

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 23.01.2023

Version number 4 (replaces version 3)

Revision: 23.01.2023

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

1.1 Product identifier

Trade name: **R-PO4/1-1A**

Article number: 827520

Description: Reagent 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:



GHS05 corrosion

Met. Corr. 1 H290 May be corrosive to metals.

Skin Corr. 1A 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:

sulphuric acid

Hazard statements:

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

Precautionary statements:

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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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.

Additional information:

Product contains: Restricted explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 5 (1) and (3).

2.3 Other hazards No further relevant information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description:

Mixture of substances listed below with nonhazardous additions.
Water, sulphuric acid, ammonium monovanadate

Dangerous components:

| | | |
|---|---|------------|
| CAS: 7664-93-9 EINECS: 231-639-5 Index number: 016-020-00-8 | sulphuric acid Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: $C \geq 15\%$ Skin Irrit. 2; H315: $5\% \leq C < 15\%$ Eye Irrit. 2; H319: $5\% \leq C < 15\%$ | 15 - < 20% |
| CAS: 7803-55-6 EINECS: 232-261-3 | ammonium monovanadate Acute Tox. 3, H301; Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335 | 0.1 - < 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 or oxygen; call for doctor.

After skin contact:

Wash with plenty of water.
Take off immediately all contaminated clothing and wash it before reuse.
Call a doctor immediately.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

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.

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

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.

5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Sulphur oxides (SOx)
Vanadium oxide compounds

5.3 Advice for firefighters

Protective equipment:

Wear self-contained respiratory protective device.
Wear chemical protective clothing in the case of heavy toxic load.

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Additional information Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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 contaminated material as waste according to section 13.

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: Do not use light alloy receptacles.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Store receptacle in a well ventilated area.

Store tightly sealed at temperatures between 15 °C and 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:

7664-93-9 sulphuric acid

IOELV Long-term value: 0.05 mg/m³

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

8.2 Exposure controls

Appropriate engineering controls No further data; see item 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: Use suitable respiratory protective device only when aerosol or mist is formed.

Recommended Filter type: Combination filter E-P2

Hand protection Protective gloves

Material of gloves

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

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 glasses

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· **Body protection:** Acid resistant protective clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

| | |
|---|---------------------------|
| · Physical state | Fluid |
| · Colour: | Light yellow |
| · Odour: | Odourless |
| · Melting point/freezing point: | Undetermined. |
| · Boiling point or initial boiling point and boiling range | 100 °C |
| · Flammability | Product is not flammable. |
| · Flash point: | Not applicable. |
| · pH at 20 °C | 0 |
| · Viscosity: | |
| · Kinematic viscosity | Not determined. |
| · Dynamic: | Not determined. |
| · Solubility | |
| · water: | Fully miscible. |
| · Vapour pressure at 20 °C: | 23 hPa |
| · Density and/or relative density | |
| · Density at 20 °C: | 1.25 g/cm ³ |

· 9.2 Other information

· Important information on protection of health and environment, and on safety.

| | |
|-------------------------------------|---|
| · Auto-ignition temperature: | Product is not selfigniting. |
| · Explosive properties: | Product does not present an explosion hazard. |

· Information with regard to physical hazard classes

| | |
|--|------|
| · Explosives | Void |
| · Flammable gases | Void |
| · Aerosols | Void |
| · Oxidising gases | Void |
| · Gases under pressure | Void |
| · Flammable liquids | Void |
| · Flammable solids | Void |
| · Self-reactive substances and mixtures | Void |
| · Pyrophoric liquids | Void |
| · Pyrophoric solids | Void |
| · Self-heating substances and mixtures | Void |
| · Substances and mixtures, which emit flammable gases | |
| in contact with water | Void |
| · Oxidising liquids | Void |
| · Oxidising solids | Void |
| · Organic peroxides | Void |
| · Corrosive to metals | |
| May be corrosive to metals. | |
| · Desensitised explosives | Void |

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

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10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Do not heat.

10.3 Possibility of hazardous reactions

Formation of hydrogen possible with metals and alloys (risk of explosion).

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials:

Alkalies

Metals

10.6 Hazardous decomposition products:

In case of fire, see section 5.

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.

LD/LC50 values relevant for classification:

7664-93-9 sulphuric acid

| | | |
|------------|------|---|
| Oral | LD50 | 2140 mg/kg (Rat) (RTECS) |
| Inhalative | LC50 | 510 mg/m ³ , 2 h (Rat) (RTECS) |

7803-55-6 ammonium monovanadate

| | | |
|------------|------|----------------------------|
| Oral | LD50 | 169 mg/kg (Rat) (OECD) |
| Dermal | LD50 | > 2500 mg/kg (Rat) (OECD) |
| Inhalative | LC50 | 2.5 mg/l, 4 h (Rat) (OECD) |

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.

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

None of the ingredients is listed.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity:

7664-93-9 sulphuric acid

| | |
|------|--|
| EC50 | 29 mg/l, 24 h (Daphnia magna) |
| LC50 | 16 – 29 mg/l, 96 h (Lepomis macrochirus) |

7803-55-6 ammonium monovanadate

| | |
|------|---|
| LC50 | 2.6 mg/l, 96 h (Ictalurus catus) (ECOTOX) |
|------|---|

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

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- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment** Not applicable.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
 - **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
 - **Additional ecological information:**
 - **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
 - **Additional ecological information:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.

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 | UN2796 |
| · 14.2 UN proper shipping name | |
| · IMDG, IATA | SULPHURIC ACID |
| · 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 |

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| | |
|--|-------------------------------|
| · Segregation groups | (SGG1) Acids |
| · Stowage Category | B |
| · 14.7 Maritime transport in bulk according to IMO instruments | Not applicable. |
| · ADR/RID | |
| · Limited quantities (LQ) | 1L |
| · Transport category | 2 |
| · Tunnel restriction code | E |
| · UN "Model Regulation": | UN 2796 SULPHURIC ACID, 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.

· REGULATION (EU) 2019/1148

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

7664-93-9 sulphuric acid

Limit value: > 15 – ≤ 40 %

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

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

7664-93-9 sulphuric acid

3

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

7664-93-9 sulphuric acid

3

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

SECTION 16: Other information

· Relevant phrases

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory 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)

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LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Met. Corr.1: Corrosive to metals – Category 1
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

EU