According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

Captopril

Version number: 2.0
Issued: 2024-01-23
Replaces SDS: 2019-10-17

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

1.1. Product identifier

Trade name
Captopril

CAS number
62571-86-2

EC number
263-607-1

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

Relevant identified uses
Research and development.

Not suitable for use in
Not suitable for human consumption or veterinary purposes.

1.3. Details of the supplier of the safety data sheet

Supplier
Molekula Group

Address
Molekula Ltd, Lingfield Way, Darlington,
DL1 4XX Darlington
United Kingdom

Telephone
+44 (0) 3302 000 333

Email
info@molekula.com

Web site
www.molekula.com

Contact person
Kevin Banks

Email
+44 (0) 7769276927

1.4. Emergency telephone number

Poison center/Additional emergency number
0344 892 0111 - National Poisons Information Service (Newcastle Centre)

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

Captopril

Version number: 2.0
Issued: 2024-01-23
Replaces SDS: 2019-10-17

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Classification

Acute toxicity, oral, hazard category 5
Skin sensitisation, hazard category 1
Reproductive toxicity, hazard category 1A
Specific Target Organ Toxicity — Repeated exposure, hazard category 2

Hazard statements

H303, H317, H360, H373

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H303 May be harmful if swallowed.
H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P314 Get medical advice/attention if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of water/.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P333 +P313 If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards

No data available

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

Captopril

Version number: 2.0
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SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Note
1-[(2S)-2-Methyl-3-sulfanyl-propanoyl]-L-proline	62571-86-2 263-607-1 - -	100%	Acute Tox. 5 - oral, Skin Sens. 1, Repr. 1A, STOT RE 2	H303, H317, H360, H373 - -	-

Molecular weight
217.29

Substance additional information
For the complete text of H- / EUH-statements mentioned in this section, see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel.

Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing. In case of persistent throat irritation or coughing: Seek medical attention and bring these instructions.

Skin contact
IF ON SKIN: Wash with plenty of water. Continue to rinse for at least 15 minutes and seek medical attention. Get medical advice/attention if you feel unwell.

Eye contact
Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.

Ingestion
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

Information for doctors
First aiders/ medical personnel need to protect themselves.

4.2. Most important symptoms and effects, both acute and delayed

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

Inhalation
Single exposure may cause the following adverse effects: Upper respiratory irritation.

Skin contact
Single exposure may cause the following adverse effects: Skin sensitisation: May irritate.

Eye contact
Single exposure may cause the following adverse effects: May cause temporary eye irritation.

Ingestion
Single exposure may cause the following adverse effects: Severe abdominal pain. Nausea, vomiting.

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically. No special treatment requirement.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

Unsuitable extinguishing media
No specific fire fighting procedure given.

5.2. Special hazards arising from the substance or mixture
Specific hazards: Combustible.
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Carbon dioxide (CO2). Carbon monoxide (CO). Nitrous gases (NOx). Sulphurous gases (SOx).

5.3. Advice for firefighters
Special protective equipment for fire-fighters
Evacuate area. Avoid breathing gas, fume, vapours or spray. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. Avoid contact with skin and eyes. For personal protection, see section 8.

6.2. Environmental precautions
Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Collect spillage with shovel, broom or the like and reuse, if possible. Dispose of large amounts of spillage/waste according to agreement with local authorities.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

For precautions see section 2.2. Wear protective clothing, gloves, eye and face protection. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid ingestion and inhalation.

General hygiene

Observe good chemical hygiene practices. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove contaminated clothing and launder thoroughly before re-use. Wash skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Store at ambient temperature. Store in a dry place. Store in a closed container.

7.3. Specific end use(s)

No specific usage precautions noted.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available

8.2. Exposure controls

Personal Protective Equipment Symbols



Eye / face protection

Wear eye protection.

Hand protection
Wear protective gloves.
Recommended gloves: Nitrile.
Glove Thickness: 0.11mm
Breakthrough time: 8 hours

Always inspect gloves before use. If signs of wear and tear are noticed then the gloves should be replaced.

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. Wash contaminated skin thoroughly after handling.

Other skin protection
Wash skin thoroughly after handling.

Respiratory protection
Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided.

Environmental exposure controls
Avoid discharge into drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state
Solid

Colour
White.

Odour
Sulphur.

Melting point / freezing point
103 - 110 °C

Boiling point or initial boiling point and boiling range
427 °C

Flammability
No data available

Lower and upper explosion limit
No data available

Flash point
No data available

Auto-ignition temperature
No data available

Decomposition temperature
No data available

pH
2 - 2.6
Method
(2.0% aq.)

Kinematic viscosity
No data available

Solubility
Soluble in water.

Partition coefficient n-octanol/water
No data available

Vapour pressure
No data available

Density and/or relative density
1.272 g/cm³

Relative vapour density
No data available

Particle characteristics
No data available

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
The following applies in general to flammable organic substances and mixtures: when finely distributed, the risk of a dust explosion may be assumed.

10.2. Chemical stability
Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

Avoid dust formation. Avoid dust close to ignition sources.

10.5. Incompatible materials

Strong oxidising agents.

10.6. Hazardous decomposition products

See section 5.

SECTION 11: Toxicological information

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

Acute toxicity

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Test animals	Remarks
1-[(2S)-2-Methyl-3-sulfanylpropanoyl]-L-proline 62571-86-2 / 263-607-1	Acute Toxicity (Oral LD50):	4,245mg/kg	Rat	(RTECS)

Respiratory or skin sensitisation

Product / Substance name CAS / EC no.	Result	Species
1-[(2S)-2-Methyl-3-sulfanylpropanoyl]-L-proline 62571-86-2 / 263-607-1	The product is a skin sensitiser	Guinea Pig

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

No data available

SECTION 12: Ecological information

12.1. Toxicity

No data available

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
No data available

12.6. Endocrine disrupting properties
This product does not contain any known or suspected endocrine disruptors.

12.7. Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Disposal considerations
Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

14.1. UN number
Not applicable

14.2. UN proper shipping name
Not applicable

14.3. Transport hazard class(es)
Not applicable

14.4. Packing group
Not applicable

14.5. Environmental hazards
Not applicable

14.6. Special precautions for user
Not applicable

14.7. Maritime transport in bulk according to IMO instruments
Not applicable

Captopril

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SECTION 15: Regulatory information

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

EU regulations

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
This material safety data sheet complies with the requirements of Regulation (EU) 2020/878.

National regulations

No data available

15.2. Chemical safety assessment

No data available

SECTION 16: Other information

Phrase meaning

Acute Tox. 5 - oral - Acute toxicity, oral, hazard category 5
Skin Sens. 1 - Skin sensitisation, hazard category 1
Repr. 1A - Reproductive toxicity, hazard category 1A
STOT RE 2 - Specific Target Organ Toxicity — Repeated exposure, hazard category 2
H303 May be harmful if swallowed.
H317 May cause an allergic skin reaction.
H360 May damage fertility or the unborn child.
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