

This safety data sheet complies with the requirements of:
Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) 2020/878
Version 3.0 Revision date 14-04-2026
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1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product name : pH 4.01 Buffer
Product number(s) : pH4,01/100mIR, pH4,01/500mlS, pH4,01/5ltr, pH4,01/10ltr,
51300903, 51300003, 51300103, 51300203, 5110203, 32383123,
51100033, 51100133, 51190333, 51100233.
Supplier: Hydrocal
REACH Number : No REACH registration number is available as this mixture is exempt
from registration requirements or the substances are registered by the
suppliers.

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

Recommended Use : Use as laboratory reagent, Calibration solution

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Hydrocal B.V.
Wallerstraat 125a
3862 CN NIJKERK
The Netherlands
Telephone : +31 (0)88-8760101
E-mail address : info@hydrocal.nl

1.4 Emergency telephone number

Emergency telephone number: +31 (0)88-8760101
Solely intended to inform professional caregivers in acute poisoning

2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

This mixture is not classified as hazardous.

The mixture contains sodium azide (<0.01%), which is classified as:

Acute Tox. 2 (Oral), H300

Aquatic Acute 1, H400

Aquatic Chronic 1, H410

However, the concentration is below classification thresholds.

2.2 Label elements according to Regulation (EC) No 1272/2008

No labeling required according to Regulation (EC) No 1272/2008.

EUH210: Safety data sheet available on request.

2.3 Other hazards

Special danger of slipping by leaking/spilling product.

This mixture does not contain substances meeting the criteria for PBT or vPvB.

The mixture does not contain endocrine disrupting substances above 0.1%.

3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixtures

Component	EC-No.	CAS-No.	Concentration (%)	DSD Classification – 67/548/EEC	CLP Classification – Regulation (EC No. 1272/2008)
Water	231-791-2	7732-18-5	90 – 100%	-	-
Potassium Hydrogen Phthalate	212-889-4	877-24-7	0 – 10%	-	-
Sodium Azide	247-852-1	26628-22-8	0 – 0.01%	-	Acute Tox. 2; H300 Aquatic Acute 1; H400 Aquatic Chronic 1; H410
Amarant Red	213-022-2	915-67-3	0 – 10%	-	-

4: FIRST AID MEASURES

4.1 Description of first aid measures

General Advice:	Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. Show this safety data sheet to the doctor in attendance.
Inhalation:	Move to fresh air. If symptoms persist, obtain medical attention.
Skin Contact:	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Eye Contact:	In case of eye contact, rinse immediately with plenty of water for at least 15 minutes. If symptoms persist, obtain medical attention.
Ingestion:	Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. If symptoms persist, call a physician or Poison Control Center immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Evacuate personnel to safe areas.

6.2 Environmental precautions

Prevent entry into drains and surface waters.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Prevent further leakage or spillage if safe to do so. Special danger of slipping by leaking/spilling product.

6.4 Reference to Other Sections

For additional waste treatment information, see section 13.

7: HANDLING AND STORAGE

7.1 Precautions for safe handling

To avoid risks to human health and the environment, comply with the instructions for use. Wear personal protective equipment. Avoid ingestion and contact with eyes. Handle in accordance with good laboratory practice. Ensure adequate ventilation, especially in confined areas.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from direct sunlight.

7.3 Specific end use(s)

See Section 1.2. No other specific uses are advised.

8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Sodium azide (CAS 26628-22-8)

European Union:

Indicative occupational exposure limit value: 0.1 mg/m³ (8h)

Short-term exposure limit: 0.3 mg/m³ (15 min)

National occupational exposure limit values may apply.

8.2 Exposure controls

Engineering Measures

Use in accordance with current rules and practices with regard to industrial hygiene and safety.
Wash hands before breaks and at the end of the working day.

Personal protective equipment

Personal protective equipment must comply with Regulation (EU) 2016/425.

Eye/face Protection

Face protection and safety glasses. Use facial and / or eye protection tested and approved by official institutions such as NIOSH (US) or EN 166 (EU).

Skin and body protection

Handle with gloves. Inspect gloves prior to use. Pull gloves neatly out without touching the outside with bare hands. Dispose gloves immediately according to the applicable laboratory regulations. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686 / EEC and the standard EN 374 derived from it. Full contact material: Nitrile rubber
Minimum layer thickness: 0.11 mm Breakthrough time: 480 min.

Respiratory Protection

Provide adequate ventilation.

