	Z3:US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
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Further information	:	Form of exposure : Respirable fraction.
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Ammonium chloride	12125-02-9	TWA : Time weighted average	15 mg/m3	03 2016	Z3:US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
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Further information	:	Form of exposure : Total dust.
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Ammonium chloride	12125-02-9	TWA : Time weighted average	15 millions of particles per cubic foot of air	03 2016	Z3:US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
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Further information	:	Form of exposure : Respirable fraction.
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Ammonium chloride	12125-02-9	TWA : Time weighted average	50 millions of particles per cubic foot of air	03 2016	Z3:US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
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Further information	:	Form of exposure : Total dust.
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Ammonium chloride	12125-02-9	:	Listed	03 2016	Z3:US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Further information	:	Form of exposure : Respirable fraction.			

Ammonium chloride	12125-02-9	:	Listed	03 2016	Z3:US. OSHA Table Z-3 (29 CFR 1910.1000), as amended
Further information	:	Form of exposure : Total dust.			

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	solid
Color	:	colourless
Odor	:	odourless
Odor threshold	:	Note: No data available
pH	:	4.6 - 6.0 at , 20 °C
Melting point/range	:	338 °C Note: Decomposition
Boiling point/boiling range	:	Note: No data available
Flash point	:	Note: Not applicable
Evaporation rate	:	Note: No data available
Flammability	:	The product is not flammable.

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Lower explosion limit	: Note: Not applicable
Upper explosion limit	: Note: Not applicable
Vapor pressure	: Note: No data available
Vapor density	: Note: No data available
Density	: 1.536 g/cm ³ at 20 °C
Water solubility	: 372 g/l at 20 °C
Partition coefficient: n-octanol/water	: Note: No data available
Viscosity, dynamic	: Note: No data available
Viscosity, kinematic	: Note: No data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Molecular weight	: 53.49 g/mol

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous	: Hazardous polymerisation does not occur.

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reactions

Conditions to avoid

: Keep away from heat and sources of ignition.
Avoid dust formation.

Incompatible materials

: Oxidizing agents
Strong acids and strong bases
Nitrites
Nitrates

Hazardous decomposition
products

: Ammonia
Hydrogen chloride gas

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

: LD50: 1,410 mg/kg
Species: Rat
Method: OECD Test Guideline 401

Acute inhalation toxicity

: Note: No data available

Acute dermal toxicity

: LD50: > 2,000 mg/kg
Species: Rat

Skin irritation

: Note: Conclusive and supporting classification (Ref: REACH
Dossier - ECHA disseminated data)

Eye irritation

: Note: Classification based on Annex VI of regulation
1272/2008/EC.

Sensitisation

: Maximisation Test
Species: Guinea pig
Classification: non-sensitizing

Repeated dose toxicity

: Note: There are no observed toxicological effects, which result

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in classification as a specific target organ toxicant.

Genotoxicity in vitro	:	Note: In vitro tests did not show mutagenic effects
Genotoxicity in vivo	:	Note: In vivo tests did not show mutagenic effects
Carcinogenicity	:	Species: Rat Note: Did not show carcinogenic effects in animal experiments.
Further information	:	Note: Irritating to mucous membranes

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to fish	:	semi-static test LC50: 209 mg/l Exposure time: 96 h Species: Cyprinus carpio (Carp)
	:	flow-through test NOEC: 11.8 mg/l Exposure time: 28 d Species: Pimephales promelas (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates	:	static test EC50: 101 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea)
Toxicity to algae	:	EC50: 90.4 mg/l Exposure time: 10 d Species: Diatoms
Toxicity to bacteria	:	EC20: ca. 850 mg/l

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Exposure time: 0.5 h
Species: activated sludge
Method: OECD 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : semi-static test
NOEC: 14.6 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Elimination information (persistence and degradability)

Bioaccumulation : Note: Bioaccumulation is unlikely.

Biodegradability : Note: The methods for determining biodegradability are not applicable to inorganic substances.

Further information on ecology**SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT Not dangerous goods

TDG Not dangerous goods

IATA Not dangerous goods

IMDG Not dangerous goods

SECTION 15. REGULATORY INFORMATION**Inventories**

US. Toxic Substances : On TSCA Inventory

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Control Act

Australia. Industrial Chemicals Act (AICC), as amended : On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) : All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List : On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI) : On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS) : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC) : On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand : On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI) : On the inventory, or in compliance with the inventory

National regulatory information

US. EPA CERCLA Hazardous Substances (40 CFR 302) : The following component(s) of this product is/are subject to release reporting under 40 CFR 302 when release exceeds the Reportable Quantity (RQ):

Reportable quantity: 5000 lbs
: Ammonium chloride 12125-02-9

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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SARA 313 Components	:	The following components are subject to reporting levels established by SARA Title III, Section 313:
	:	Ammonium chloride 12125-02-9
SARA 311/312 Hazards	:	Acute Health Hazard
CERCLA Reportable Quantity	:	5000 lbs
California Prop. 65	:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
Massachusetts RTK	:	Ammonium chloride 12125-02-9
New Jersey RTK	:	Ammonium chloride 12125-02-9
Pennsylvania RTK	:	Ammonium chloride 12125-02-9

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 2	2
Flammability	: 0	0
Physical Hazard	: 0	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process,

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unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user. This information should not constitute a guarantee for any specific product properties.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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