SAFETY DATA SHEET

Imaging Buffer Solute

Section 1. Identification

Imaging Buffer Kit, Solute	: **Product name**
205-858-1	: **EC number**
156-57-0	: **CAS number**
BU09	: **Product code**
Not available.	: **Other means of identification**
C2-H7-N-S.Cl-H	: **Chemical formula**
Professional use. Use in laboratories: Research.	: **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

Mono-constituent substance : **Product definition**

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

Acute Tox. 4, H302
Eye Irrit. 2, H319
Skin Sens. 1A, H317

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**

Warning : **Signal word**

H302 - Harmful if swallowed. : **Hazard statements**
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.

Precautionary statements

P280 - Wear protective gloves, protective clothing and eye or face protection. : **Prevention**
P261 - Avoid breathing dust.
P264 - Wash hands thoroughly after handling.

P362 + P364 - Take off contaminated clothing and wash it before reuse. : **Response**
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
P337 + P313 - If eye irritation persists: Get medical advice or attention.

Not applicable. : **Storage**

Section 2. Hazard identification

Not applicable. : **Disposal**

mercaptamine hydrochloride : **Hazardous ingredients**

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**

2.3 Other hazards

PBT	P	B	T	vPvB	vP	vB
No	N/A	N/A	N/A	No	N/A	N/A

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

Fine dust clouds may form explosive mixtures with air. : **Other hazards which do not result in classification**

Section 3. Composition/information on ingredients

Mono-constituent substance : **3.1 Substances**

Type	Classification	%	Identifiers	Product/ingredient name
[1]	Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Sens. 1A, H317 **See Section 16 for the full text of the H statements declared above.**	≤100	EC: 205-858-1 CAS: 156-57-0	mercaptamine hydrochloride

Specific Conc. Limits, M-factors and ATEs	Product/ingredient name
ATE [Oral] = 500 mg/kg	mercaptamine hydrochloride

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[1] Constituent

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. : **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 adverse health effects persist or are severe. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. : **Inhalation**

Section 4. First aid measures

Wash with plenty of 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. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. : **Skin contact**

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. If necessary, call a poison center or 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 irritation. : **Eye contact**

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

May cause an allergic skin reaction. : **Skin contact**

Harmful if swallowed. : **Ingestion**

Over-exposure signs/symptoms

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

No specific data. : **Inhalation**

Adverse symptoms may include the following:
irritation
redness : **Skin contact**

No specific data. : **Ingestion**

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

In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. : **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. 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**

May form combustible dust concentrations in air. : **Specific hazards arising from the chemical**

Section 5. Fire-fighting measures

Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
halogenated compounds
hydrogen chloride gas

: **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**

Fine dust clouds may form explosive mixtures with air.

: **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. 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

Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

: **Small spill**

Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. 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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. 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

Hygroscopic. Store between the following temperatures: 2 to 8°C (35.6 to 46.4°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. 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
None.	

Biological exposure indices

Exposure indices	Ingredient name
None known.	

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

: 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. Contaminated work clothing should not be allowed out of the workplace. 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: chemical splash goggles.

: 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

Recommended:

> 8 hours (breakthrough time): nitrile rubber (thickness >0.11 mm).

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

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

Section 8. Exposure controls/personal 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

Solid. [Crystalline]	**: Physical state**
Colorless.	**: Color**
Disagreeable.	**: Odor**
Not available.	**: Odor threshold**
3.5 to 5at g/l: 113.6	**: pH**
67 to 71°C (152.6 to 159.8°F)	**: Melting point/freezing point**
Not available.	**: Boiling point, initial boiling point, and boiling range**
Not applicable.	**: Flash point**
Not available.	**: Flammability**
Not applicable.	**: Lower and upper explosion limit/flammability limit**
Not available.	**: Vapor pressure**
Not applicable.	**: Relative vapor density**
Not available.	**: Relative density**
≈113.6 g/l	**: Solubility in water**
Not available.	**: Partition coefficient: n-octanol/water**
Not applicable.	**: Auto-ignition temperature**
Not available.	**: Decomposition temperature**
Not applicable.	**: Viscosity**

Particle characteristics

Not available.	**: 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**
Reacts vigorously with: Strong oxidizing materials. Fine dust clouds may form explosive mixtures with air.	**: Possibility of hazardous reactions**
Avoid dust generation.	**: Conditions to avoid**
Reactive or incompatible with the following materials: Strong oxidizing materials.	**: Incompatible materials**
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

Exposure	Dose	Species	Result	Product/ingredient name
-	1325 mg/kg	Mouse	LD50 Oral	mercaptamine hydrochloride

Harmful if swallowed. : **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
500	N/A	N/A	N/A	N/A	mercaptamine hydrochloride

Irritation/Corrosion

	Conclusion/Summary
Not available.	: **Skin**
Causes serious eye irritation.	: **Eyes**
Not available.	: **Respiratory**

Sensitization

	Conclusion/Summary
May cause an allergic skin reaction.	: **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.

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

Potential acute health effects

Causes serious eye irritation.	: **Eye contact**
No known significant effects or critical hazards.	: **Inhalation**
May cause an allergic skin reaction.	: **Skin contact**
Harmful if swallowed.	: **Ingestion**

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

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

No specific data.
: **Inhalation**

Adverse symptoms may include the following:
irritation
redness
: **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**

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
: **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

Not available.
: **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

: Disposal methods

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.

Section 14. Transport information

IATA	IMDG	UN	
UN3335	Not regulated.	Not regulated.	**UN number**
Aviation regulated solid, n.o.s. (mercaptamine hydrochloride)	-	-	**UN proper shipping name**
9	-	-	**Transport hazard class(es)**
			**Label**
III	-	-	**Packing group**
No.	Marine Pollutant: No	No.	**Environmental hazards**

Additional information

: IATA

Quantity limitation Passenger and Cargo Aircraft: 400 kg. Packaging instructions: 956. Cargo Aircraft Only: 400 kg. Packaging instructions: 956. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y956.
Special provisions A27

: Special precautions for user

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.

: Transport in bulk according to IMO instruments

Not applicable.

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.

Section 15. Regulatory information

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

This material is listed or exempted.	**: Australia**
This material is listed or exempted.	**: Canada**
This material is listed or exempted.	**: China**
Russian Federation inventory: This material is listed or exempted.	**: Eurasian Economic Union**
Japan inventory (CSCL):	**: Japan**
This material is listed or exempted.	
This material is listed or exempted.	**: New Zealand**
This material is listed or exempted.	**: Philippines**
This material is listed or exempted.	**: Republic of Korea**
This material is listed or exempted.	**: Taiwan**
This material is listed or exempted.	**: Thailand**
This material is active or exempted.	**: United States**
This material is listed or exempted.	**: Viet Nam**

Section 16. Other information

History

04/11/2022	**: Date of printing**
04/11/2022	**: Date of issue/Date of revision**
15/12/2021	**: Date of previous issue**
2	**: Version**
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	**: Key to abbreviations**

Procedure used to derive the classification

Justification	Classification
On basis of test data	ACUTE TOXICITY (oral) - Category 4
Expert judgment	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
Expert judgment	SKIN SENSITIZATION - Category 1A

Not available. **: References**

Indicates information that has changed from previously issued version.

Notice to reader

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