

Safety Data Sheet

Concentrated ORP Buffer, 146 mV (Solution Michaelis)

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 : Concentrated ORP Buffer, 146 mV (Solution Michaelis).
Article No (user) : P01700110.

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: This mixture is not classified as dangerous.

2.2. Label elements

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

Labelling

Hazard pictograms

Signal word

Precautionary Statements

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

Precautionary Statements - Disposal

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

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.

Adverse physicochemical effects:

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

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
water			
CAS N°	7732-18-5	99.0% <C≤ 100.0%	
EC N°	231-791-2		
IDX N°			
potassium chloride			
CAS N°	7447-40-7	C< 1.0%	
EC N°	231-211-8		
IDX N°			
REACH N°	01-2119539416-36-xxxx		
tetrapotassium hexacyanoferrate			
CAS N°	13943-58-3	C< 1.0%	H412 Aquatic Chronic 3
EC N°	237-722-2		
IDX N°			
REACH N°	01-2120768449-37-xxxx		
tripotassium hexacyanoferrate			
CAS N°	13746-66-2	C< 1.0%	H319 Eye Irrit. 2 H335 STOT SE 3 H335 H412 Aquatic Chronic 3
EC N°	237-323-3		
IDX N°			
REACH N°	01-2120787462-46-xxxx		

Remark

Full text of H-statements: see section 16.

SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures****Following inhalation:**

Remove person to fresh air and keep comfortable for breathing.

Following skin contact:

Wash skin with plenty of water.

Following eye contact:

Rinse eyes with water as a precaution.

Following ingestion:

Call a poison center or a doctor if you feel unwell.

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

No additional information available.

Effects:

No additional information available.

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.

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. Wear personal protective equipment.

Advices on general occupational hygiene:

Do not eat, drink or smoke when using this product. Always wash hands after handling the Product.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:

Store in a well-ventilated place. Keep cool.

7.3. Specific end uses

No additional information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits:

Does not contain substances above concentration limits fixing an occupational exposure limit.

Biological limit values:

Not available

Exposure limits at intended use:

Not available

Remark:

Not available

8.2. Exposure controls

Appropriate engineering controls:

See section 7. No additional measures necessary.

Individual protection measures, such as personal protective equipment:



Eye/face protection

: **Suitable eye protection:**
No data available.

Skin protection

: **Hand protection:**
Suitable gloves type:
No data available.
Body protection:
Suitable protective clothing:
Lab coat.

Respiratory protection

: **Suitable respiratory protection apparatus:**
No data available.

Environmental exposure controls:

No special measures are necessary.

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	:	7
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

No additional information available.

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:

- potassium chloride (CAS: 7447-40-7):

Subendpoint	Operator	Value	Unit
LD50:	=	2600	mg/kg bw

Conclusion : Not available

- tetrapotassium hexacyanoferrate (CAS: 13943-58-3):

Species : Rat
 Sex : Not available
 Guideline : Not available

Subendpoint	Operator	Value	Unit
LD50:	=	3613	mg/kg bw

Conclusion : Not available

• **tripotassium hexacyanoferrate (CAS: 13746-66-2):**

Species : Mouse
 Sex : Not available
 Guideline : Not available

Subendpoint	Operator	Value	Unit
LD50:	=	2970	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: ≈ 7 @ 25°C.

The product is not classified.

Data for mixture:

Not available

Substances:

Not available

Serious eye damage/irritation:

PH: ≈ 7 @ 25°C.

The product is not classified.

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 : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

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:

Dispose of waste according to applicable legislation.

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.

Dispose of waste according to applicable legislation.

Remark:

For recycling, contact manufacturer.

Additional information

Not available

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

The product is not hazardous according to the applicable transport regulations.

14.2. UN proper shipping name

Not regulated.

14.3. Transport hazard class(es)

Not regulated.

14.4. Packing group

Not regulated.

14.5. Environmental hazards

Not regulated.

14.6. Special precautions for user

Not regulated.

14.7. Bulk shipping according to IMO instruments

Not regulated.

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.

15.2. Chemical Safety Assessment

For this substance/mixture a chemical safety assessment is not required.

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)

H319	Eye Irrit. 2	Causes serious eye irritation
H335	STOT SE 3 H335	May cause respiratory irritation
H412	Aquatic Chronic 3	Harmful to aquatic life with long lasting effects

Training advice

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

Additional information

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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.