

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-NH4/1-2A**
 - **Article number:** 827503
- **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)
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CAS: 13755-38-9 sodium pentacyanonitrosylferrate(III) dihydrate

Oral	LD50	99 mg/kg (Rat)
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· 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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SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
 - **Trade name:** **R-NH4/1-2B**
 - **Article number:** 827504
 - **Description:** Reagent solution for ammonium 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 Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
- **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:** Warning
 - **Hazard statements:**
H290 May be corrosive to metals.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
 - **Precautionary statements:**
P280 Wear protective gloves / eye protection.

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P302+P352 IF ON SKIN: Wash with plenty of water.

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	5 – < 10%
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 %	0.5 – < 1%

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 a doctor.

After skin contact:

Wash skin with water or shower.
Take off contaminated clothing.
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.
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.

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- **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:**
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** 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:**
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**
 - **Individual protection measures, such as personal protective equipment**
 - **General protective and hygienic measures:**
Avoid contact with the eyes and skin.

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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

· **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**

10.3

· **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:**

1.05 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

· **Corrosive to metals**

May be corrosive to metals.

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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	13574 mg/kg (Rat)
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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 skin irritation.
 - **Serious eye damage/irritation** Causes serious eye irritation.
- **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:

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.

· **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

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· 14.3 Transport hazard class(es) · ADR/RID, IMDG, IATA	
	
· Class · Label	8 Corrosive substances. 8
· 14.4 Packing group · ADR/RID, IMDG, IATA	
III	
· 14.5 Environmental hazards: · Marine pollutant:	
No	
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Segregation Code	
Warning: Corrosive substances. 80 F-A,S-B (SGG18) Alkalies A SG35 Stow "separated from" SGG1-acids	
· 14.7 Maritime transport in bulk according to IMO instruments	
Not applicable.	
· ADR/RID · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code	
5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml 3 E	
· UN "Model Regulation":	
UN 1824 SODIUM HYDROXIDE SOLUTION, 8, III	

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.	
· 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.	

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· **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 Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

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

- **1.1 Product identifier**
 - **Trade name:** **R-NH4/1-2C**
 - **Article number:** 827505
- **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**

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· **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