

Safety Data Sheet

ORP buffer 468 mV

Version: 2
 Version date: 09/05/2023
 Language: EN
 According to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No. 2020/878)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name/designation : ORP buffer 468 mV.
Article No (user) : P01700115.
UFI : Y800-U08G-U00A-4K94

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

Relevant identified uses : Laboratory chemicals.
Uses advised against : No additional information available.

1.3. Details of the supplier of the safety data sheet

Supplier : **Name:** Manumesure
Street: 8 avenue du docteur Schweitzer
Postal code/City: 69330 Meyzieu
Country: France
Telephone: 04 37 45 05 68
E-mail: qualite@manumesure.fr

1.4. Emergency Telephone Number

United Kingdom:

In England and Wales: dial 111 (NHS 111), In Scotland: dial 111 (NHS 24), In Northern Ireland: Contact your local GP or pharmacist during normal hours. During GP Out-of-Hours (www.gpoutofhours.hscni.net/): Belfast HSC Trust, (North & West) 028 9074 4447, (South & East) 028 9079 6220 South Eastern HSC Trust, (North Down & Ards) 028 9182 2344, (Lisburn & Downpatrick) 028 9260 2204, Dalriada Urgent Care (Northern Trust area) 028 2566 3500, Southern HSC Trust 028 3839 9201, Western Urgent Care 028 7186 5195.

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to the regulation (EC) n°1272/2008 (CLP) and its amendments

Hazards identification:

H290 Met. Corr. 1 May be corrosive to metals.
 H314 Skin Corr. 1A Causes severe skin burns and eye damage.

2.2. Label elements

Label elements according to the regulation (EC) n°1272/2008 (CLP) and its amendments

Labelling

Hazard pictograms



Signal word

Danger

Hazard Statements

H290 May be corrosive to metals.
 H314 Causes severe skin burns and eye damage.

Precautionary Statements

P101 If medical advice is needed, have product container or label at hand.

Precautionary Statements - Prevention

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P264 Wash hands thoroughly after handling.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statements - Response

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].

353
 P305+P351+P IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue
 338 rinsing.
 P310 Immediately call a POISON CENTER/doctor/...

Precautionary Statements - Storage

P405 Store locked up.

Precautionary Statements - Disposal

P501 Dispose of contents and container in accordance with local regulations.

Contains

sulphuric acid

2.3. Other hazards

According to Regulation (EU) 1907/2006, no substances are assessed as PBT or vPvB.

According to Regulation (EU) 2017/2100 or Regulation (EU) 2018/605, no substances are known to have endocrine disrupting properties.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2. Mixtures**

In accordance with the product knowledge, no nanomaterials have been identified.

The mixture does not contain any substances classified as Substances of Very High Concern (SVHC) by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>.

Substance	Concentration (%)	Specific concentration limits	Classification
iron (II) sulfate (1:1) heptahydrate			
CAS N°	7782-63-0	1.0% ≤C≤ 5.0%	Skin Irrit. 2; H315: C ≥ 25 %
EC N°	231-753-5		H302 Acute Tox. 4 ORAL
IDX N°	026-003-01-4		H315 Skin Irrit. 2
REACH N°	01-2119513203-57-xxxx		H319 Eye Irrit. 2
sulphuric acid [1]			
CAS N°	7664-93-9	1.0% ≤C≤ 5.0%	H290 Met. Corr. 1
EC N°	231-639-5		H314 Skin Corr. 1A
IDX N°	016-020-00-8		
REACH N°	01-2119458838-20-xxxx		

[1] Substances for which maximum workplace exposure limits are available.

Remark

Full text of H-statements: see section 16.

SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures****General information:**

Call a physician immediately.

Following inhalation:

Remove person to fresh air and keep comfortable for breathing.

Following skin contact:

Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.

Following eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

Following ingestion:

Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed**Symptoms:**

After skin contact : Burns.

After eye contact : Serious damage to eyes.

After ingestion : Burns.

Effects:

After skin contact : Burns.

After eye contact : Serious damage to eyes.

After ingestion : Burns.

4.3. Indication of any immediate medical attention and special treatment needed**Notes for the doctor:**

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:

Water spray.
Dry powder.
Foam.
CARBON DIOXIDE.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire: Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Additional information

Not available

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Emergency procedures:

Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders:

Individual protection measures, such as personal protective equipment:

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For cleaning up:

Take up liquid spill into absorbent material.

Other information:

Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

Additional information

Not available

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

PROTECTIVE MEASURES:

Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.

Advices on general occupational hygiene:

Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

In the immediate working surroundings there must be:

Provide eye shower and label its location conspicuously.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:

Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep cool.

Incompatible materials : Metals.

