

## Safety Data Sheet

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### Identification of the substance or mixture

**Product code** 21985023  
**Product name** 2-MERCAPTOETHANOL (1000X)

#### Company/undertaking identification

Life Technologies Corporation  
5781 Van Allen Way  
PO Box 6482  
Carlsbad, CA 92008  
+1 760 603 7200

Life Technologies  
5250 Mainway Drive  
Burlington, ONT  
CANADA L7L 6A4  
800/263-6236

**24 hour Emergency Response for Hazardous Materials [or Dangerous Goods] Incident. Spill, Leak, Fire, Exposure, or Accident. Call CHEMTREC** Within the USA + Canada: 1-800-424-9300 and 1-703-527-3887  
Outside the USA + Canada: 1-703-741-5970

**Country Specific Emergency Number (if available):**

**For research use only. Not for use in diagnostic procedures**

### SECTION 2: Hazards identification

#### GHS Classification

**Signal Word**  
WARNING

**Hazard pictograms**



**Health hazards**

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Skin sensitization	Subcategory 1A
Reproductive Toxicity	Category 2

### Physical hazards

Not classified

### Environmental hazards

Acute aquatic hazard	Category 3
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### Hazard Statements

H361 - Suspected of damaging fertility or the unborn child

H317 - May cause an allergic skin reaction

### Precautionary Statements

#### Prevention

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P201 - Obtain special instructions before use

P280 - Wear protective gloves/protective clothing/eye protection/face protection

#### Response

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

#### Storage

Not Applicable

#### Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

### Other hazards

Not Applicable

### HMIS

Health	4 *
Flammability	0
Reactivity	0

## SECTION 3: Composition/information on ingredients

Chemical Name	CAS No.	Common name	EINECS-No	Weight-%
2-mercaptoethanol	60-24-2	Not applicable	200-464-6	0.1-0.9

We recommend handling all chemicals with caution.

## SECTION 4: First aid measures

### Description of first aid measures

<b>Skin contact</b>	Rinse skin with water. Immediate medical attention is not required.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Ingestion</b>	Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.
<b>Inhalation</b>	Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
<b>Notes to Physician</b>	Treat symptomatically.

### Most important symptoms and effects, both acute and delayed

H361 - Suspected of damaging fertility or the unborn child H317 - May cause an allergic skin reaction

### Indication of any immediate medical attention and special treatment needed

If skin irritation or rash occurs: Get medical advice/attention.

## SECTION 5: Firefighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	Water spray. Carbon dioxide (CO <sub>2</sub> ). Foam. Dry chemical.
<b>Unsuitable extinguishing media</b>	No information available.

### Special hazards arising from the substance or mixture

No data

### Advice for firefighters

Standard procedure for chemical fires.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation  
Always wear recommended Personal Protective Equipment  
Use personal protection equipment  
See section 8 for more information

### Environmental precautions

No special environmental precautions required.

### Methods and material for containment and cleaning up

Soak up with inert absorbent material.

### Reference to other sections

See section 8 for more information.

## SECTION 7: Handling and storage

### Precautions for safe handling

Use personal protective equipment as required. No special handling advices are necessary.

### Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers.

### Storage Conditions

Cold Room (2 °C to 8 °C)

### Specific end use(s)

For research use only.

## SECTION 8: Exposure controls/personal protection

### Control parameters

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
2-mercaptoethanol	None	None	None	None

Chemical Name	Brazil - OEL - TWAs (LTs)	Brazil - OEL - Ceilings	Brazil - OEL - Skin Designations
2-mercaptoethanol	None	None	None

### Engineering Measures

Ensure adequate ventilation, especially in confined areas.

### Exposure controls

#### Personal Protective Equipment

#### Respiratory protection

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

#### Hand protection

Wear suitable gloves. Glove material: Compatible chemical-resistant gloves.

#### Eye protection

Tight sealing safety goggles.

#### Skin and Body Protection

Wear suitable protective clothing.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

#### Environmental exposure controls

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	liquid	
<b>Color</b>	No data	
<b>Odor</b>	No data	
<b>Molecular Weight</b>	No data	
<b>Melting point / melting range</b>	°C No data	°F No data
<b>Boiling point / boiling range</b>	°C No data	°F No data
<b>Flammability (solid, gas)</b>	No data	
<b>Lower explosion limit</b>	No data	
<b>Upper explosion limit</b>	No data	
<b>Flash point</b>	°C No data	°F No data
<b>Autoignition Temperature</b>	°C No data	°F No data
<b>Decomposition temperature</b>	°C No data	°F No data
<b>pH</b>	6-8	
<b>Evaporation rate</b>	No data	
<b>Viscosity</b>	No data	
<b>Solubility</b>	No data	
<b>Partition coefficient: n-octanol/water</b>	No data	
<b>Vapor Pressure</b>	No data	
<b>Specific gravity</b>	No data	
<b>Relative density</b>	No data	
<b>Vapor density</b>	No data	
<b>Explosive properties</b>	No data	
<b>Oxidizing properties</b>	No data	
<b>Particle characteristics</b>	No data	

### Other information

#### Information with regard to physical hazard classes

No information available

#### Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous reaction has not been reported.
<b>Conditions to avoid</b>	No information available.
<b>Incompatible materials</b>	No dangerous reaction known under conditions of normal use.
<b>Hazardous decomposition products</b>	No data available.

