Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 20.11.2025 Version number 7 (replaces version 6) Revision: 20.11.2025

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

· **1.1 Product identifier**

· **Trade name: ES/NH4**

· **Article number:** 120240

· **Description:** Ammonium standard solution 10 g/l NH4

· **1.2 Relevant identified uses of the substance or mixture and uses advised against:**

· **Product category:** PC21 Laboratory chemicals
· **Process category:** PROC15 Use as laboratory reagent
· **Application of the substance / the preparation:** Calibration solution

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
Xylem Analytics Germany GmbH
WTW
Am Achalaich 11
82362 Weilheim
Germany
Tel. +49 881 183-0

· **Further information obtainable from:** E-mail: Info.WTW@xylem.com

· **1.4 Emergency telephone number:** Chemtrec: (USA & Canada) 800-424-9300 (International) 001 703-527-3887

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008:** The product is not classified, according to the CLP regulation.

· **2.2 Label elements:**

· **Labelling according to Regulation (EC) No 1272/2008:** Void

· **Hazard pictograms:** Void

· **Signal word:** Void

· **Hazard statements:** Void

· **Additional information:**
EUH210 Safety data sheet available on request.

· **2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components with endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.

Environmental information: The substance/mixture does not contain components with endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1% or more.

(Contd. on page 2)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 20.11.2025 Version number 7 (replaces version 6) Revision: 20.11.2025

Trade name: ES/NH4

(Contd. of page 1)

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:**
Mixture, consisting of the following components:
Water, ammonium chloride

· **Dangerous components:**

CAS: 12125-02-9 EINECS: 235-186-4 Index number: 017-014-00-8	ammonium chloride	Acute Tox. 4, H302; Eye Irrit. 2, H319	1-5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**
Wash skin with water or shower.
Take off immediately all contaminated clothing and wash it before reuse.
If skin irritation or rash occurs: Get medical advice/attention.

· **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Seek immediate medical advice.

· **4.2 Most important symptoms and effects, both acute and delayed**
The most important known symptoms and effects are described on the labelling (see section 2.2) and/or in chapter 11.

· **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** The product is not flammable. Extinguishing agent to suit environment.

· **For safety reasons unsuitable extinguishing agents:**
There are no extinguishing agent restrictions for this substance/mixture.

· **5.2 Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Ammonia (NH3)
Hydrogen chloride (HCl)
Nitrogen oxides (NOx)

· **5.3 Advice for firefighters**

· **Protective equipment:**
Stay in the danger zone only with self-contained breathing apparatus. Avoid skin contact by keeping a safe distance or wearing suitable protective clothing.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
No special measurements required when handled properly.

· **6.2 Environmental precautions:** No special measures required.

(Contd. on page 3)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 20.11.2025 Version number 7 (replaces version 6) Revision: 20.11.2025

Trade name: ES/NH4

(Contd. of page 2)

· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of the material collected according to regulations.
Wash off residuals with water.

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** No special precautions are necessary if used correctly.
· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and receptacles:**
No special requirements.
Recommendation: Store in the original container.
· **Information about storage in one common storage facility:** No special requirements.
· **Further information about storage conditions:**
Keep container tightly sealed.
Recommended storage temperature: 15 - 25 °C

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Avoid contact with the eyes and skin.
Do not inhale gases / fumes / aerosols.
Take off contaminated clothing and wash it before reuse.
Wash hands before breaks and at the end of work.

· **Respiratory protection:** Not required.