7.3. Specific end uses

No additional information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits:

Substance	Value	Unit	Type
Sulphuric acid CAS: 7664-93-9 (UK)	0.05	mg/m ³	Exposure limit value (8 hours)

Biological limit values:

Not available

Exposure limits at intended use:

Not available

Remark:

Not available

8.2. Exposure controls**Appropriate engineering controls:**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Provide adequate ventilation as well as local exhaust at critical locations.

Individual protection measures, such as personal protective equipment:**Eye/face protection**

- : **Suitable eye protection:**
Wear eye protection equipment.
Recommended eye protection articles:
Face protection shield.

Skin protection

- : **Hand protection:**
Suitable gloves type:
Wear protective gloves.
Suitable material:
NBR (nitrile rubber).
Additional hand protection measures:
Do not wear gloves near machines and rotating tools.
Use gloves only once.

Remark:

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Breakthrough times and swelling properties of the material must be taken into consideration.

Body protection:**Suitable protective clothing:**

Lab coat.
Chemical resistant safety shoes.

Respiratory protection

- : **Respiratory protection necessary at:**
If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Suitable respiratory protection apparatus:

Wear respiratory protection.

Remark:

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Observe the wear time limits as specified by the manufacturer.

Use only respiratory protection equipment with CE-symbol including four digit test number.

Environmental exposure controls:

Not available

Consumer exposure controls:

Not available

Additional information

Not available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Physical state	:	Liquid
Colour	:	Yellow
Odour	:	Odourless

pH	:	0.1
Melting point/freezing point	:	Not available
Initial boiling point and boiling range	:	100°C
Flash point	:	Not available
Flammability	:	Not available
Upper/lower flammability or explosive limits	:	Not available
Vapour pressure	:	Not available
Vapour density	:	Not available
Relative density	:	Not available
Solubility(ies)	:	Soluble In Water.
Partition coefficient n-octanol/water (log value)	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
Kinematic viscosity	:	Not available
Solubility in other Solvents	:	Not available
Particle characteristics	:	Not available

9.2. Other safety information

Information concerning to the classes of physical hazards

Not available

Other security characteristics

Not available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Additional information

Not available

SECTION 11: TOXICOLOGICAL INFORMATION

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

Acute oral toxicity:

The product is not classified.

Data for mixture:

Not available

Substances:

• iron (II) sulfate (1:1) heptahydrate (CAS: 7782-63-0):

Species	:	Mouse
Sex	:	Not available
Guideline	:	Not available

Subendpoint	Operator	Value	Unit
LD50:		1520	mg/kg bw

Conclusion : Not available

• sulphuric acid (CAS: 7664-93-9):

Species	:	Rat
Sex	:	Not available
Guideline	:	Not available

Subendpoint	Operator	Value	Unit
LD50:		2140	mg/kg bw

Conclusion : Not available

Acute dermal toxicity:

The product is not classified.

Data for mixture:

Not available

Substances:

Not available

Acute inhalation toxicity:

The product is not classified.

Data for mixture:

Not available

Substances:

Not available

Skin corrosion/irritation:

PH: ≈ 0,1 @ 25°C.

The product is classified Skin Corr. 1A according to the referenced regulation.

Causes severe skin burns and eye damage.

Data for mixture:

Not available

Substances:

Not available

Serious eye damage/irritation:

Assumed to cause serious eye damage.

PH: ≈ 0,1 @ 25°C.

Data for mixture:

Not available

Substances:

Not available

Skin sensitisation:

The product is not classified.

Data for mixture:

Not available

Substances:

Not available

Specific target organ toxicity (repeated exposure):

The product is not classified.

Data for mixture:

Not available

Substances:

Not available

Specific target organ toxicity (single exposure):

The product is not classified.

Data for mixture:

Not available

Substances:

Not available

Carcinogenicity:

The product is not classified.

Data for mixture:

Not available

Substances:

Not available

Reproductive toxicity:

The product is not classified.

Data for mixture:

Not available

Substances:

Not available

Germ cell mutagenicity:

The product is not classified.

Data for mixture:

Not available

Substances:

Not available

Sensitisation to the respiratory tract:

The product is not classified.

Data for mixture:

Not available

Substances:

Not available

Additional information:

Not available

11.2. Information on other hazards**Endocrine disrupting properties:**

According to Regulation (EU) 2017/2100 or Regulation (EU) 2018/605, no substances are known to have endocrine disrupting properties.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

Hazardous to the aquatic environment, short-term (acute): Not classified.

Hazardous to the aquatic environment, long-term (chronic): Not classified.

Data for mixture:

Not available

Substances:

Not available

12.2. Persistence and degradability

The product has not been tested.