Environmental exposure controls

Prevent product from entering drains.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | |
|----------------------------------|--------------------------|
| a) Appearance: | Red liquid |
| b) Odor: | None |
| c) Odor Threshold: | No information available |
| d) pH: | at 20°C pH 4.0 |
| e) Melting point/freezing point: | No information available |

f) Boiling Point/Range:	at approx. 100°C
g) Flash Point:	No information available
h) Evaporation Rate:	No information available
i) Flammability (solid, gas)	No information available
j) Flammability Limit in Air:	No information available
k) Vapor pressure:	No information available
l) Vapor Density:	No information available
m) Specific Gravity:	at 20°C approx. 1.0 g/ml
n) Water Solubility:	Soluble
o) Partition coefficient n-octanol / water:	No information available
p) Autoignition Temperature:	No information available
q) Decomposition Temperature:	No information available
r) Viscosity	No information available
s) Explosive Properties:	No information available
t) Oxidizing Properties:	No information available

9.2 Other safety information

Explosive properties:	No information available
Oxidizing characteristics:	No information available
Auto-ignition temperature:	No information available
Solid content:	0.9 - 1.9 %
Water content:	98.1 - 99.1 %
Evaporation rate:	No information available

10: STABILITY AND REACTIVITY

10.1 Reactivity

No information available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None under normal processing

10.4 Conditions to avoid

Extremes of temperature and direct sunlight. Protect from frost.

10.5 Incompatible materials

Strong acids (risk of formation of hydrazoic acid), heavy metals (formation of explosive metal azides)

10.6 Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors.

11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity:	Based on available data, the mixture is not classified.
Skin Corrosion/Irritation:	Based on available data, the mixture is not classified.
Serious eye damage/eye irritation:	Based on available data, the mixture is not classified.
Sensitization:	Based on available data, the mixture is not classified.
Carcinogenic effects:	Based on available data, the mixture is not classified.
Mutagenic Effects:	Based on available data, the mixture is not classified.
STOT - single exposure	Based on available data, the mixture is not classified.
STOT - repeated exposure	Based on available data, the mixture is not classified.
Aspiration hazard	Based on available data, the mixture is not classified.
Additional Information:	Based on available data, the mixture is not classified.

The mixture is not classified as hazardous.

Sodium azide is highly toxic if ingested and may inhibit cellular respiration.

At the concentrations present, adverse health effects are not expected during normal use.

Possible symptoms in case of exposure:

- Headache
- Dizziness
- Nausea
- Hypotension

11.2 Information on other hazards

Endocrine disrupting properties:

This mixture does not contain endocrine disrupting substances above 0.1%.

Other information:

No information available

12: ECOLOGICAL INFORMATION

12.1 Toxicity

The mixture is not classified as hazardous.

The product is not expected to be hazardous to the environment at the given concentrations.

12.2 Persistence and degradability

No information available

12.3 Bioaccumulative potential

No information available

12.4 Mobility in soil

No information available

12.5 Results of PBT and vPvB assessment

This mixture does not contain substances meeting the criteria for PBT or vPvB.

12.6 Endocrine disrupting properties

This mixture does not contain endocrine disrupting substances above 0.1%.

12.7 Other adverse effects

Avoid release to the environment.

13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Dispose of as unused product.

14: TRANSPORT INFORMATION

14.1 UN-number

ADR/RID: - IMDG: - IATA: -

14.2 Proper Shipping Name

ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3 Hazard Class

ADR/RID: - IMDG: - IATA: -

14.4 Packing Group

ADR/RID: - IMDG: - IATA: -

Hydrocal – pH 4,01 buffer

14.5 Environmental hazard

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special Provisions

No information available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC-code

No information available

15: REGULATORY INFORMATION

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**This SDS complies with:**

- Regulation (EC) No 1907/2006 (REACH)
- Regulation (EU) 2020/878
- Regulation (EC) No 1272/2008 (CLP)

European legislation:

- Directive 98/24/EC (Chemical Agents Directive)
- Directive 2004/37/EC (Carcinogens and Mutagens Directive), where applicable
- Regulation (EU) 2019/1021 (POPs Regulation) – not applicable
- Regulation (EC) No 1005/2009 (Ozone-depleting substances) – not applicable

Occupational exposure limits:

- European Union (Directive 2000/39/EC): Sodium azide – 0.1 mg/m³ (8h), 0.3 mg/m³ (15 min)
- Netherlands: Sodium azide – 0.1 mg/m³ (8h TGG), 0.3 mg/m³ (15 min TGG)
- Germany (TRGS 900): Sodium azide – AGW 0.2 mg/m³ (8h), 0.4 mg/m³ (15 min)
- Sweden (AFS 2023:14): NGV (8h): 0.1 mg/m³, KGV (15 min): 0.3 mg/m³

Other regulations:

- Based on the ingredients listed in Section 3, the mixture does not contain substances subject to authorisation under REACH Annex XIV.
- Based on the ingredients listed in Section 3, the mixture does not contain substances subject to restriction under REACH Annex XVII.
- Based on the ingredients listed in Section 3, the mixture does not contain substances on the Candidate List (SVHC) above 0.1%.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this mixture.

16: OTHER INFORMATION

Full text of H-phrases referred to under sections 2 and 3.

H300 = Fatal if swallowed.

H400 = Very toxic to aquatic life

H410 = Very toxic to aquatic life with long-lasting effects

Disclaimer:

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The above information is believed to be correct but does not claim to be exhaustive and should be used only as a guide.

Hydrocal shall not be liable for any damage resulting from handling or from contact with the above product.

See our price list for further sales conditions.