

This safety data sheet complies with the requirements of:
Regulation (EC) No. 1907/2006 (REACH) and Regulation (EU) 2020/878
Version 2.1 Revision date 21-03-2023
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1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product name : Redox buffer 475mV
Product number(s) : 32383153, 51100313, 51100323, 51109383.
Supplier: Hydrocal
REACH Number : A registration number is not available for this substance as the substance or use, except for registration for the annual volume does not require a registration or the registration is equipped with a later registration deadline.

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) Nr 1272/2008

Serious eye damage/eye irritation, Cat. 2, H319
Skin corrosion/irritation, Cat. 1, H314
Corrosive to metals, Cat. 1, H290

Additional information:

For the full text of the phrases mentioned in this Section, see Section 16.

2.2 Label elements**Labeling:****Signal words:**

Danger

Hazard statements:

H290 - May be corrosive to metals.

H314 - Causes severe skin burns and eye damage.

Precautions statements:

P280 - Wear protective gloves, protective clothing, eye protection and 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/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.

Supplemental information:

None.

Product identifier:

Sulphuric acid, CAS-No. 7664-93-9, EC-No. 231-639-5

2.3 Other hazards

Endocrine disrupting properties, Results of PBT and vPvB assessment: No data available

3: COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

No data available

3.2 Mixtures**Hazardous ingredients:**

Component	EC-No.	CAS-No.	Weight %	CLP Classification – Regulation (EC No. 1272/2008)
Sulphuric acid	231-639-5	7664-93-9	5 – 10%	Skin Corr. 1A H314 [Skin Corr. 1A H314: C ≥ 15 % ; Skin Irrit. 2 H315: 5 % ≤ C < 15 % ; Eye Irrit. 2 H319: 5 % ≤ C < 15 %]

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities:

None known.

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 in case of accidental inhalation of vapours or decomposition products. Call a physician or poison control centre immediately.
Skin Contact:	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
Eye Contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye. If eye irritation persists, consult a specialist.
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 data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data 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

The product is not flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds.

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

Avoid contact with skin and eyes. Use personal protective equipment. Evacuate personnel to safe areas. Sweep up to prevent slipping hazard. Handle in accordance with good industrial hygiene and safety practice.

6.2 Environmental precautions

Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

6.3 Methods and material for containment and cleaning up

Neutralize with chalk, alkali solution or ammonia. Soak up with inert absorbent material. Keep in suitable and closed containers for disposal (Plastic container of HDPE).

6.4 Reference to Other Sections

For additional waste treatment information, see section 8 and 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 breathing dust/fume/gas/mist/vapours/spray. Ensure adequate ventilation, especially in confined areas. Avoid contact with skin and eyes.

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)

Some of the applications mentioned in section 1.2
 No other applications have been agreed

8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure limit(s): No data is available on the product itself.

Sulphuric acid (CAS 7664-93-9)	
United Kingdom - Workplace Exposure Limits (WELs) – STELs	0.15 mg/m ³ STEL (calculated, mist)
United Kingdom - Workplace Exposure Limits (WELs) – TWAs	0.05 mg/m ³ TWA (mist)
EU - Occupational Exposure (2009/161/EU) - Third List of Indicative Occupational Exposure Limit Values – TWAs	0.05 mg/m ³ TWA (taking into account potential limitations and interferences which take place in the presence of other Sulphur compounds, mist (thoracic fraction))

8.2 Exposure controls

Appropriate engineering controls: Avoid contact with skin, eyes and clothing.

Personal protection equipment

Respiratory protection: No personal respiratory protective equipment normally required. Breathing apparatus needed only when aerosol or mist is formed. Respirator with combination filter for vapour/particulate (EN 14387).

Hand protection: Gloves made of Chloroprene. The selected protective gloves have to satisfy the specifications of Regulation (EU) No. 2016/425 and the standard EN 374 derived from it. Break through time: > 4 h. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection: Safety glasses with side-shields conforming to EN166.

Skin and body protection: Long sleeved clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Thermal hazards No special measures required.

Environmental exposure controls: Prevent product from entering surface water or sewage.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | |
|----------------------------------|--------------------------|
| a) Appearance: | Light yellow |
| b) Odor: | None |
| c) Odor Threshold: | No data available |
| d) pH: | at 20°C pH 0.1 |
| e) Melting point/freezing point: | No data available |
| f) Boiling Point/Range: | at approx. 100°C |
| g) Flash Point: | No data available |
| h) Evaporation Rate: | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Flammability Limit in Air: | No data available |
| k) Vapor pressure: | No data available |
| l) Vapor Density: | No data available |
| m) Specific Gravity: | at 20°C approx. 1.0 g/ml |
| n) Water Solubility: | Soluble |

o) Partition coefficient n-octanol / water:	No data available
p) Autoignition Temperature:	No data available
q) Decomposition Temperature:	No data available
r) Viscosity	No data available
s) Explosive Properties:	No data available
t) Oxidizing Properties:	No data available

9.2 Other safety information

Explosive properties:	No data available
Oxidizing characteristics:	No data available
Auto-ignition temperature:	No data available
Solid content:	No data available
Water content:	No data available
Evaporation rate:	No data available

10: STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Heating can release hazardous gases

10.4 Conditions to avoid

Direct heating, dirt, chemical contamination, sunlight, UV or ionizing radiation.

