



Safety Data Sheet

This safety data sheet complies with the requirements of:
JIS Z 7253:2019

Revision Date 2021-02-10
Revision Number 7

1. Identification

Product Name Dithiothreitol (DTT)
Product Code ST0643
CAS-No 7732-18-5
Registration number No information available
Details of the supplier of the safety data sheet

Supplier

Japan:

Takara Bio Inc.

Nojihigashi 7-4-38

Kusatsu, Shiga 525-0058, Japan

Phone: +81.77.565.6972

Web: www.takara-bio.com

China:

Takara Biomedical Technology (Beijing) Co., Ltd.

Life Science Park, 22 KeXueYuan Road, Changping District,

Beijing 102206, China

Phone: +86 10 8072 0980

Web: www.takarabiomed.com.cn

Emergency telephone number In case of emergency, call PERS (Professional Emergency Resource Services)
1-800-633-8253 (US) or 801-629-0667 (international).

Recommended use of the chemical and restrictions on use

Identified uses For research use only. Not for use in diagnostic procedures

Restrictions on use No information available

2. Hazard(s) identification

GHS Classification

Not classified

| | |
|--|--------------------------------|
| Acute toxicity - Oral | Classification not possible |
| Acute toxicity - Dermal | Classification not possible |
| Acute toxicity - Inhalation (Gases) | Classification not applicable |
| Acute toxicity - Inhalation (Vapors) | Classification not possible |
| Acute toxicity - Inhalation (Dusts/Mists) | Classification not possible |
| Skin corrosion/irritation | Classification not possible |
| Serious eye damage/eye irritation | Classification not possible |
| Respiratory sensitization | Classification not possible |
| Skin sensitization | Classification not possible |
| Germ cell mutagenicity | Classification not possible |
| Carcinogenicity | Classification not possible |
| Reproductive toxicity | Classification not possible |
| Effects on or via lactation | No effects on or via lactation |
| Specific target organ toxicity (single exposure) | Classification not possible |
| Specific target organ toxicity (repeated exposure) | Classification not possible |
| Aspiration hazard | Classification not possible |
| Acute aquatic toxicity | Classification not possible |
| Chronic aquatic toxicity | Classification not possible |
| Ozone | Classification not possible |

GHS label elements**Hazard Statements**

Not classified

Prevention

- Not applicable

Response

- Not applicable

Storage

- Not applicable

Disposal

- Not applicable

Other hazards

No information available.

3. Composition/information on ingredients**Pure substance/mixture**

Mixture

CAS-No

7732-18-5

Pollutant Release and Transfer Registry (PRTR)

Not applicable

Industrial Safety and Health LawISHL Notifiable Substances

Not applicable

Harmful Substances Whose Names Are to be Indicated on the Label

Not applicable

Poisonous and Deleterious Substances Control Law

Not applicable

4. First-aid measures**In case of inhalation**

Remove to fresh air.

In case of skin contact

Wash skin with soap and water.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

In case of ingestion

Clean mouth with water and drink afterwards plenty of water.

Most important symptoms/effects, acute and delayed

No information available.

Note to physicians

Treat symptomatically.

5. Fire-fighting measures

| | |
|---|--|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | Do not scatter spilled material with high pressure water streams. |
| Specific hazards arising from the chemical | No information available. |
| Special Extinguishing Media Large Fire | Cool drums with water spray. CAUTION: Use of water spray when fighting fire may be inefficient. |
| Special protective equipment and precautions for fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

6. Accidental release measures

| | |
|--|--|
| Personal precautions, protective equipment and emergency procedures | Ensure adequate ventilation. |
| For emergency responders | Use personal protection recommended in Section 8. |
| Environmental precautions | See Section 12 for additional Ecological Information. |
| Methods for containment | Prevent further leakage or spillage if safe to do so. |
| Methods for cleaning up | Pick up and transfer to properly labeled containers. |
| Prevention of secondary hazards | Clean contaminated objects and areas thoroughly observing environmental regulations. |

7. Handling and storage

| | |
|--------------------------------|--|
| Handling | |
| Advice on safe handling | Handle in accordance with good industrial hygiene and safety practice. |
| Storage | |
| Storage Conditions | Keep containers tightly closed in a dry, cool and well-ventilated place. |

8. Exposure controls/personal protection

| | |
|--|--|
| Engineering controls | Showers Eyewash stations Ventilation systems. |
| Exposure guidelines | This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
| Biological occupational exposure limits | This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies |
| Environmental exposure controls | No information available. |
| Personal Protective Equipment | |
| Respiratory protection | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. |
| Eye/face protection | No special protective equipment required. |
| Skin and body protection | No special protective equipment required. |

