Safety data sheet

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

Printing date 24.11.2025 Version number 4 (replaces version 3) Revision: 24.11.2025

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

· **1.1 Product identifier**

· **Trade name: R-NH4/1-1A**

· **Article number:** 827500

· **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:** Chemical analytics

· **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

· **2.3 Other hazards** No further relevant information available.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Aqueous solution of inorganic and organic compounds.

· **Dangerous components:** Void

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

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· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Get medical advice/attention if you feel unwell.

· **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** No further relevant information available.

· **5.3 Advice for firefighters**
· **Protective equipment:** Fight the fire with the usual precautions from a safe distance.

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:** Do not allow to enter sewers/ surface or ground water.

· **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.

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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**

· **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.
Wash hands before breaks and at the end of work.

· **Respiratory protection:** Not required.

· **Hand protection** Protective gloves recommended for frequent or long-term skin contact.

· **Material of gloves**
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
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

· **Environmental exposure controls** Do not allow product to reach ground water, water course or sewage system.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**	Liquid
· **Colour:**	Colourless
· **Odour:**	Odourless
· **Odour threshold:**	Not applicable.
· **Melting point/freezing point:**	No data available.
· **Boiling point or initial boiling point and boiling range**	No data available.
· **Flammability**	Product is not flammable.
· **Flash point:**	Not applicable.
· **pH at 20 °C**	8
· **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:**	1.14 g/cm³
· **Relative density**	No data available.
· **Vapour density**	No data available.

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· **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:** No further relevant information available.

· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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	67623 mg/kg (Rat)

CAS: 13755-38-9 sodium pentacyanonitrosylferrate(III) dihydrate		
Oral	LD50	99 mg/kg (Rat)

· **Primary irritant effect:**

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation** 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.

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SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.

· **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.

· **12.7 Other adverse effects**
· **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly 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.

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, 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.
· **Transport/Additional information:**	Not dangerous according to the above specifications.

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· **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.

· **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.

· **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

· **Date of previous version:** 14.10.2021
· **Version number of previous version:** 3
· **Abbreviations and acronyms:**
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

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Printing date 24.11.2025 Version number 4 (replaces version 3) Revision: 19.11.2025

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

· **1.1 Product identifier**

· **Trade name: R-NH4/1-1B**

· **Article number:** 827501

· **Description:** Cleaning solution for phosphate analyzer

· **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:** Chemical analytics

· **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:**

Met. Corr.1	H290 May be corrosive to metals.
Skin Corr. 1B	H314 Causes severe skin burns and eye damage.
Eye Dam. 1	H318 Causes serious eye damage.

· **2.2 Label elements:**

· **Labelling according to Regulation (EC) No 1272/2008:**
The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms:**

GHS05

· **Signal word:** Danger

· **Hazard-determining components of labelling:**
Sodium hydroxide

· **Hazard statements:**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

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Trade name: R-NH4/1-1B

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· **Precautionary statements:**

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

· **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.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Aqueous solution of inorganic and organic compounds.

· **Dangerous components:**

CAS: 54-21-7 EINECS: 200-198-0	sodium salicylate Acute Tox. 4, H302	10 - < 20%
CAS: 1310-73-2 EINECS: 215-185-5 Index number: 011-002-00-6	Sodium hydroxide Met. Corr.1, H290; Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 5 % Skin Corr. 1B; H314: 2 % ≤ C < 5 % Skin Irrit. 2; H315: 0.5 % ≤ C < 2 % Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %	2 - < 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.
Call a doctor immediately.

· **After skin contact:**
Wash skin with water or shower.
Take off immediately all contaminated clothing and wash it before reuse.
Call a doctor immediately.

· **After eye contact:**
Rinse opened eye for at least 15 minutes under running water.
Consult an ophthalmologist immediately.
Remove contact lenses.

· **After swallowing:**
Make victim drink water immediately (2 glasses at most).
Do not induce vomiting (risk of perforation)
Call a doctor immediately.
Do not attempt to neutralize.

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Trade name: R-NH4/1-1B

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· **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** Formation of hazardous gases or vapors is possible.

· **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.
Wear chemical protective clothing in the case of heavy toxic load.
· **Additional information** Do not allow extinguishing water to enter the surface water or groundwater system.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear personal protective equipment (see section 8).

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**
Observe possible material restrictions (see information in section 7 or section 10).
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Wash off residuals with water.
Dispose of the material collected according to regulations.

· **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** Wear personal protective equipment (see section 8)
· **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:**
Do not use light alloy receptacles.
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.

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Trade name: R-NH4/1-1B

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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**

· **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:**
Use suitable respiratory protective device only when aerosol or mist is formed.
Recommended filter type: Combination filter B-P2

· **Hand protection** Protective gloves

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

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

· **Body protection:** Protective clothing

· **Environmental exposure controls** Do not allow product to reach ground water, water course or sewage system.