10.5 Incompatible materials

Metals. Alkaline metals. Strong bases. Halogenated compounds. Ammonia.

10.6 Hazardous decomposition products

Sulphur oxides.

11: TOXICOLOGICAL INFORMATION

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

Acute toxicity:	No data is available on the product itself. Sulphuric acid (CAS 7664-93-9) Inhalation LC50 Rat = 0.375 mg/L 4 h(OECD_SIDS) Oral LD50 Rat = 2140 mg/kg (JAPAN_GHS)
Skin corrosion/irritation:	Causes severe burns.
Serious eye damage/eye irritation:	Causes serious eye damage.
Respiratory / Skin Sensitisation:	No data available.
Carcinogenicity:	No data available.
Germ cell mutagenicity:	No data available.
Reproductive toxicity:	No data available.
Specific target organ toxicity: (single exposure)	No data available.
Specific target organ toxicity: (repeated exposure)	No data available.
Aspiration hazard:	No data available.
Human experience:	No data available.

11.2 Information on other hazards

Endocrine disrupting properties:	No data available
Symptoms related to the physical, chemical and toxicological characteristics :	The product causes burns of eyes, skin and mucous membranes.
Other information:	No data available.

12: ECOLOGICAL INFORMATION

12.1 Toxicity

No data is available on the product itself. May change pH of waters.

Sulphuric acid (CAS 7664-93-9)
Ecotoxicity - Freshwater Fish - : LC50 96 h Brachydanio rerio >500 mg/L [static] (IUCLID)
Acute Toxicity Data

12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Does not bioaccumulate.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues / unused products

Dispose of in accordance with local regulations. European Waste catalogue code (EWC-code): 06 01 01 *.

Contaminated Packaging

Dispose of as unused product.

14: TRANSPORT INFORMATION

14.1 UN-number

ADR/RID: UN 3264

IMDG: UN 3264

IATA: UN 3264

14.2 Proper Shipping Name

ADR/RID: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid).

IMDG: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid).

IATA: Corrosive liquid, acidic, inorganic, n.o.s. (Sulphuric acid).

14.3 Hazard Class

ADR/RID: 8

IMDG: 8

IATA: 8

14.4 Packing Group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazard

ADR/RID: No

IMDG Marine pollutant: No

IATA: No

14.6 Special Provisions

No data available

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

No data available

UN Model Regulations

ADR/RID	UN 3264. Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid). Class 8. Packing group III. ADR/RID-Labels 8. Classification code C1. Hazard identification no. 80. Limited quantity 5 L. Excepted quantity E1. Transport category 3. Tunnel restriction code (E).
IMDG	UN 3264. Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid). Class 8. Packing group III. IMDG-Labels 8. Limited quantity 5 L. Excepted quantity E1. EmS F-A, S-B. Marine pollutant: No..
IATA	UN 3264. Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Sulphuric acid). Class 8. Packing group III. IATA label 8. Packing instruction (passenger aircraft): 852 (5 L). Packing instruction (LQ): Y841 (1 L). Packing instruction (cargo aircraft): 856 (60 L).
Inland navigation ADN	UN 3264. Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Sulphuric acid). Class 8. Packing group III. ADN labels 8. Classification code C1. Limited quantity 5 L. Excepted quantity E1.
Further Information	None.

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

Regulatory Information The product is classified and labelled according to Regulation (EC) No. 1272/2008.

Sulphuric acid (CAS 7664-93-9)	
EU - Narcotics (111/2005) - Implementing Export Requirements - Scheduled Substances	Category 3 Substance ([2807 00 00])
EU - Narcotics (2015/1011) - Implementing Export Requirements - Annual Maximum Export Quantities for Exemption	100 kg
EU - Narcotics (273/2004) – Drug Precursors - Annex I – Scheduled Substances	Category 3 Substance ([2807 00 00])
EU - REACH (1907/2006) – Annex XVII - Restrictions on Certain Dangerous Substances	Use restricted. See item 75. (B)
EU - REACH (1907/2006) - List of Registered Intermediates	Present ([231-639-5])
EU - REACH (1907/2006) - List of Registered Substances	Present
UN (United Nations) – Convention on Illicit Traffic in Narcotics & Psychotropics - Table II Substances	Present (listed under HS Code: 2807.00)

15.2 Chemical safety assessment

For this product no chemical safety assessment has been carried out.

16: OTHER INFORMATION

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

H290 = May be corrosive to metals.

H314 = Causes severe skin burns and eye damage.

H319 = Causes serious eye irritation.

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.

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