

SAFETY DATA SHEET

L-Cysteine

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

1.1 PRODUCT IDENTIFIER

L-Cysteine

ARTICLE NUMBERS

-

1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Laboratory chemicals, for research use only.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Supplier: Gyros Protein Technologies AB
Address: Uppsala Science Park, 751 83 Uppsala
Telephone: +46 18-566 300
Fax: +46 18-566 350
E-mail: information@gyrosproteintech.com
Webpage: www.gyrosproteintechnologies.com

1.4 EMERGENCY TELEPHONE NUMBER

Local emergency number (acute)

Swedish Poisons Information Centre +46 (0)10-456-67-00 (working hours)

Section 2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE ACCORDING TO CLP (REGULATION 1272/2008/EC): GHS07; Acute Tox. 4: H302.

2.2 LABEL ELEMENTS

LABELLING ACCORDING TO CLP (REGULATION 1272/2008/EC)

Hazard pictogram(s)

GHS07



Signal word(s)

Warning

Hazard statement(s)

H302 – Harmful if swallowed.

Precautionary statement(s)

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P301 + P312 – IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

Other information:

-

2.3 OTHER HAZARDS

The product does not fulfill the criteria for PBT or vPvB substances.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

Composition according to CLP (Regulation 1272/2008/EC)

Substance	EC nr	Reg. nr	CAS nr	%	Pictogram	H-phrases*	Category
L-Cysteine	200-158-2	01-2120 0474 94-54	52-90-4	100 %	GHS07 Warning	H302	Acute Tox. 4

Section 4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

GENERAL RECOMMENDATION

Keep the victim warm and calm. Never give anything to eat or drink to an unconscious person. If uncertain or if symptoms remain, consult a doctor. Show this SDS to medical personnel.

AFTER INHALATION

Supply fresh air and rest. Consult a doctor if symptoms remain.

AFTER SKIN CONTACT

Rinse with soap and water. Consult a doctor if symptoms remain.

AFTER EYE CONTACT

Rinse opened eye for several minutes under running water. Keep eyelids apart. Remove contacts if present. Consult a doctor if symptoms remain.

AFTER INGESTION

Rinse the mouth with running water. Drink a few glasses of water. Consult a doctor if symptoms remain.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECT, BOTH ACUTE AND DELAYED

Harmful if swallowed. May cause nausea and vomiting. Drowsiness. Inhalation of dust may cause mild irritation of the respiratory tract.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

Section 5. FIREFIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Choose suitable extinguishing media for the surrounding fire. Water mist, alcohol-resistant foam, powder, sand, carbon monoxide (CO₂).

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5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Combustible. Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide (CO). Sulphur oxides (SO_x).

5.3 ADVICE FOR FIREFIGHTERS

In case of fire: Wear self-contained breathing apparatus.

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin and eyes. Use personal protection equipment. Provide adequate ventilation. Wear personal protection equipment, see Section 8.

6.2 ENVIRONMENTAL PRECAUTIONS

Do not allow entering sewers/ surface or ground water. Inform the emergency services in case of a big spill.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Take up mechanically, placing in appropriate containers for disposal. Avoid dust formation. Clear contaminated areas thoroughly.

6.4 REFERENCE TO OTHER SECTIONS

Refer to section 8 and 13 of this SDS for information on protective equipment and waste handling.

Section 7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Use protective equipment according to section 8 of this SDS. Wash of hands after working with the product. No eating or drinking when working with the product. Avoid formation of dust. Avoid contact with eyes and skin. Remove all sources of ignition.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep container tightly closed. Keep container tightly closed in a well-ventilated place at 15-25°C. Protect from direct sunlight and heat.

7.3 SPECIFIC END USE(S)

See EWC code in section 13 of this SDS.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMIT VALUES (ACCORDING TO DIRECTIVES 91/322/EEG, 2000/39/EG AND 2006/15/EG)

No values apply to the product.

PNEC

No data available.

DNEL

No data available.

EXPOSURE CONTROLS

RESPIRATORY PROTECTION

Ensure adequate ventilation. In case of insufficient ventilation, use particle filter P2.

HAND PROTECTION

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Use protective gloves made of nitrile or butyl rubber (thickness: > 0.11 mm; breakthrough time: 480 min) when working with laboratory chemicals. Contact your supplier of protective equipment for more information.

EYE/FACE PROTECTION

Splash proof safety glasses or goggles should be used when working with all laboratory chemicals.

SKIN PROTECTION

Laboratory coat or overalls.

HYGIENE MEASURES

No food, drinks or smoking at the workplace. Remove all contaminated clothes. Wash hands and/or face before breaks and at the end of the workday.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 INFORMATION ON FUNDAMENTAL PHYSICAL AND CHEMICAL PROPERTIES**

(a) Appearance	White/whitish Solid
(b) Odour	Characteristic
(c) Odour threshold	No information available
(d) pH	4,5-5,5 (water: 25 g/L) at 20°C
(e) Melting point/ freezing point	220-228°C
(f) Initial boiling point and boiling range	No information available
(g) Flash point	No information available
(h) Evaporation rate	No information available
(i) Flammability (gas, solid)	Not determined
(j) Upper/lower flammability or explosive limits	Not determined
(k) Vapour pressure	Not determined
(l) Vapour density	Not determined
(m) Relative density	Not determined
(n) Solubility(ies)	160 g/l (water) at 20°C
(o) Partition coefficient: n-octanol/water	Log Pow: -2,49 (experimental data)
(p) Auto-ignition temperature	420°C
(q) Decomposition temperature	Not determined
(r) Viscosity	Not relevant
(s) Explosive properties	None
(t) Oxidizing properties	None
Solvent content	No data available

9.2 OTHER INFORMATION

Physical hazard class: -

9.2.2 Other safety characteristics

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a)	mechanical sensitivity	Not determined
b)	self-accelerating polymerisation temperature	Not determined
c)	formation of explosible dust/air mixture	Not determined
d)	acid/alkaline reserve	Not determined
e)	evaporation rate	Not determined
f)	miscibility	Not determined
g)	conductivity	Not determined
h)	corrosiveness	Not determined
i)	gas group	Not determined
j)	redox potential	Not determined
k)	radical formation potential	Not determined
l)	photocatalytic properties	Not determined

Section 10. STABILITY AND REACTIVITY

10.1 REACTIVITY

Stable under normal conditions of handling and storage.

