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Safety Data Sheet

Version 01 dated 13/12/2017

1. Identification of the substance/mixture and the company/group

Désignation : Solution Michaelis 146 mV
Description : Concentrated ORP buffer, 146 mV (25°C)
Code produit : P01700110
Producteur : Manumasure
8 avenue du docteur Schweitzer
69 330 Meyzieu
FRANCE
Tél. 04 37 45 05 68
Numéro en cas d'urgence : Institut National de Recherche et de Sécurité, I.N.R.S. Tél. 01 45 42 59 59

2. Identification des dangers

Classification of the mixture: the mixture is not classed as hazardous in the sense of directive **CE 1272/2008**.

3. Composition/information on ingredients

Composition :
Aqueous mixture

Ingredient name	Concentration (p/p)	CAS no.	CE no.	Classification as per CE 1272/2008 directives
Chlorure de potassium	~ 0,15 %	7447-40-7	231-211-8	Not classified
Potassium hexacyanoferrate (II)	~ 0,4 %	14459-95-1	237-722-2	R52/53, harmful to aquatic organisms life with long lasting effects
Potassium hexacyanoferrate (III)	~ 0,4 %	13746-66-2	237-323-3	R32, contact with acids liberates very toxic gas

Hazardous substance:
This product is not hazardous but contains a harmful to aquatic organisms compound.

4. First aid measures

4.1 Description of first aid:

General indications: Remove soiled clothing.
After inhalation : Allow to breathe fresh air.
Skin contact : Wash immediately and abundantly with water.
Eye contact: Rinse immediately and thoroughly with water or eyewash.
After ingestion: Rinse out mouth with water and then give water to drink

If there is any trouble seek medical help.

4.2 Main acute and delayed symptoms and effects:
No known effect.

4.3 Indication of any immediate medical care and specific treatments necessary:
Treat symptomatically

5. Fire-fighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Use extinguishing appliances which are suitable for the local conditions and environment.
The product does not burn.
Unsuitable extinguishing media: No limitation.

5.2 Specific hazards arising from the substance or mixture:

In the event of fire, hazardous fumes are emitted.

Other indications: Non-combustible products.

6. Accidental release measures

6.1 Personal precautions:

- For first-aid workers:** Provide the clean-up teams with appropriate protection.
Air the zone.
- For non-first-aid workers:** Non-essential staff should be moved to a different area.

6.2 Environmental precautions:

Do not dispose of the product in surface water or drains.

6.3 Method and equipment for confinement and cleaning:

Contain the spillage and use inert solids such as clay or diatomaceous earth to absorb it.

6.4 References to other sections:

See Part 8. Exposure controls / personal protection.

7. Handling and storage

7.1 Hazard-free handling precautions :

- Instructions :** Avoid contact with the eyes (wear safety spectacles) or skin (wear a lab coat or overalls).
Do not inhale the vapour.
Wash hands after handling.

7.2 Safe storage requirements, including any incompatibilities:

- Storage :** Store only in the original recipient in a cool, well-ventilated place (20 to 25°C).
Store away from strong bases and acids and keep out of direct sunlight.

8. Exposure controls/personal protection

8.1 Control parameter

Does not contain substances with occupational exposure limits.

8.2 Personal protective equipment

- General protective and hygienic measures:** Keep away from foodstuffs.
Immediately remove soiled or damp clothing.
Wash your hands before breaks and after work.
Store the protective clothing separately.
Avoid any contact with the skin or eyes.
- Eye protection:** Wear safety glasses with side protection.
- Hand protection:** Wear safety gloves.
Glove material resistant to Category III butyl rubber or nitrile rubber. The choice of appropriate gloves is not just a question of the material, but also of other quality criteria which may vary between manufacturers.
- Body protection:** Protective work clothing.

9. Physical and chemical properties

Indications générales :

- Form:** Clear liquid
Colour: Yellow
Odour: Odourless
pH value (at 25°C): ~7.00

Change in condition:

- Melting point:** Non applicable
Boiling point: 100°C
- Ignition temperature:** Not applicable
- Inflammability:** The substance is not inflammable
- Explosion hazard:** The product is not explosive
- Oxidizing properties:** No data available
- Solubility in other solvents:** No data available

10. Stability and reactivity

- Reactivity:** No known hazardous reactions
- Chemical stability:** Chemically stable product
- Conditions to avoid:** Extreme temperatures and direct sunlight

Incompatible materials:	No data available
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11. Toxicological information

Acute toxicology:	No information is available on the product itself
Irritation and corrosivity:	May cause irritation of the eyes, airways and skin
Sensitizing effects:	No known effects
Specific toxicity for target organ/ single exposure:	The mixture is not classified as specifically toxic for a target organ after a single exposure
Serious effects due to repeated or prolonged exposure:	The mixture is not classified as specifically toxic for a target organ after repeated exposure
CMR effects (carcinogenic, mutagenic or toxic to reproduction):	No known CMR effects
Additional information:	Handle this product with the usual precautions recommended for chemicals

12. Informations écologiques

Toxicity:	No information is available on the product itself, contains 0.4% of a harmless compound to aquatic organisms
Persistence and degradability:	No information is available on the product itself
Bioaccumulative potential:	No data available
Mobility in soil:	No data available

13. Disposal considerations

Recommendation:	Waste disposal is regulated by the competent regional services. Please contact the competent services (wastedisposal authority or company) who will tell you what measures to take for disposal.
Uncleaned packaging:	Dispose of waste as for an unused product.

14. Transport information

Land transport:	Not subject to transport rules.
River transport:	Not subject to transport rules
Maritime transport:	Not subject to transport rules
Air transport:	Not subject to transport rules
Environmental hazard:	No

15. Regulatory information

Chemical safety assessment:	No chemical safety assessment has been performed.
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16 Other information

Document version information:

Creation date: 10/05/2016

Revision date: 13/12/2017

Reason for revision: Modification of the version of classification directives : replaced 1999/45/CE by CE 1272/2008

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