

# Material Safety Data Sheet

According to 1907/2006/EC, Article 31



# GENAXXON

b i o s c i e n c e

Product number: M6031

Product name :

DTT, Biochemica

## 1. Identification of the substance/preparation and of the company

**Product Name:** DTT, Biochemica

**Product number:** M6031

**CAS number:** 3483-12-3

**EC number:** 222-468-7

**Index number:**

**Relevant identified uses of the substance or mixture and uses advised against:** No further relevant information available.

**Application of the substance / the preparation:** Laboratory chemical.

### Details of the supplier of the safety data sheet

#### Manufacturer /Supplier:

Genaxxon bioscience GmbH, Söflinger Str. 100, 89077 Ulm/Germany.

Tel.: +49 (0)731 3608 123, info@genaxxon.com

#### Further information available from:

Genaxxon bioscience GmbH, Söflinger Str. 100, 89077 Ulm/Germany.

Tel.: +49 (0)731 3608 123, info@genaxxon.com

#### Information in case of emergency:

Poison Information Centre Mainz, Germany

Tel.: +49 (0)6131 19240 / 24 h

**NOTE:** If this product is a kit or supplied with more than one material, please refer to the MSDS for each component for hazard information.

#### Product Use:

This products are for laboratory research use only and are not intended for human or animal diagnostics, therapeutics or other clinical uses.

## 2. Hazardous identification

### Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008



**GHS07**

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

#### Classification according to EU Directives 67/548/EEC or 1999/45/EC



Xn; Harmful

R22: Harmful if swallowed



Xi; Irritant

R36/38: Irritating to eyes and skin.

**Information concerning particular hazards for human and environment:** Not applicable.

#### Label elements

#### Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

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## Hazard pictograms



GHS07

**Signal word:** Warning

Hazard-determining components of labelling:

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

### Hazard statements

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

### Precautionary statements

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P350 If ON SKIN: Gently wash with plenty of soap and water.

### Other hazards

### Results of PBT and vPvB assessment.

**PBT:** Not applicable

**vPvB:** Not applicable

## 3. Composition/Information on Ingredients

### Chemical characterisation: Substances

**CAS-No.:** Description

3483-12-3 (R\*,R\*)-1,4-dimercaptobutane-2,3-diol

**Identification number(s)**

**EC-number:** 222-468-7

## 4. First-aid measures

### Description of first aid measures

#### General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Involve doctor immediately.

**After inhalation:** Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

**After skin contact:** Wash off with plenty of water. Immediately remove any clothing soiled by the product. Call a doctor immediately

**After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** Rinse out mouth. Make victim drink water (max. of 2 drinking glasses). Seek medical treatment. Call for a doctor immediately.

#### Information for doctor:

**Most important symptoms and effects, both acute and delayed:** No further relevant information available.

**Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

## 5. Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing agents:

Use fire extinguishing methods suitable to surrounding conditions.

In adaption to materials stored in the immediate neighbourhood.

#### Special hazards arising from the substance or mixture:

Combustible.

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Forms explosive mixtures with air on intense heating.  
Vapours are heavier than air and may spread along floors.  
Development of hazardous combustion gases or vapours possible in the event of fire.  
In case of fire the following can be released:

Carbon oxides (CO, CO<sub>2</sub>)

Sulphur oxides (SO<sub>2</sub>, SO<sub>3</sub>, ...)

**Advice for fire fighters:**

**Protective equipment:**

Mouth respiratory protective device.

Wear self-contained respiratory protective device.

**Additional information:**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Contain escaping vapours with water.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Avoid formation of dust.

Do not inhale dust.

Mount respiratory protective device.

Avoid substance contact.

Ensure adequate ventilation.

**Environmental precautions:** Do not allow product to enter sewage system, surface or ground water.

Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up:

Pick-up mechanically.

Avoid generation of dust.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Clean up affected area.

### Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7. Handling and storage

### Handling

#### Precautions for safe handling:

Prevent formation of dust.

Any unavoidable deposit of dust must be regularly removed.

**Information about fire – and explosion protection:** Normal measures for preventive fire protection. No special measures required.

### Conditions for safe storage, including any incompatibilities

#### Storage:

**Requirements to be met by storerooms and receptacles:** No special measures required.

**Information about storage in one common storage facility:** Not required.

#### Further information about storage conditions:

Keep container tightly closed.

Store under lock and key and with access restricted to technical experts or their assistants only.

**Recommended storage temperature:** 2°C - 8°C

**Storage class:** 10 – 13

**Specific end use(s):** No further relevant information available

## 8. Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

### Control parameters

#### Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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**Additional information:** The lists valid during the making were used as basis.

## Exposure controls:

### Personal protective equipment:

#### General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and skin.

Change contaminated clothing.

