

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Revision date: 06.12.2019

1,4-Dithio-DL-threitol

Product code: 4031235

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

1,4-Dithio-DL-threitol

CAS No: 3483-12-3

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

Laboratory chemicals

1.3. Details of the supplier of the safety data sheet

Company name: Bachem AG
Street: Hauptstrasse 144
Place: CH-4416 Bubendorf
Telephone: +41 58 595 2021 Telefax: +41 58 595 2040
e-mail (Contact person): msds@bachem.com
Responsible Department: Department: Global Marketing

1.4. Emergency telephone number: +41 44 251 51 51 (Tox Info Suisse)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause respiratory irritation.

2.2. Label elements**Regulation (EC) No. 1272/2008****Signal word:** Warning**Pictograms:****Hazard statements**

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements

P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P337+P313

If eye irritation persists: Get medical advice/attention.

SECTION 3: Composition/information on ingredients**3.1. Substances**

Sum formula: C4H10O2S2

Molecular weight: 154.25

Hazardous components

CAS No	Chemical name	Quantity		
	EC No	Index No	REACH No	
	GHS Classification			
3483-12-3	1,4-Dithio-DL-threitol			100 %
	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H302 H315 H319 H335			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Change contaminated, saturated clothing. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Seek medical advice immediately.

After contact with skin

Rinse cautiously with water for several minutes. Seek medical advice immediately.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion

IF SWALLOWED: rinse mouth. Never give anything by mouth to an unconscious person or a person with cramps. Seek medical advice immediately.

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

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Dry extinguishing powder

Unsuitable extinguishing media

No information available.

5.2. Special hazards arising from the substance or mixture

Carbon monoxide Carbon dioxide (CO₂) Nitrogen oxides (NO_x) Sulphur dioxide (SO₂)

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

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Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Use personal protection equipment. Avoid contact with skin, eyes and clothes. Do not breathe dust/fume/gas/mist/vapours/spray. Remove persons to safety.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Cover drains.

6.3. Methods and material for containment and cleaning up

Collect spillage. Avoid dust formation.

6.4. Reference to other sections

Safe handling: see section 7

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Provide adequate ventilation. Use personal protection equipment. Avoid contact with skin, eyes and clothes. Do not breathe dust/fume/gas/mist/vapours/spray. Keep container tightly closed and dry.

Advice on protection against fire and explosion

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

Further information on handling

No information available.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Recommended storage temperature: 2-8°C

Hints on joint storage

Do not store together with:
Food and feedingstuffs

Further information on storage conditions

Protect against:
Frost
Heat
Humidity

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Additional advice on limit values**

To date, no national critical limit values exist.

8.2. Exposure controls**Appropriate engineering controls**

Provide adequate ventilation as well as local exhaust at critical locations.

Protective and hygiene measures

Work in well-ventilated zones or use proper respiratory protection. Only wear fitting, comfortable and clean protective clothing. Avoid contact with skin, eyes and clothes. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink or smoke.

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Eye/face protection

Suitable eye protection:

Eye glasses with side protection
goggles**Hand protection**

Wear protective gloves.

Suitable material: NBR (Nitrile rubber), Butyl caoutchouc (butyl rubber)

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Protective clothing

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.:

Self-contained respirator (breathing apparatus) (DIN EN 133)

Combination filtering device (EN 14387)

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	solid
Colour:	white
Odour:	This information is not available.
pH-Value:	No data available

Changes in the physical state

Melting point:	47 °C
Initial boiling point and boiling range:	No data available
Sublimation point:	No data available
Softening point:	No data available
Flash point:	No data available
Sustaining combustion:	No data available

Explosive properties

No data available

Lower explosion limits:	No data available
Upper explosion limits:	No data available
Ignition temperature:	No data available
Decomposition temperature:	No data available

Oxidizing properties

No data available

Vapour pressure:	No data available
Density:	No data available
Bulk density:	No data available
Water solubility: (at 25 °C)	50 g/L

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Partition coefficient:	No data available
Viscosity / dynamic:	No data available
Viscosity / kinematic:	No data available
Vapour density:	No data available
Evaporation rate:	No data available
Solvent content:	No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability

The substance is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

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

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
3483-12-3	1,4-Dithio-DL-threitol				
	oral	ATE mg/kg	500		

Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause respiratory irritation. (1,4-Dithio-DL-threitol)

STOT-repeated exposure

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

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Aspiration hazard

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

SECTION 12: Ecological information**12.1. Toxicity**

The product has not been tested.

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number:**

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)**14.1. UN number:**

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

Marine transport (IMDG)**14.1. UN number:**

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

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Air transport (ICAO-TI/IATA-DGR)

- 14.1. UN number:** No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

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

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

National regulatory information

SECTION 16: Other information**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer
(Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
CAS: Chemical Abstracts Service (division of the American Chemical Society)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures
ATE: Acute toxic estimate
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
EC50: Effectice concentration, 50 percent
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.