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**	13
· **Viscosity:**	
· **Kinematic viscosity**	No data available.
· **Dynamic viscosity:**	No data available.
· **Solubility**	
· **water:**	Fully miscible.

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Trade name: R-NH4/1-1B

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· **Vapour pressure at 20 °C:**	23 hPa
· **Density and/or relative density**	
· **Density at 20 °C:**	1.2 g/cm³
· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Liquid
· **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
· **Corrosive to metals**	May be corrosive to metals.

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**
Formation of hydrogen possible with metals and alloys (risk of explosion).
Reactions with ammonium salts will form ammonia.

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

· **10.5 Incompatible materials:**
Acids
Metals
Ammonium compounds

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	10372 mg/kg (Rat)

CAS: 54-21-7 sodium salicylate		
Oral	LD50	1200 mg/kg (Rat)

CAS: 1310-73-2 Sodium hydroxide		
Oral	LD50	2000 mg/kg (Rat)

· **Primary irritant effect:**

· **Skin corrosion/irritation** Causes severe skin burns and eye damage.

· **Serious eye damage/irritation** Causes serious eye damage.

· **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.

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Trade name: R-NH4/1-1B

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· **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.

· **Additional toxicological information:**
· **Acute effects (acute toxicity, irritation and corrosivity):**
If ingested, severe burns of the mouth and throat, as well as a danger of the perforation of the oesophagus and the stomach.

· **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: 1310-73-2 Sodium hydroxide	
EC50	40.4 mg/l, 48 h (Ceriodaphnia) (ECHA)
EC50	22 mg/l, 15 min (Photobacterium phosphoreum) (supplier SDS)
LC50	125 mg/l, 96 h (Gambusia affinis) (ECOTOX)

· **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.

· **12.7 Other adverse effects**
· **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
· **Additional ecological information:**
· **General notes:** Detrimental effect due to shift of pH value.

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.

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· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR/RID, IMDG, IATA** UN1824

· **14.2 UN proper shipping name**
· **ADR/RID, IMDG, IATA** SODIUM HYDROXIDE SOLUTION

· **14.3 Transport hazard class(es)**

· **ADR/RID, IMDG, IATA**

· **Class** 8 Corrosive substances.
· **Label** 8

· **14.4 Packing group**
· **ADR/RID, IMDG, IATA** II

· **14.5 Environmental hazards:**
· **Marine pollutant:** No

· **14.6 Special precautions for user** Warning: Corrosive substances.
· **Hazard identification number (Kemler code):** 80
· **EMS Number:** F-A,S-B
· **Segregation groups** (SGG18) Alkalis

· **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.

· **ADR/RID**
· **Limited quantities (LQ)** 1L
· **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
· **Transport category** 2
· **Tunnel restriction code** E

· **UN "Model Regulation":** UN 1824 SODIUM HYDROXIDE SOLUTION, 8, II

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: 3

· **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.

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· **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**
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

· **Date of previous version:** 13.10.2021

· **Version number of previous version:** 3

· **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
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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

· **1.1 Product identifier**

· **Trade name: R-NH4/1-1C**

· **Article number:** 827502

· **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:** Chemical analytics

· **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

· **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.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Aqueous solution of inorganic and organic compounds.

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· **Dangerous components:** Void

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 contaminated clothing.
· **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.
If symptoms persist consult doctor.

· **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** No further relevant information available.

· **5.3 Advice for firefighters**
· **Protective equipment:** Fight the fire with the usual precautions from a safe distance.

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:** Do not allow to enter sewers/ surface or ground water.

· **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.

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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**

· **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:**
Required if vapours or aerosols are present.
Recommended filter type: Combination filter B-P2

· **Hand protection** Protective gloves recommended for frequent or long-term skin contact.
· **Material of gloves**
Nitrile rubber, NBR
Recommended material thickness: ≥ 0.11 mm
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

· **Environmental exposure controls** Do not allow product to reach ground water, water course or sewage system.

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**	11
· **Viscosity:**	
· **Kinematic viscosity**	No data available.
· **Dynamic viscosity:**	No data available.

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· **Solubility**	
· **water:**	Fully miscible.
· **Vapour pressure:**	No data available.
· **Density and/or relative density**	
· **Density at 20 °C:**	1 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:** No further relevant information available.

· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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:**

· **Primary irritant effect:**

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation** 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.

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SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.

· **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.

· **12.7 Other adverse effects**
· **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly 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.

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.
· **Transport/Additional information:**	Not dangerous according to the above specifications.

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· **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.

· **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.

· **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

· **Date of previous version:** 13.10.2021
· **Version number of previous version:** 3
· **Abbreviations and acronyms:**
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)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative