SAFETY DATA SHEET

Fluidics Cleaning Kit, Solution 3

Section 1. Identification

Fluidics Cleaning Kit, Solution 3	: **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	: **Supplier's details**
support-tech@lunaphore.com	: **e-mail address of person responsible for this SDS**
CHEMTREC: +972 3-763-0639 (Local)	: **Emergency telephone number**

Section 2. Hazard identification

Classification of the substance or mixture

Mixture : **Product definition**

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

Skin Corr. 1, H314
Eye Dam. 1, H318

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.

Label elements

: **Hazard pictograms**

Danger : **Signal word**

H314 - Causes severe skin burns and eye damage. : **Hazard statements**

Precautionary statements

P280 - Wear protective gloves, protective clothing and eye or face protection. : **Prevention**
P260 - Do not breathe vapor or spray.

P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. : **Response**
P303 + P361 + P353 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or doctor.
P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Not applicable. : **Storage**

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

oxalic acid : **Hazardous ingredients**

Section 2. Hazard identification

: Supplemental label elements

Not applicable.

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

Not applicable.

2.3 Other hazards

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

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

: Other hazards which do not result in classification

None known.

Section 3. Composition/information on ingredients

: 3.2 Mixtures

Mixture

Type	Classification	%	Identifiers	Product/ingredient name
[1] [2]	Acute Tox. 4, H302 Acute Tox. 4, H312 Eye Dam. 1, H318 **See Section 16 for the full text of the H statements declared above.**	≤1	EC: 205-634-3 CAS: 144-62-7 Index: 607-006-00-8	oxalic acid

Specific Conc. Limits, M-factors and ATEs	Product/ingredient name
ATE [Oral] = 375 mg/kg ATE [Dermal] = 1100 mg/kg	oxalic acid

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.

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

Section 4. First aid measures

Description of necessary first aid measures

: Eye contact

Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

: Inhalation

Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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.

Section 4. First aid measures

Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.	**: Skin contact**
Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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

Causes serious eye damage.	**: Eye contact**
No known significant effects or critical hazards.	**: Inhalation**
Causes severe burns.	**: Skin contact**
No known significant effects or critical hazards.	**: Ingestion**

Over-exposure signs/symptoms

Adverse symptoms may include the following: pain watering redness	**: Eye contact**
No specific data.	**: Inhalation**
Adverse symptoms may include the following: pain or irritation redness blistering may occur	**: Skin contact**
Adverse symptoms may include the following: stomach pains	**: Ingestion**

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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.	**: Protection of first-aiders**

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Use dry chemical, CO_2, 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**

Section 5. Fire-fighting measures

In a fire or if heated, a pressure increase will occur and the container may burst.	**: Specific hazards arising from the chemical**
Decomposition products may include the following materials: carbon dioxide carbon monoxide Formic acid.	**: Hazardous thermal decomposition products**
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. Do not breathe 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).	**: 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). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. 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). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not breathe dust or mist. Do not ingest. 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. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.	**: Protective measures**

Section 7. Handling and storage

: Advice on general occupational hygiene

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.

: Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 15 to 30°C (59 to 86°F). 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. Separate from alkalis. 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.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Exposure limits	Ingredient name
EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values TWA: 1 mg/m³ 8 hours.	oxalic acid

Biological exposure indices

Exposure indices	Ingredient name
None known.	

: Appropriate engineering controls

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.

: Environmental exposure 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.

Individual protection measures

: Hygiene 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.

: Eye/face protection

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: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

: Hand 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.

Section 8. Exposure controls/personal 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. Wear apron or coverall if there is a risk of exposure to splashes.	**: Body 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**
Colorless.	**: Color**
Odorless.	**: Odor**
Not applicable.	**: Odor threshold**
<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**

Section 10. Stability and reactivity

Incompatible materials :

Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.
Reactive or incompatible with the following materials:
alkalis
alkali metals
oxidizing agents

Hazardous decomposition products :

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

Section 11. Toxicological information

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

Acute toxicity

Exposure	Dose	Species	Result	Product/ingredient name
-	20000 mg/kg	Rabbit	LD50 Dermal	oxalic acid
-	375 mg/kg	Rat - Female	LD50 Oral	

Conclusion/Summary :

Based on available data, the classification criteria are not met.

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
37500.0	110000.0	N/A	N/A	N/A	Fluidics Cleaning Kit, Solution 3
375	1100	N/A	N/A	N/A	oxalic acid

Irritation/Corrosion

	Conclusion/Summary
Causes severe burns.	**Skin**
Causes serious eye damage.	**Eyes**
Not available.	**Respiratory**

Sensitization

	Conclusion/Summary
Not available.	**Skin**
Not available.	**Respiratory**

Mutagenicity

Not available. : **Conclusion/Summary**

Carcinogenicity

Not available. : **Conclusion/Summary**

Reproductive toxicity

Not available. : **Conclusion/Summary**

Teratogenicity

Not available. : **Conclusion/Summary**

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Not available. : **Information on the likely routes of exposure**

Potential acute health effects

Causes serious eye damage. : **Eye contact**

No known significant effects or critical hazards. : **Inhalation**

Causes severe burns. : **Skin contact**

No known significant effects or critical hazards. : **Ingestion**

Symptoms related to the physical, chemical and toxicological characteristics

Adverse symptoms may include the following: : **Eye contact**
pain
watering
redness

No specific data. : **Inhalation**

Adverse symptoms may include the following: : **Skin contact**
pain or irritation
redness
blistering may occur

Adverse symptoms may include the following: : **Ingestion**
stomach pains

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

Not available. : **Conclusion/Summary**

Persistence and degradability

There are no data available on the mixture itself. : **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**

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	
UN3265	UN3265	UN3265	**UN number**
Corrosive liquid, acidic, organic, n.o.s. (oxalic acid)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (oxalic acid)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (oxalic acid)	**UN proper shipping name**
8	8	8	**Transport hazard class(es)**
			**Label**
III	III	III	**Packing group**
No.	Marine Pollutant: No	No.	**Environmental hazards**

Additional information

Special provisions 223, 274 : **UN**

Emergency schedules F-A, S-B : **IMDG**
Special provisions 223, 274

Section 14. Transport information

Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 852. Cargo Aircraft Only: 60 L. Packaging instructions: 856. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y841.
Special provisions A3, A803 : **IATA**

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**

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.

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 active or exempted. : **United States**

All components are listed or exempted. : **Viet Nam**

Section 16. Other information

History

04/11/2022 : **Date of printing**

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2 : **Version**

Section 16. Other information

: Key to abbreviations

ATE = Acute Toxicity Estimate
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

Justification	Classification
On basis of test data	SKIN CORROSION/IRRITATION - Category 1
On basis of test data	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

: References

Not available.

Indicates information that has changed from previously issued version.

Notice to reader

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