



Safety Data Sheet Form
Ligation Enzyme (E)
R51/R52

1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Ligation Enzyme (E) R51/R52

1.2 Relevant identified uses of the substance or mixture

In vitro diagnostic use

1.3 Uses advised against

None

1.4 Details of the supplier of the safety data sheet

Omixon Biocomputing Ltd.

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1.5 Emergency telephone number

Call your local emergency centre

2 Hazardous identification

2.1 Classification of the substance or mixture

Not a hazardous mixture according to the CLP Regulation (EC) No. 1272/2008.

2.2 Label elements

No label elements are needed.

2.3 Other hazards

None.

3 Composition/Information on ingredients

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INGREDIENT	CLASSIFICATION SUBSTANCE	Identification numbers	Concentration
Tromethamine (TRIS)	Not classified	CAS: 77-86-1	< 1%
Glycerol	Not classified	CAS: 56-81-5	50%
Potassium Chloride	Not classified	CAS: 7447-40-7	< 1%
EDTA	Not classified	CAS: 6381-92-6	< 1%
(R*,R*)-1,4-dimercaptobutane-2,3-diol (DTT)	Acute toxicity, Oral (Cat 4), H302 Skin irritation (Cat 2), H315 Eye irritation (Caty 2), H319 STOT - SE (Cat 3), Respiratory system, H335	CAS: 3483-12-3 EC nr. 222-468-7	< 1%
Hydrochloric Acid	Skin corrosion (Cat 1B), H314 STOT - SE (Cat 3), Respiratory system, H335	CAS:7647-01-0	< 1%

4 First aid measures

4.1 Description of first aid measures

Eyes: Flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating eyelids. Call a physician.

Skin: Wash skin with soap and copious amount of water.

Ingestion: If the person is conscious, wash out mouth with water. Call a physician.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5 Fire fighting measures

Extinguishing Media: Carbon dioxide, dry chemical powder or appropriate foam.

Special Fire Fighting Procedures: Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Fire and Explosion Hazards: Combustible liquid. Emits toxic fumes (carbon and sulfur oxides and hydrogen sulfide) under fire conditions.

6 Accidental release measures

Personal Precautions: Avoid breathing or contact with vapors, mist of gas.

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Environmental Precautions: Do not let product enter drains.

Methods For Cleaning Up: Absorb spill with inert material, then place in a chemical waste container. Dispose of in a manner consistent with federal, local law.

7 Handling and storage

Handling: Provide appropriate exhaust ventilation.

Storage: Keep tightly closed in a dry and well ventilated place. Store at -20°C

Specific end use(s): Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8 Exposure controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure Controls

Engineering Controls: Safety shower and eye wash. Mechanical exhaust.

Personal Protective Equipment:

Eye Protection: Safety goggles.

Hand Protection: Compatible resistant gloves.

Respiratory Protection: None required.

Hygiene Measure: General practice, wash (hands and skin) thoroughly after handling. Remove and wash contaminated clothing.

9 Physical and chemical properties

Physical State: Form: Liquid	Color: Clear	Odor: Faint
Property	Value	Temperature or Pressure
Boiling Point Range:		289°C
Melting Point Range:		18°C
Flash Point:		193°C
Auto Ignition Temp:		400°C
Vapor Pressure:		0.0025 mm Hg @ 5°C
Vapor Density:		3.17 g/l
Specific Gravity:		1.2610 g/cm ³
Solubility in Water:		Miscible in water
pH:		5.5-8.0

10 Stability and reactivity

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10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Protect from heat and moisture.

10.5 Incompatible materials

Strong oxidizing agents, strong bases.

10.6 Hazardous decomposition products

Carbon monoxide, carbon dioxide

11 Toxicological information

11.1 Information on toxicological effects

(R*,R*)-1,4-dimercaptobutane-2,3-diol (DTT)

Acute toxicity

LD50 Oral - Rat - 400 mg/kg

Inhalation: No data available

Skin corrosion/irritation

The preceding data, or interpretation of data, was determined using Quantitative Structure Activity Relationship (QSAR) modeling.

Serious eye damage/eye irritation

The preceding data, or interpretation of data, was determined using Quantitative Structure Activity Relationship (QSAR) modeling.

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: EK1610000

Nausea, Headache, Vomiting, Central nervous system depression, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

12 Ecological information

12.1 Toxicity

(R*,R*)-1,4-dimercaptobutane-2,3-diol (DTT)

Toxicity to daphnia and other aquatic invertebrates

LC50 - Daphnia magna (Water flea) - 27 mg/l - 48 h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

13 Disposal considerations.

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13.1 Waste treatment methods

Dispose of container, unused contents and contaminated packaging in accordance with federal, state and local requirement. Contract with a licensed Chemical Waste Disposal Service. Dissolve or mix with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

14 Transport information

This product is not dangerous and no special precautions are needed according to DOT, ADR/RID (cross border), IMDG and IATA/ICAO.

15 Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No data available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

16 Disclaimer

Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

The information provided on the SDS is furnished in good faith and based on our present knowledge. However, this SDS shall not constitute a guarantee of any kind. Personnel handling this material must make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of this material and the safety and health of employees and customers. Omixon assumes no additional liability or responsibility resulting from the use of, or reliance on this Information. This product is for R&D use only. Not for drug, household or other uses.

Changes to previous version of the SDS :

None this is the first version of the document.