

SAFETY DATA SHEET

Fluidics Cleaning Kit, Solution 2

Section 1. Identification

Fluidics Cleaning Kit, Solution 2	: Product name
BU03	: Product code
Not available.	: Other means of identification
Professional use. Use in laboratories. Cleaning solutions.	: Product use
Lunaphore Technologies SA Route de Lully 5C, CH-1131 Tolochenaz, Switzerland + 41 800 84 86 89 support-tech@lunaphore.com	: Supplier's details
CHEMTREC: +972 3-763-0639 (Local)	: e-mail address of person responsible for this SDS
	: Emergency telephone number

Section 2. Hazard identification

Classification of the substance or mixture

Mixture

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

Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

*** Product definition

Label elements



: Hazard pictograms

No signal word.

: Signal word

H411 - Toxic to aquatic life with long lasting effects.

: Hazard statements

Precautionary statements

P273 - Avoid release to the environment.

: Prevention

P391 - Collect spillage.

: Response

Not applicable.

: Storage

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

: Disposal

Not applicable.

: Supplemental label elements

Not applicable.

: Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Section 2. Hazard identification

2.3 Other hazards

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

: **Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII**

None known.

: **Other hazards which do not result in classification**

Section 3. Composition/information on ingredients

Mixture

: **3.2 Mixtures**

Type	Classification	%	Identifiers	Product/ingredient name
[1] [2]	Ox. Sol. 2, H272 Acute Tox. 4, H302 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 1, H410 See Section 16 for the full text of the H statements declared above.	<2.0	EC: 231-760-3 CAS: 7722-64-7 Index: 025-002-00-9	potassium permanganate

Specific Conc. Limits, M-factors and ATEs	Product/ingredient name
ATE [Oral] = 500 mg/kg M [Acute] = 10 M [Chronic] = 10	potassium permanganate

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

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Section 4. First aid measures

Description of necessary first aid measures

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

: **Eye contact**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

: **Inhalation**

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

: **Skin contact**

Section 4. First aid measures

Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

: Ingestion

Most important symptoms/effects, acute and delayed

Potential acute health effects

No known significant effects or critical hazards.

: Eye contact

No known significant effects or critical hazards.

: Inhalation

No known significant effects or critical hazards.

: Skin contact

No known significant effects or critical hazards.

: Ingestion

Over-exposure signs/symptoms

No specific data.

: Eye contact

Adverse symptoms may include the following:

reduced fetal weight

: Inhalation

increase in fetal deaths

skeletal malformations

Adverse symptoms may include the following:

reduced fetal weight

: Skin contact

increase in fetal deaths

skeletal malformations

Adverse symptoms may include the following:

reduced fetal weight

: Ingestion

increase in fetal deaths

skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

: Notes to physician

No specific treatment.

: Specific treatments

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

: Protection of first-aiders

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Use dry chemical, CO₂, water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire.

: Suitable extinguishing media

Do not use water jet.

: Unsuitable extinguishing media

In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

: Specific hazards arising from the chemical

Decomposition products may include the following materials:
metal oxide/oxides

: Hazardous thermal decomposition products

Section 5. Fire-fighting measures

- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. : **Special protective actions for fire-fighters**
- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. : **Special protective equipment for fire-fighters**
- Not considered to be a product presenting a risk of explosion. : **Remark (Explosibility)**

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. : **For non-emergency personnel**
- If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". : **For emergency responders**
- Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage. : **Environmental precautions**

Methods and materials for containment and cleaning up

- Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. : **Small spill**
- Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. : **Large spill**

Section 7. Handling and storage

Precautions for safe handling

- Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. : **Protective measures**
- Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. : **Advice on general occupational hygiene**

Section 7. Handling and storage

Storage temperature: 15 - 30 °C. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

: **Conditions for safe storage, including any incompatibilities**

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Exposure limits	Ingredient name
EU OEL (Europe, 1/2022). [Manganese and inorganic manganese compounds] Notes: list of indicative occupational exposure limit values TWA: 0.2 mg/m ³ , ((as manganese)) 8 hours. Form: Inhalable fraction TWA: 0.05 mg/m ³ , ((as manganese)) 8 hours. Form: Respirable fraction	potassium permanganate

Biological exposure indices

Exposure indices	Ingredient name
None known.	

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

: **Appropriate engineering controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

: **Environmental exposure controls**

Individual protection measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

: **Hygiene measures**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

: **Eye/face protection**

Skin protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

: **Hand protection**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

: **Body protection**

Section 8. Exposure controls/personal protection

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

: **Other skin protection**

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

: **Respiratory protection**

SECTION 9: Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Liquid.

: **Physical state**

Dark purple.

: **Color**

Odorless.

: **Odor**

Not applicable.

: **Odor threshold**

7.2

: **pH**

Not available.

: **Melting point/freezing point**

Not available.

: **Boiling point, initial boiling point, and boiling range**

Not available.

: **Flash point**

Not applicable.

: **Flammability**

Not available.

: **Lower and upper explosion limit/flammability limit**

Not available.

: **Vapor pressure**

Not available.

: **Relative vapor density**

Not available.

: **Relative density**

Not available.

: **Solubility in water**

Yes.

: **Miscible with water**

Not applicable.

: **Partition coefficient: n-octanol/water**

Not available.

: **Auto-ignition temperature**

Not available.

: **Decomposition temperature**

Not available.

: **Viscosity**

Particle characteristics

Not applicable.

: **Median particle size**

Section 10. Stability and reactivity

No specific test data related to reactivity available for this product or its ingredients.

: **Reactivity**

The product is stable.

