

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Date of issue: 23/06/2014 Revision date: 10/01/2023 Supersedes version of: 07/03/2018 Version: 2.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Trade name	: Ammonium chloride AGR
Chemical name	: ammonium chloride
IUPAC name	: ammonium chloride
EC Index-No.	: 017-014-00-8
EC-No.	: 235-186-4
CAS-No.	: 12125-02-9
REACH registration No	: 05-2115526235-53
Product code	: AMCH-00P
Formula	: NH4CI

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category

: Laboratory use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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1.4. Emergency telephone number

Emergency number

: +34 937 077 970 (For technical information_Office Hours) In case of medical emergency phone 112 or to your local emergency number.

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 Serious eye damage/eye irritation, Category 2 Full text of H and EUH statements: see section 16 H302 H319

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Signal word (CLP) : Warning Hazard statements (CLP) : H302 - Harmful if swallowed. H319 - Causes serious eye irritation. : P264 - Wash hands, forearms and face thoroughly after handling. Precautionary statements (CLP) : P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell. : Page - Wear protection (Page - Page	Hazard pictograms (CLP)	GHS07
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2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent Name Product identifier % Ammonium chloride CAS-No.: 12125-02-9 EC-No.: 235-186-4 EC Index-No.: 017-014-00-8 REACH-no: 05-2115526235-53 ≥ 99

3.2. Mixtures

Not applicable

SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	: 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. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately.
4.2. Most important symptoms and effects, both acute and delayed	
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Can occur: irritation.
Symptoms/effects after eye contact	: Can occur: irritation. redness, itching, tears.
Symptoms/effects after ingestion	: Abdominal pain, nausea.

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4.3. Indication of any immediate medical attention and special treatment needed

Never give anything by mouth to an unconscious person.

SECTION 5: Firefighting measures	
5.1. Extinguishing media	
Suitable extinguishing media	: Water spray. Carbon dioxide. Foam. Dry powder.
5.2. Special hazards arising from the subs	tance or mixture
Hazardous decomposition products in case of fire	: fume.
5.3. Advice for firefighters	
Firefighting instructions Protection during firefighting	 Exercise caution when fighting any chemical fire. Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release measu	ires
6.1. Personal precautions, protective equi	pment and emergency procedures
6.1.1. For non-emergency personnel No additional information available 6.1.2. For emergency responders	
Protective equipment	: Equip cleanup crew with proper protection. Do not attempt to take action without suitable protective equipment.
6.2. Environmental precautions	
Prevent entry to sewers and public waters.	
6.3. Methods and material for containment	t and cleaning up
For containment Methods for cleaning up	 Collect spillage. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Collect spillage. Mechanically recover the product.
6.4. Reference to other sections	
See Heading 8. For further information refer to sect	ion 13.
SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Additional hazards when processed	: Keep containers closed.
Precautions for safe handling	
Hygiene measures	 Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Hygiene measures 7.2. Conditions for safe storage, including	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. any incompatibilities Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in a well-ventilated place. Keep container tightly closed.
7.2. Conditions for safe storage, including	 Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. any incompatibilities Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No

Laboratory chemicals.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Ammonium chloride AGR (12125-02-9)	
France - Occupational Exposure Limits	
Local name	Chlorure d'ammonium
VME (OEL TWA)	10 mg/m³ (fumées)
Remark	Valeurs recommandées/admises
Portugal - Occupational Exposure Limits	
Local name	Cloreto de amónio, fumos
OEL TWA 10 mg/m ³	
OEL STEL	20 mg/m ³
Spain - Occupational Exposure Limits	
Local name	Cloruro amónico
VLA-ED (OEL TWA) [1]	10 mg/m³ humos
VLA-EC (OEL STEL)	20 mg/m³ humos
United Kingdom - Occupational Exposure Limits	
Local name	Ammonium chloride
WEL TWA [1] 10 mg/m ³ fume	
WEL STEL	20 mg/m ³ fume

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Ammonium chloride AGR (12125-02-9)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	128,9 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	43,97 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, oral	55,2 mg/kg bodyweight/day
Long-term - systemic effects,oral	55,2 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	9,4 mg/m³
Long-term - systemic effects, dermal	55,2 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0,25 mg/l
PNEC aqua (marine water) 0,025 mg/l	
PNEC aqua (intermittent, freshwater)	0,43 mg/l

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Ammonium chloride AGR (12125-02-9)	
PNEC (Sediment)	
PNEC sediment (freshwater)	0,9 mg/kg dwt
PNEC sediment (marine water) 0,09 mg/kg dwt	
PNEC (Soil)	
PNEC soil	50,7 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant 13,1 mg/l	

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. EN 374.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection: Safety glasses

8.2.2.2. Skin protection

Skin and body protection: Wear suitable protective clothing

Hand protection:

Protective gloves against chemicals (EN 374)

8.2.2.3. Respiratory protection

Respiratory protection:

Wear appropriate mask

Respiratory protection			
Device	Filter type	Condition	Standard
filtering face piece	Туре Р1		

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Other information:

Do not eat, drink or smoke when using this product. The present safety data sheet is consistent with the specific conditions relied on to justify the registration of the substance in accordance with Article 17 or 18 of the REACH regulation. Wash hands with water as a precaution.