9. Physical and chemical properties

Information on basic physical and chemical properties

| | |
|----------------|--------------------------|
| Appearance | Clear, colorless |
| Physical state | Liquid |
| Color | Clear |
| Odor | Unpleasant |
| Odor Threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--|---------------|--------------------------|
| Melting point / freezing point | | No information available |
| Boiling point/boiling range (°C) | | No information available |
| Flammability (solid, gas) | | No information available |
| Upper/lower flammability or explosive limits | | |
| Upper flammability limit: | | |
| Lower flammability limit: | | |
| Flash point | | ASTM D 56 |
| Evaporation Rate | | No information available |
| Autoignition temperature | | No information available |
| Decomposition temperature | | No information available |
| pH | | No information available |
| Viscosity | | |
| Kinematic viscosity | | No information available |
| Dynamic Viscosity | | No information available |
| Water solubility | | No information available |
| Solubility in other solvents | | No information available |
| Partition Coefficient (n-octanol/water) | | No information available |
| Vapor pressure | | No information available |
| Vapor density | | No information available |
| Relative density | | No information available |
| Particle characteristics | | |
| Particle Size | | Not applicable |
| Particle Size Distribution | | Not applicable |

Other information

| | |
|----------------------|--------------------------|
| Explosive properties | No information available |
| Oxidizing properties | No information available |

10. Stability and reactivity

| | |
|------------------------------------|---|
| Reactivity | No information available. |
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | None under normal processing. |
| Incompatible materials | None known based on information supplied. |
| Hazardous Decomposition Products | None known based on information supplied. |
| Explosion Data | |
| Sensitivity to static discharge | None. |
| Sensitivity to mechanical impact | None. |

11. Toxicological information

Acute toxicity

Numerical measures of toxicity - Product Information

2 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
 2 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
 2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
 2 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

| | |
|--|--|
| Symptoms | No information available. |
| Product Information | |
| Ingestion | Specific test data for the substance or mixture is not available. |
| Inhalation | Specific test data for the substance or mixture is not available. |
| Skin contact | Specific test data for the substance or mixture is not available. |
| Eye contact | Specific test data for the substance or mixture is not available. |
| Skin corrosion/irritation | Based on available data, the classification criteria are not met. Classification not possible. |
| Serious eye damage/eye irritation | Based on available data, the classification criteria are not met. Classification not possible. |
| Respiratory or skin sensitization | Classification not possible. |
| Germ cell mutagenicity | Based on available data, the classification criteria are not met. Classification not possible. |
| Carcinogenicity | Based on available data, the classification criteria are not met. Classification not possible. |
| Reproductive toxicity | Based on available data, the classification criteria are not met. Classification not possible. |
| STOT - single exposure | Based on available data, the classification criteria are not met. Classification not possible. |
| STOT - repeated exposure | Based on available data, the classification criteria are not met. Classification not possible. |
| Aspiration hazard | Based on available data, the classification criteria are not met. Classification not possible. |

12. Ecological information

| | |
|---------------------------------------|---|
| Ecotoxicity | Classification not possible. |
| Percentage for unknown hazards | 0.4575 % of the mixture consists of component(s) of unknown hazards to the aquatic environment. |
| Persistence and degradability | No information available. |
| Bioaccumulation | No information available. |

| | |
|-------------------------------------|--|
| Hazardous to the ozone layer | Classification not possible. Based on available data, the classification criteria are not met. |
| Other adverse effects | No information available. |

13. Disposal considerations

| | |
|--|---|
| Waste from residues/unused products | Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. |
|--|---|

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|-------------------------------|--------------------------------|
| Contaminated packaging | Do not reuse empty containers. |
|-------------------------------|--------------------------------|

14. Transport information

| | |
|--------------------|---------------|
| <u>IMDG</u> | Not regulated |
|--------------------|---------------|

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|-------------------|---------------|
| <u>ADR</u> | Not regulated |
|-------------------|---------------|

| | |
|--------------------|---------------|
| <u>IATA</u> | Not regulated |
|--------------------|---------------|

| | |
|---------------------|---------------|
| <u>Japan</u> | Not regulated |
|---------------------|---------------|

15. Regulatory information

National regulations

Pollutant Release and Transfer Registry (PRTR)

Not applicable

Industrial Safety and Health Law

Not applicable

ISHL Notifiable Substances

Not applicable

Poisonous and Deleterious Substances Control Law

Not applicable

Fire Service Law:

Not applicable

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL)

Not applicable

Act on Prevention of Marine Pollution and Maritime Disaster

Not applicable

International Regulations

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

IECSC

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

16. Other information

Revision Date 2021-02-10
Revision Note No information available.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|-----|-----------------------|---------|---------------------|
| TWA | Time weighted average | Ceiling | Maximum limit value |
| * | Skin designation | + | Sensitizers |

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Chemicals Agency
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Disclaimer

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End of Safety Data Sheet