

Safety Data Sheet

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Classification according to Regulation (EC) No. 1272/2008 [CLP]

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

Product identifier

Product code	21985023
Product name	2-MERCAPTOETHANOL (1000X)
Unique Formula Identifier (UFI)	Not Applicable
Chemical Name	Not Applicable
REACH registration number	No registration number is given yet for this substance / substances in this mixture since the annual import quantity is less than one tonnage per annum or the transition period for its registration according to Article 23 of REACH has not yet expired.

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	For research use only
Use Description Code	SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen), PROC15 - Use as laboratory reagent, PC21 - Laboratory chemicals, SU24 - Scientific research and development
Uses advised against	Not for consumer use.

Details of the supplier of the safety data sheet

Manufacturer / Supplier

LIFE TECHNOLOGIES EUROPE BV
KWARTSWEG 2
2665 NN BLEISWIJK
NETHERLANDS
31-(0)180 392 400
Email: MSDS@lifetech.com

Life Technologies Limited
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+44 (0)141 814 6100

Emergency telephone number

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

Country Specific Emergency Number (if available):

CHEMTREC Ireland (Dublin) +(353)-19014670 (Greeting Language: English and Irish)
CHEMTREC UK (London) +(44)-870-8200418 (Greeting Language: English)

SECTION 2: Hazards identification

Classification of the substance or mixture

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

Physical hazards

Not classified

Health hazards

Skin sensitiser	Category 1A
Reproductive Toxicity	Category 2

Environmental hazards

Not classified

Additional information

No information available

Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms



Signal Word

Warning

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/vapours/spray

P201 - Obtain special instructions before use

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

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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

SECTION 3: Composition/information on ingredients

Mixtures

Chemical Name	CAS No	EINECS-No.	Weight-%	REACH registration number	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-Mercaptoethanol	60-24-2	200-464-6	0.1-0.9	-	Acute Tox. 3 - H301 Acute Tox. 2 - H310 Acute Tox. 3 - H331 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317A Repr. 2- H361 STOT RE 2 - H373 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411

Chemical Name	Specific concentration limit (SCL)	M-Factor	Acute Toxicity Estimate
2-Mercaptoethanol	-	-	-

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SECTION 4: First aid measures

Description of first aid measures

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

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media	Water spray. Carbon dioxide (CO ₂). Foam. Dry chemical.
Unsuitable extinguishing media	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 labelled 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	EU OEL (TWA)	EU OEL (STEL)	EU Skin Notation
2-Mercaptoethanol 60-24-2	None	None	None

Chemical Name	Austria	Belgium (TWA)	Czech Republic
2-Mercaptoethanol 60-24-2	None	None	None

Chemical Name	Denmark (TWA)	Finland OEL (TWA)	France OEL (VME)
2-Mercaptoethanol 60-24-2	None	None	None

Chemical Name	Germany OEL (TWA)	Ireland (TWA)	Italy OEL (TWA)
2-Mercaptoethanol 60-24-2	None	None	None

Chemical Name	Lithuania OEL (TWA)	Netherlands OEL (MAC)	Norway
2-Mercaptoethanol 60-24-2	1 mg/m ³	None	None

Chemical Name	Poland	Portugal	Spain OEL (TWA)
2-Mercaptoethanol 60-24-2	None	None	None

Chemical Name	Sweden - Occupational Exposure Limits - TLVs (LLVs)	Switzerland	United Kingdom
2-Mercaptoethanol 60-24-2	None	None	None

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Exposure controls

Personal protection 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

Avoid discharge into drains and waterways whenever possible.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

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

Other information

Information with regards to physical hazard classes

No information available

Other safety characteristics

No information available

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

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

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

Principal Routes of Exposure

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

Information on other hazards

Endocrine disrupting properties

No information available

Other information

No information available

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

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

Results of PBT and vPvB assessment

No information available.

Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors

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 according to 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

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

Environmental hazards

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Not Hazardous

Special precautions for user

Not Applicable

Maritime transport in bulk according to IMO instruments

Not Applicable.

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Substances of Very High Concern

None

Substance subject to authorisation per REACH Annex XIV

None

Restricted substances under EC 1907/2006, Annex XVII

None

Regulation (EC) No 649/2012 (Rotterdam Convention - export/import of dangerous chemicals)

None

Regulation (EU) No 2019/1021 (Stockholm Convention – persistent organic pollutants)

None

EU - Substances Depleting the Ozone layer (1005/2009)

None

German Water hazard classes (Wassergefährdungsklassen)

Chemical Name	Weight-%	Water hazard class (WGK)
2-Mercaptoethanol	0.1-0.9	hazard class 3 - highly hazardous to water

Other International Inventories

Chemical Name	EINECS (European Union)	ELINCS (European List of Notified Chemical Substances)	ENCS (Japan)	PICCS (Philippines)
2-Mercaptoethanol	Listed	-	Listed	Listed

Chemical Name	AICS (Australia)	South Korea (KECL)	Canada (DSL)	NDSL
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2-Mercaptoethanol	Listed	Listed	Listed	-
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Chemical safety assessment

No Chemical safety assessment has been carried out.

SECTION 16: Other information

Reason for revision Update according to Commission Regulation EU No. 2020/878
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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>

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Skin sensitiser Category 1A Reproductive Toxicity Category 2
Calculation method

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 Labour
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
HMIS - Department of Defense Hazardous Materials Information System
NTP - National Toxicology Program
IARC - International Agency for Research on Cancer

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006.

"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"

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