#### Respiratory protection:



Required when dusts are generated

Filter P2

#### Protection of hands:



Protective gloves

The glove material has to be impermeable and resist ant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

#### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

#### Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

#### For the permanent contact gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.11$  mm

Value for permeation: Level:  $>480$  min.

#### As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.11$  mm

Value for the permeation: Level  $\geq 480$  min.

#### Eye/face protection:



Tightly sealed goggles

#### Body protection:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

##### Appearance:

Form:

Solid

Colour:

White

Odour:

Rotten

Odour threshold:

Not determined

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<b>pH-value at 20°C:</b>	5.1
<b>Change in conditions</b>	
<b>Melting point/Melting range:</b>	40°C - 43°C
<b>Boiling point/Boiling range:</b>	Undetermined
<b>Flash point:</b>	>110°C
<b>Flammability (solid, gaseous):</b>	Product is not flammable
<b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined
<b>Self-ignition:</b>	Not determined
<b>Danger of explosion:</b>	Product does not present an explosion hazard
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined
<b>Vapour pressure:</b>	Not applicable
<b>Density (20°C):</b>	Not determined
<b>Bulk density at 20°C:</b>	300 kg/m <sup>3</sup>
<b>Relative density:</b>	Not determined
<b>Vapour density:</b>	Not applicable
<b>Evaporation rate:</b>	Not applicable
<b>Solubility in / Miscibility with (water, 20°C):</b>	1500g/L
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable
<b>Kinematic:</b>	Not applicable
<b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0%
<b>VOC (EC)</b>	0.00%
<b>Solids content:</b>	100.0%
<b>Other information</b>	No further relevant information available

## 10. Stability and reactivity

### Reactivity

#### Chemical stability

**Thermal decomposition / conditions to be avoided:** Strong heating.

**Possibility of hazardous reactions:** No dangerous reactions known.

#### Conditions to avoid:

Strong heating.

No further relevant information available.

#### Incompatible materials:

increased reactivity with: strong oxidants.

**Hazardous decomposition products:** In the event of fire: See chapter 5.

**Additional information:** hygroscopic

## 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity:

**LD/LC50 values relevant for classification:**

**3483-12-3 (R\*,R\*)-1,4-dimercaptobutane-2,3-diol**

Oral LD50 400mg/kg (rat)

#### Primary irritant effects:

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**on the skin:** Irritant to skin and mucous membranes.

**on the eye:** Severe irritations..

**After inhalation:** Irritant to skin and mucous membranes.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:** None.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. Ecological Information

### Toxicity

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability:** No further relevant information available.

**Behaviour in environmental systems:**

**Bioaccumulative potential:** No further relevant information available.

**Mobility in soil:** No further relevant information available.

**Additional ecological information:**

**General notes:**

Water hazard class 3 (German Regulation) (Self assessment): extremely hazardous for water.

Danger to drinking water if even small quantities leak into the ground.

Do not allow product to reach ground water, water course or sewage system.

Do not allow to enter water, waste water, or soil.

**Results of PBT andvPvB assessment**

**PBT:** Not applicable

**vPvB:** Not applicable

**Other adverse effects:** No further relevant information available

## 13. Disposal considerations

### Waste treatment methods

#### Recommendation:

Chemicals must be disposed of in compliance with the respective national regulations.

Must not be disposed together with household garbage. Do not allow product to reach sewage system. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

#### Uncleaned packaging:

##### Recommendation:

Disposal must be made according to official regulations.

Packaging the may not be cleansed are to be disposed of in the same manner as the product.

**Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14. Transport information

### UN-Number

**ADR/RID, ADN, IMDG, IATA:** Void

### UN proper shipping name

**ADR/RID, ADN, IMDG, IATA:** Void

### Transport hazard class(es)

**ADR/RID, ADN, IMDG, IATA:** Void

### Class

Void

### Packaging group

**ADR/RID, IMDG, IATA:** Void

### Environmental hazards:

**Marine pollutant:** No

**Special precautions for user:** Not applicable

### Transport in bulk according to Annex II of

**MARPOL73/78 and the IBC Code** Not applicable

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**Transport/Additional information:** Not dangerous according to the above specifications.

**UN "Model Regulation":** -

## 15. Regulatory information

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**National Regulations:** Germany

**Waterhazard class:** Water hazard class 3 ( Self-assessment): extremely hazardous for water.

## 16. Other information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Genaxxon BioScience GmbH, shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

### Disclaimer

This product is for R&D use only. Not for drug, household or other uses.

### Abbreviations and Acronyms:

ACAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS: Chemical Abstracts Service (division of the American Chemical Society)

EINECS: European Inventory of Existing Commercial Chemical Substances

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

GHS: Globally Harmonized System of Classification and labeling of Chemicals

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

IMDG: International Maritime code for Dangerous Goods

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

VOC: Volatile Organic Compounds (USA, EU)