· **Hand protection** Protective gloves
· **Material of gloves**
- For full contact:
Nitrile rubber, NBR
Recommended material thickness: ≥ 0.11 mm
Breakthrough time: 480 min

- For splash contact:
Nitrile rubber
Recommended thickness of the material: ≥ 0.11 mm

(Contd. on page 4)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 20.11.2025 Version number 7 (replaces version 6) Revision: 20.11.2025

Trade name: ES/NH4

(Contd. of page 3)

Breakthrough time: 480 min

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **Eye/face protection** Safety goggles with side protection

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Liquid
· **Colour:**	Colourless
· **Odour:**	Odourless
· **Melting point/freezing point:**	No data available.
· **Boiling point or initial boiling point and boiling range**	100 °C
· **Flammability**	Product is not flammable.
· **Flash point:**	Not applicable.
· **pH at 20 °C**	3.1
· **Viscosity:**	
· **Kinematic viscosity**	No data available.
· **Dynamic viscosity:**	No data available.
· **Solubility**	
· **water:**	Fully miscible.
· **Vapour pressure at 20 °C:**	23 hPa
· **Density and/or relative density**	
· **Density at 20 °C:**	1.02 g/cm³
· **9.2 Other information**	
· **Important information on protection of health and environment, and on safety.**	
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Information with regard to physical hazard classes**	Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

· **10.2 Chemical stability**

· **Thermal decomposition / conditions to be avoided:**
The product is chemically stable under normal ambient conditions (room temperature).

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.

· **10.4 Conditions to avoid** No further relevant information available.

· **10.5 Incompatible materials:** Alkalis (formation of ammonia)

· **10.6 Hazardous decomposition products:** In case of fire: See section 5.

(Contd. on page 5)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 20.11.2025 Version number 7 (replaces version 6) Revision: 20.11.2025

Trade name: ES/NH4

(Contd. of page 4)

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

· **Acute toxicity**

No quantitative toxicity data are available for this product.

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

· **Acute toxicity estimate of the mixture (ATE) - Calculation method:**

· **LD/LC50 values relevant for classification:**		
ATE (Acute Toxicity Estimates)		
Oral	LD50	50000 mg/kg (Rat)

CAS: 12125-02-9 ammonium chloride		
Oral	LD50	1440 mg/kg (Rat)

· **Primary irritant effect:**

· **Skin corrosion/irritation**

Local irritation possible.

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

· **Serious eye damage/irritation**

Irritation possible.

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

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

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

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
The substance/mixture does not contain components that have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**		
CAS: 12125-02-9 ammonium chloride		
LC50	209 mg/l, 96 h (Cyprinus carpio) (IUCLID)	

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **12.5 Results of PBT and vPvB assessment**

This product does not contain components classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in concentrations of 0.1% or higher.

· **12.6 Endocrine disrupting properties**

The substance/mixture does not contain components that have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605 Commission Delegated Regulation (EU) 2018/605 in quantities of 0.1 % or more have endocrine disrupting properties.

(Contd. on page 6)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 20.11.2025 Version number 7 (replaces version 6) Revision: 20.11.2025

Trade name: ES/NH4

(Contd. of page 5)

· **12.7 Other adverse effects**
· **General notes:** Not hazardous for water.
· **Additional ecological information:**
· **General notes:** Not hazardous for water.
· **Additional ecological information:** Not hazardous for water.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Disposal must comply with the relevant local regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.

· **Uncleaned packaging:**
· **Recommendation:**
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· **14.1 UN number or ID number**	
· **ADR/RID, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name**	
· **ADR/RID**	Void
· **ADN, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)**	
· **ADR/RID, ADN, IMDG, IATA**	
· **Class**	Void
· **14.4 Packing group**	
· **ADR/RID, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **UN "Model Regulation":**	Void

SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 65

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

(Contd. on page 7)

Safety data sheet

according to Regulation (EC) No 1907/2006, Article 31

Printing date 20.11.2025 Version number 7 (replaces version 6) Revision: 20.11.2025

Trade name: ES/NH4

(Contd. of page 6)

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

· **Relevant phrases**
H302 Harmful if swallowed.
H319 Causes serious eye irritation.

· **Date of previous version:** 19.01.2023

· **Version number of previous version:** 6

· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Acute Tox. 4: Acute toxicity – Category 4
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2