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SECTION 9: Physical and chemical properties		
9.1. Information on basic physical and chemical properties		
Physical state Colour Molecular mass Odour Odour threshold Melting point Freezing point Boiling point Flammability Explosive limits Lower explosion limit Upper explosion limit Flash point Auto-ignition temperature Decomposition temperature pH pH solution	 Solid white. 53,49 g/mol odourless. Not available 338 °C Decomposition: 'yes' Not available Not available Not available Not available Not applicable Not available Xot available Not applicable Not available Not available Not applicable Not available 	
Viscosity, kinematic Solubility Partition coefficient n-octanol/water (Log Kow) Vapour pressure Vapour pressure at 50 °C Density Relative density Relative vapour density at 20 °C Particle size	 Not applicable Water: < 283 (20°C) Not available 1,3 hPa Temp.: 160 °C Not available Not available 1,53 Type: 'relative density' Temp.: 25 °C Not applicable Not available Not available 	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable in use and storage conditions as recommended in item 7.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Oxidizing materials. Nitrates.

10.4. Conditions to avoid

High temperature. Water, humidity.

10.5. Incompatible materials

Oxidizing agent. Acids.

10.6. Hazardous decomposition products

No additional information available

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SECTION 11: Toxicological information		
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008		
Acute toxicity (oral) Acute toxicity (dermal) Acute toxicity (inhalation)	: Harmful if swallowed. : Not classified : Not classified	
Ammonium chloride AGR (12125-0	02-9)	
LD50 oral rat	1410 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity) 95% CL: 1260 - 1550	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 434 (Acute Dermal Toxicity - Fixed Dose Procedure)	
Skin corrosion/irritation	: Not classified pH: 4,5 – 5,5 [5%; 20°C]	
Serious eye damage/irritation	: Causes serious eye irritation. pH: 4,5 – 5,5 [5%; 20°C]	
Respiratory or skin sensitisation	: Not classified	
Germ cell mutagenicity	: Not classified	
Carcinogenicity	: Not classified	
Reproductive toxicity	: Not classified	
STOT-single exposure	: Not classified	
STOT-repeated exposure	: Not classified	
Ammonium chloride AGR (12125-02-9)		
NOAEL (oral, rat, 90 days)	≈ 1695,7 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)	
Aspiration hazard	: Not classified	

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity		
(acute)	Not classified Not classified	
Ammonium chloride AGR (12125-02-9)		
LC50 - Fish [1]	42,91 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)	
LC50 - Fish [2]	46,27 mg/l Test organisms (species): Prosopium williamsoni	
EC50 - Daphnia [1]	136,6 mg/l Test organisms (species): Daphnia magna	
EC50 - Daphnia [2]	98,5 mg/l Test organisms (species): other:Ceriodaphnia acanthina	

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

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2.5. Results of PBT and vPvB assessment
o additional information available
2.6. Endocrine disrupting properties
o additional information available
2.7. Other adverse effects
o additional information available
ECTION 13: Disposal considerations

13.1	. Waste	treatmen	t methods

Regional legislation (waste)	:	Disposal must be done according to official regulations.
Waste treatment methods	:	Must follow special treatment according to local regulation.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number	
UN-No. (ADR) UN-No. (IMDG) UN-No. (IATA) UN-No. (ADN) UN-No. (RID)	 Not regulated Not regulated Not regulated Not regulated Not regulated
14.2. UN proper shipping name	
Proper Shipping Name (ADR) Proper Shipping Name (IMDG) Proper Shipping Name (IATA) Proper Shipping Name (ADN) Proper Shipping Name (RID)	 Not regulated Not regulated Not regulated Not regulated Not regulated
14.3. Transport hazard class(es)	
ADR Transport hazard class(es) (ADR)	: Not regulated
IMDG Transport hazard class(es) (IMDG)	: Not regulated
IATA Transport hazard class(es) (IATA)	: Not regulated
ADN Transport hazard class(es) (ADN)	: Not regulated
RID Transport hazard class(es) (RID)	: Not regulated
14.4. Packing group	
Packing group (ADR) Packing group (IMDG) Packing group (IATA) Packing group (ADN) Packing group (RID)	 Not regulated Not regulated Not regulated Not regulated Not regulated

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14.5. Environmental hazards	
Dangerous for the environment Marine pollutant Other information	NoNoNo supplementary information available

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

No REACH Annex XVII restrictions

REACH Annex XIV (Authorisation List)

Ammonium chloride AGR is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

Ammonium chloride AGR is not on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Ammonium chloride AGR is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 july 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Ammonium chloride AGR is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Ammonium chloride is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

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15.1.2. National regulations

Germany

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Water hazard class (WGK)	: WGK 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 213).
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)
Netherlands	
SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: The substance is not listed
Denmark	
Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product
15.2 Chemical safety assessment	

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:		
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
H302	Harmful if swallowed.	
H319	Causes serious eye irritation.	

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.