Data for mixture:

Not available

Substances:

Not available

12.3. Bioaccumulative potential

The product has not been tested.

Data for mixture:

Not available

Substances:

Not available

12.4. Mobility in soil

The product has not been tested.

Data for mixture:

Not available

Substances:

Not available

12.5. Results of PBT and vPvB assessment

According to Regulation (EU) 1907/2006, no substances are assessed as PBT or vPvB.

12.6. Endocrine disrupting properties

According to Regulation (EU) 2017/2100 or Regulation (EU) 2018/605, no substances are known to have endocrine disrupting properties.

12.7. Other adverse effects

Not available

Additional ecotoxicological information

Not available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods**Product/Packaging disposal:****Waste codes/waste designations according to EWC/AVV:**

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Waste treatment options:

Dispose of contents/container in accordance with licensed collector's sorting instructions.

Appropriate disposal/Product:

Waste requiring special supervision.

Dispose of waste according to applicable legislation.

Delivery to an approved waste disposal company.

Appropriate disposal/Package:

Non-contaminated packages must be recycled or disposed of.

Contaminated packing must be completely emptied and can be reused after proper cleaning.

Packing which cannot be properly cleaned must be disposed of.

Handle contaminated packages in the same way as the substance itself.
Dispose of waste according to applicable legislation.





Remark:

For recycling, contact manufacturer.
Collect the waste separately.
Consult the appropriate authorities about waste disposal.
Do not mix with other wastes.
The waste is to be kept separate from other types of waste until its disposal.
Concerning the waste it has to be checked, whether a transport authorisation is required.

Additional information

Not available

SECTION 14: TRANSPORT INFORMATION

	Land transport (ADR/RID):	Inland waterway transport (ADN):	Sea transport (IMDG):	Air transport (ICAO-TI/IATA-DGR):
14.1 UN number:	1760	1760	1760	1760
14.2 UN proper shipping name:	CORROSIVE LIQUID, N.O.S.	CORROSIVE LIQUID, N.O.S.	CORROSIVE LIQUID, N.O.S.	CORROSIVE LIQUID, N.O.S.
14.3 Transport hazard class(es):				
Class or Division:	8	8	8	8
Hazard label(s):				
14.4 Packing group:	I	I	I	I

14.5. Environmental hazards

Not available

14.6. Special precautions for user

Not available

14.7. Bulk shipping according to IMO instruments

Not available

Additional information

Not available

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

This SDS has been established in accordance with REACH regulation, including its amendments: REACH Regulation (EC) No 1907/2006.
This SDS has been established in accordance with CLP regulation, including its amendments: CLP Regulation EC No. 1272/2008.

National regulations:**U.S. - NY - RTK:**

Substance	CAS	EC
sulphuric acid	7664-93-9	231-639-5

U.S. - Vermont - RTK:

Substance	CAS	EC
sulphuric acid	7664-93-9	231-639-5

15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Additional information

Not available

SECTION 16: OTHER INFORMATION**Indication of changes**

Not applicable (first edition of the MSDS).

Abbreviations and acronyms

CAS: Chemical Abstract Service Number.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods Code.
DPD Dangerous Preparation Directive.
UN number: United Nations number.

No EC: European Commission Number.

ADN/ADNR: Regulations concerning the transport of dangerous substances in barges on the waterways.

ADR/RID: European Agreement concerning the International Carriage of Dangerous Goods by Road/Regulations concerning the international carriage of dangerous goods by rail.

CLP: Classification, labeling and packaging.

VPvB: very persistent and very bioaccumulative substances.

Key literature references and sources for data

No data available.

Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 [CLP]

Classification of the mixture is in accordance with the evaluation method described in Regulation (EC) No 1272/2008.

Complies with ATP 18, Regulation (EU) n°2022/692.

Relevant R-, H- and EUH-phrases (Number and full text)

H290	Met. Corr. 1	May be corrosive to metals.
H302	Acute Tox. 4 ORAL	Harmful if swallowed
H314	Skin Corr. 1A	Causes severe skin burns and eye damage.
H315	Skin Irrit. 2	Causes skin irritation.
H319	Eye Irrit. 2	Causes serious eye irritation

Training advice

Refer to Sections 4, 5, 6, 7 and 8 of this safety data sheet.

Additional information

Creation date: 09/05/2023

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The information given in this Safety Data Sheet is based on our present knowledge and on European and national regulations. This Safety Data Sheet describes safety requirements relative to identified uses, it doesn't guarantee all the product properties particularly in the case of non identified uses. The product mustn't be used for any uses other than those identified under heading 1. Since the user's working conditions are not known by us, it is the responsibility of the user to take all necessary measures to comply with legal requirements for specific uses and avoid negative health effects.