10.2 CHEMICAL STABILITY

Stable under normal conditions of handling and storage.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Violent reaction with strong oxidizer.

10.4 CONDITIONS TO AVOID

Protect from heat, direct sunlight and moisture.

10.5 INCOMPATIBLE MATERIALS

Not known under normal conditions of handling and storage.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition can lead to the escape of irritating gases and vapours.

In case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide (CO). Sulphur oxides.

Section 11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

	ACUTE EFFECTS	CHRONIC EFFECTS
SKIN CONTACT	-	-
EYE CONTACT	-	-
INHALATION	Dust can cause mild irritation to the respiratory tract.	-
INGESTION	Dangerous if swallowed. Drowsiness. May cause nausea and vomiting.	-

ACUTE TOXICITY

TOXICOLOGICAL DATA FOR THE PRODUCT AS IS

(a) acute toxicity

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Cysteine:

LD50 Oral rat: 1890 mg/kg Bodyweight (not acute-toxic)

(b) skin corrosion/irritation

No corrosive/irritating effects known.

(c) serious eye damage/irritation

Irritating to eyes.

(d) respiratory or skin sensitisation

No sensitizing effects known.

(e) germ cell mutagenicity

No mutagenicity known.

(f) carcinogenicity

No carcinogenicity known.

(g) reproductive toxicity

No reproductive toxicity known

(h) STOT-single exposure

No effects known.

(i) STOT-repeated exposure

No effects known.

(j) aspiration hazard

No effects known.

INTERACTIVE EFFECTS

No interactive effects known.

MISSING DATA

-

Other information:

No endocrine disruptors are present in notifiable concentrations.

Section 12. ECOLOGICAL INFORMATION

12.1 TOXICITY

Not classified as an environmental hazard.

ECOLOGICAL DATA FOR THE PRODUCT AS IS

No data available.

ECOLOGICAL DATA FOR INCLUDED COMPONENTS

Cysteine:

Bioaccumulation

Log Pow: -2,49 (no bioaccumulation expected)

12.2 PERSISTENCE AND DEGRADABILITY

No data available.

12.3 BIOACCUMULATIVE POTENTIAL

Not expected to bioaccumulate to a significant degree.

12.4 MOBILITY IN SOIL AND WATER

No data available.

12.5 RESULTS OF PBT AND vPvB ASSESSMENT

No data available.

12.6 ENDOCRINE DISRUPTORS

No endocrine disruptors are present in notifiable concentrations

12.7 OTHER ADVERSE EFFECTS

No other adverse effects known.

SUMMARY

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The product is not classified as an environmental hazard. However, do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Section 13. DISPOSAL CONSIDERATIONS

13.1 DISPOSAL FROM EXCESS/UNUSED PRODUCT

Unused product is hazardous waste according to directive 2000/532/EC.

Suggestion of EWC codes:

07 07 wastes from the MFSU of fine chemicals and chemical products not otherwise specified

07 07 04* other organic solvents, washing liquids and mother liquors.

WASTE

Waste is classified as hazardous waste and should be taken care of in conformity with national and local regulations.

WASTE TREATMENT METHODS

Hazardous waste and should be taken care of in conformity with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging is considered hazardous waste but should be taken care of in conformity with national and local regulations.

Section 14. TRANSPORT INFORMATION

Not classified as dangerous goods according to ADR/RID/IMO/DGR.

14.1 UN number

-

14.2 UN proper shipping name

-

14.3 Transport hazard class(es)

-

14.4 Packing group

-

14.5 Environmental hazards

-

14.6 Special precautions for user

-

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

-

Section 15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Safety data sheet and classification in accordance with CLP (Regulation 1272/2008/EC) and Commission Regulation (EU) 878/2020 (REACH, Annex II).

CHEMICAL SAFETY ASSESSMENT

A Chemical safety assessment (CSA) according to REACH has not been conducted for the product. See section 16 for further information.

Section 16. OTHER INFORMATION

H PHRASES GIVEN UNDER SECTION 3 IN PLAIN TEXT

H302 – Harmful if swallowed.

LEGEND TO ABBREVIATIONS

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LITERATURE REFERENCES AND SOURCES FOR DATA

Refer to chemical safety assessment (CSA) for sources.

CHANGES MADE IN CASE OF REVISIONS

Version A: First edition.

OTHER

The current Material Safety Data Sheet was defined by Gyros AB on the basis of knowledge of the product at the date of issue.

It is the duty of the operator

- to develop under his own responsibility, the safety dispositions regarding the operation of the product taking into account the data from this form
- to pass to all users and operators the appropriate safety data and warning regarding the risks mentioned in the documentation relative to the utilisation of the product
- to be cautious of possible risks faced when the product is used for other utilisation than those for which it has been designed

This SDS has been compiled with assistance from Amasis Konsult AB, Solna, Sweden.