

Safety Data Sheet

Concentrated ORP Buffer, 146 mV (Solution Michaelis)

According_to_Regulation_CLP14

Version:1

Version date:28/06/2021

Language:EN

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: Manumasure
Street: 8 avenue du docteur Schweitzer
Postal code/City: 69330 Meyzieu
Country: FRANCE
Telephone: 04 37 45 05 68
E-mail: qualite@manumasure.fr

1.4. Emergency Telephone Number

United Kingdom: 0344 892 0111

SECTION 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 dangerous.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms -
Signal word -
Product identifiers -
Hazard Statements -
Supplemental Hazard information (EU) -
Precautionary Statements - General -
Precautionary Statements - Prevention -
Precautionary Statements - Response -

Precautionary Statements - Storage -
 Precautionary Statements - Disposal -

2.3. Other hazards

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

3.1. Substances

Substance	C (%)	Classification	Specific concentration limits	Note
water CAS N°:7732-18-5 EC N°:231-791-2 IDX N°:	99.0% <C≤ 100.0%	-	-	-
potassium chloride CAS N°:7447-40-7 EC N°:231-211-8 IDX N°:	C< 1.0%	-	-	-
tetrapotassium hexacyanoferrate CAS N°:13943-58-3 EC N°:237-722-2 IDX N°:	C< 1.0%	H412: Harmful to aquatic life with long lasting effects	-	-
tripotassium hexacyanoferrate CAS N°:13746-66-2 EC N°:237-323-3 IDX N°:	C< 1.0%	H319: Causes serious eye irritation H335: May cause respiratory irritation H412: Harmful to aquatic life with long lasting effects	-	-

3.2. Mixtures

Not available

3.3. 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.

5.4. Additional information

Not available

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

- 6.1.1. For non-emergency personnel.
- Emergency procedures : Ventilate spillage area.
- 6.1.2. For emergency responders.
- 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

- Methods 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.

6.5. 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

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

8.2. Exposure controls

Appropriate engineering controls

See section 7. No additional measures necessary.

Personal protection equipment

Not available

Eye/face protection	:	Suitable eye protection: Safety glasses.
Skin protection	:	Hand protection: Protective gloves. Body protection: Wear suitable protective clothing.
Respiratory protection	:	Suitable respiratory protection apparatus: In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental exposure controls

Avoid release to the environment.

8.3. 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.
Odour threshold:	Not available
pH:	≈ 7 @ 25°C
Melting point/freezing point:	Not available
Initial boiling point and boiling range:	100°C
Flash point:	Not available
Evaporation rate:	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 KOC):	Not available
Auto-ignition temperature:	Not available

Decomposition temperature:	Not available
Viscosity:	Not available
Explosive properties:	Not available
Oxidising properties:	Not available

9.2. Other safety information

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.

10.7. Additional information

Not available

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Acute oral toxicity

Data for mixture

Not classified.

Substances

tripotassium hexacyanoferrate (CAS: 13746-66-2)

Species	:	Mouse
Sex	:	Not available
Guideline	:	Not available

Subendpoint	Operator	Value	Unit
LD50	=	2970	mg/kg

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

Conclusion : Not available
potassium chloride (CAS: 7447-40-7)
 Species : Not available
 Sex : Not available
 Guideline : Not available

Subendpoint	Operator	Value	Unit
LD50	=	2600	mg/kg

Conclusion : Not available

11.2. Acute skin toxicity

Data for mixture

Not classified.

Substances

Not available

11.3. Acute inhalation toxicity

Data for mixture

Not classified.

Substances

Not available

11.4. Skin corrosion

Data for mixture

Not classified.

pH: ≈ 7 @ 25°C.

Substances

Not available

11.5. Eye damage

Data for mixture

Not classified.

pH: ≈ 7 @ 25°C.

Substances

Not available

11.6. Skin sensitisation

Data for mixture

Not classified.

Substances

Not available

11.7. STOT RE

Data for mixture

Not classified.

Substances

Not available

11.8. STOT SE

Data for mixture

Not classified.

Substances

Not available

11.9. STOT RE

Data for mixture

Not classified.

Substances

Not available

11.10. Carcinogenicity

Data for mixture

Not available

Substances

Not available

11.11. Reproductive and Developmental Toxicity

Data for mixture

Not available

Substances

Not available

11.12. Genotoxicity

Data for mixture

Not available

Substances

Not available

11.13. In vitro genotoxicity

Data for mixture

Not available

Substances

Not available

11.14. Respiratory sensitisation

Data for mixture

Not available

Substances

Not available

11.15. Additional information

Not available

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.

12.2. Persistence and degradability

No additional information available.

12.3. Bioaccumulative potential

No additional information available.

12.4. Mobility in soil

No additional information available.

12.5. Results of PBT and vPvB assessment

No additional information available.

12.6. Other adverse effects

No additional information available.

12.7. Additional ecotoxicological information

Not available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Product/Packaging disposal

Waste treatment options

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

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	-	-	-	-
14.2. UN proper shipping name	-	-	-	-
14.3. Transport hazard class(es)				
Class or Division	-	-	-	-
Hazard label(s)				
14.4. Packing group	-	-	-	-

14.5. Environmental hazards

Not regulated.

14.6. Special precautions for user

Not regulated.

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

Not regulated.

14.8. 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.

For this substance/mixture a chemical safety assessment has been elaborated.

For this mixture, the relevant data of the Substances' Chemical safety assessment are integrated in the sections of the SDS.

15.3. Additional information

Not available

SECTION 16: OTHER INFORMATION

Creation date: 28/06/2021

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16.1. Indication of changes

Not applicable (first edition of the MSDS).

16.2. 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.

16.3. Key literature references and sources for data

No data available.

16.4. 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.

16.5. 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

16.6. Training advice

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

16.7. Additional information

Not available

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.