## SECTION 11: Toxicological information

### Information on toxicological effects

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2-mercaptoethanol	244 mg/kg Oral LD50	112 - 224 mg/kg(Rabbit)	>4060mg/m <sup>3</sup> /4h

### Principal Routes of Exposure

<b>Acute toxicity</b>	Data are conclusive but insufficient for classification.
<b>Skin corrosion/irritation</b>	Data are conclusive but insufficient for classification
<b>Serious eye damage/irritation</b>	Data are conclusive but insufficient for classification
<b>Respiratory or skin sensitization</b>	May cause sensitization by skin contact
<b>Specific target organ toxicity (STOT) – single exposure</b>	Data are conclusive but insufficient for classification
<b>Specific target organ toxicity (STOT) – repeated exposure</b>	Data are conclusive but insufficient for classification
<b>Carcinogenicity</b>	Data are conclusive but insufficient for classification
<b>Germ cell mutagenicity</b>	Data are conclusive but insufficient for classification
<b>Reproductive toxicity</b>	Product is or contains a chemical which is a known or suspected reproductive hazard
<b>Aspiration hazard</b>	Data are conclusive but insufficient for classification

## SECTION 12: Ecological information

### Toxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Microtox Data	log Pow
2-mercaptoethanol	Desmodesmus subspicatus(LC50 (96h) = 19 mg/L)	Daphnia magna EC50=0,4 mg/L (48 h)	Leuciscus idus LC50(96h) = 37 mg/L	No data available	logPow-0.056

**Mobility in soil** No information available.

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.

### Results of PBT and vPvB assessment

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

**Other adverse effects** No information available.

## SECTION 13: Disposal considerations

### Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

## SECTION 14: Transport information

### IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations

<b>UN number or ID number</b>	Not Applicable
<b>UN proper shipping name</b>	Not Applicable
<b>Transport hazard class(es)</b>	Not Applicable
<b>Packing group</b>	Not Applicable

### Environmental hazards

Not Hazardous

### Special precautions for user

Not Applicable

### Maritime transport in bulk according to IMO instruments

Not Applicable.

## SECTION 15: Regulatory information

Component	US TSCA
2-mercaptoethanol 60-24-2 ( 0.1-0.9 )	Listed

### US Federal Regulations

#### SARA 313

This product is not regulated by SARA.

#### Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs

### US State Regulations

Chemical Name	Massachusetts - RTK (Right-to-Know)	New Jersey - RTK (Right-to-Know)	Pennsylvania - RTK (Right-to-Know)
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2-mercaptoethanol	Listed	Listed	Listed
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### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### WHMIS Hazard Class

D2B - Toxic materials

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

### National Regulations - Brazil

Chemical Name	CAS No.	Brazil - National Agency for Sanitary Surveillance (ANVISA)	Brazil - National List of Carcinogen Agents to Humans (LINACH)
2-mercaptoethanol	60-24-2	Not Listed	Not Listed

### SECTION 16: Other information

Reason for revision                      SDS sections updated.  
Revision number                            9  
Revision date                                21-Jul-2022

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### References

- ECHA: <http://echa.europa.eu/>
- TOXNET: <http://toxnet.nlm.nih.gov/>
- eChemPortal: <http://www.echemportal.org/>
- LOLI database: <https://www.chemadvisor.com/loli-database>

### Abbreviations and acronyms

**TWA** - Time-Weighted Average  
**OELs** - Occupational Exposure Limits  
**STEL** - Short Term Exposure Limit  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**CEPA** - Canadian Environmental Protection Act  
**EPA** - Environmental Protection Agency  
**OSHA** - Occupational Safety and Health Administration of the US Department of Labor  
**IATA** - International Air Transport Association  
**DOT** - Department of Transportation  
**IMDG** - International Maritime Dangerous Goods  
**ACGIH** - American Conference of Governmental Industrial Hygienists  
**NIOSH** - National Institute for Occupational Safety and Health  
**AIHA** - American Industrial Hygiene Association

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**HMIS** - Department of Defense Hazardous Materials Information System

**NTP** - National Toxicology Program

**IARC** - International Agency for Research on Cancer

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE"

**End of Safety Data Sheet**