: **Chemical stability**

Under normal conditions of storage and use, hazardous reactions will not occur.

: **Possibility of hazardous reactions**

Keep away from heat, sparks and flame.

: **Conditions to avoid**

Reactive or incompatible with the following materials:
reducing agents, peroxides, acids, metals.

: **Incompatible materials**

Section 10. Stability and reactivity

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

: Hazardous decomposition products

Section 11. Toxicological information

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

Acute toxicity

No known significant effects or critical hazards.

: Conclusion/Summary

Acute toxicity estimates

Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)	Product/ingredient name
25000	N/A	N/A	N/A	N/A	Fluidics Cleaning Kit, Solution 2
500	N/A	N/A	N/A	N/A	potassium permanganate

Irritation/Corrosion

Not available.

Not available.

Not available.

Sensitization

Not available.

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Not available.

Conclusion/Summary

: Skin

: Eyes

: Respiratory

Conclusion/Summary

: Skin

: Respiratory

: Conclusion/Summary

: Conclusion/Summary

: Conclusion/Summary

: Conclusion/Summary

: Information on the likely routes of exposure

Potential acute health effects

No known significant effects or critical hazards.

: Eye contact

No known significant effects or critical hazards.

: Inhalation

No known significant effects or critical hazards.

: Skin contact

No known significant effects or critical hazards.

: Ingestion

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

No specific data. : Eye contact
 No specific data. : Inhalation
 No specific data. : Skin contact
 No specific data. : Ingestion

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Not available. : Potential immediate effects
 Not available. : Potential delayed effects

Long term exposure

Not available. : Potential immediate effects
 Not available. : Potential delayed effects

Potential chronic health effects

Not available.
 Not available. : Conclusion/Summary
 No known significant effects or critical hazards. : General
 No known significant effects or critical hazards. : Carcinogenicity
 No known significant effects or critical hazards. : Mutagenicity
 No known significant effects or critical hazards. : Reproductive toxicity

Information on other hazards

Endocrine disrupting properties

No known significant effects or critical hazards (Human Health).

Other information

Not available.

Section 12. Ecological information

Toxicity

Exposure	Species	Result	Product/ingredient name
48 hours	Daphnia - Daphnia magna	Acute EC50 0.84 mg/l	potassium permanganate
96 hours	Fish - Onchorchyncus mykiss	Acute LC50 0.3 mg/l	

Toxic to aquatic life with long lasting effects. : Conclusion/Summary

Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances. : Conclusion/Summary

Bioaccumulative potential

Not available.

Mobility in soil

Not available. : Soil/water partition coefficient (K_{oc})

Not available. : Mobility

No known significant effects or critical hazards. : Other adverse effects

Section 12. Ecological information

Endocrine disrupting properties

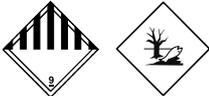
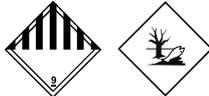
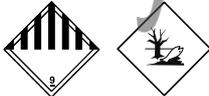
No known significant effects or critical hazards (Environment).

Section 13. Disposal considerations

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

: **Disposal methods**

Section 14. Transport information

IATA	IMDG	UN	
UN3082	UN3082	UN3082	UN number
Environmentally hazardous substance, liquid, n.o.s. (potassium permanganate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (potassium permanganate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (potassium permanganate)	UN proper shipping name
9	9	9	Transport hazard class(es)
			Label
III	III	III	Packing group
Yes.	Marine Pollutant: Yes	Yes.	Environmental hazards

Additional information

This product is not regulated as a dangerous good when transported in sizes of ≤ 5 L or ≤ 5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. : **UN**

Special provisions 274, 331, 335, 375

This product is not regulated as a dangerous good when transported in sizes of ≤ 5 L or ≤ 5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. : **IMDG**

Emergency schedules F-A, S-F

Special provisions 274, 335, 969

This product is not regulated as a dangerous good when transported in sizes of ≤ 5 L or ≤ 5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8. : **IATA**

Quantity limitation Passenger and Cargo Aircraft: 450 L. Packaging instructions: 964. Cargo Aircraft Only: 450 L. Packaging instructions: 964. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y964.

Special provisions A97, A158, A197, A215

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage. : **Special precautions for user**

Section 14. Transport information

Not applicable.

: Transport in bulk according to IMO instruments

Section 15. Regulatory information

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

All components are listed or exempted.

: Australia

All components are listed or exempted.

: Canada

All components are listed or exempted.

: China

Russian Federation inventory: All components are listed or exempted.

: Eurasian Economic Union

Japan inventory (CSCL):

: Japan

All components are listed or exempted.

: New Zealand

All components are listed or exempted.

: Philippines

All components are listed or exempted.

: Republic of Korea

All components are listed or exempted.

: Taiwan

All components are listed or exempted.

: Thailand

All components are listed or exempted.

: United States

All components are active or exempted.

: Viet Nam

All components are listed or exempted.

Section 16. Other information

History

04/11/2022

: Date of printing

: Date of issue/Date of revision

26/11/2021

: Date of previous issue

1

: Version

ATE = Acute Toxicity Estimate

: Key to abbreviations

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available

SGG = Segregation Group

UN = United Nations

Procedure used to derive the classification

Section 16. Other information

Justification	Classification
Calculation method	TOXIC TO REPRODUCTION - Category 2
Calculation method	AQUATIC HAZARD (ACUTE) - Category 2
Calculation method	AQUATIC HAZARD (LONG-TERM) - Category 2

Not available.

: References

Indicates information that has changed from previously issued version.



Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

*** draft only ***