

Chemical Safety Data Sheet MSDS / SDS

Dithallium malonate SDS

Revision Date:2024-04-25 Revision Number:1

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

Product name: Dithallium malonate

CAS: 2757-18-8

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

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.

Uses advised against: none

Company Identification

Company: Chemicalbook.in

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SECTION 2: Hazards identification**Classification of the substance or mixture**

no data available

GHS label elements, including precautionary statements

Signal word no data available

Hazard statement(s)

no data available

Precautionary statement(s)**Prevention**

no data available

Response

no data available

Storage

no data available

Disposal

no data available

Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients**Substance**

Chemical name: Dithallium malonate

Common names and
synonyms: Dithallium malonate

CAS number: 2757-18-8

EC number: 220-414-7

Concentration: 100%

SECTION 4: First aid measures

Description of necessary first-aid measures

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

Most important symptoms/effects, acute and delayed

Non-Specific -- Thallium Salts, n.o.s.) Poisonous if swallowed. Inhalation of dust causes poisoning. (EPA, 1998)

Indication of immediate medical attention and special treatment needed, if necessary

Absorption, Distribution and Excretion

The distribution and elimination patterns of thallous malonate were studied and compared to those of thallous sulfate. Male Syrian golden hamsters were divided into 3 groups. The first group (control) received distilled water. Animals in group 2 received either a single oral dose or an ip dose of 12.5 mg/kg of thallous malonate. The third group of animals received either a single oral dose or an ip dose of 12.35 mg/kg of thallous sulfate. By 1 hour after thallous malonate administration, thallium was detected in all organs. Thallium was detected only in the heart, liver and kidney in the group given thallous sulfate. By 12 hours the maximum values, except for muscle and testes, were observed in both treated groups, and the distribution patterns were similar. At this time, although the thallium concentration in the brain was less than in the other organs, thallium was rapidly deposited in the brain in both treated groups. The liver, heart, kidney and whole blood had short half-lives in the alpha phase. The beta phase in these tissues and in the brain, muscle and testes had long half lives, indicating that thallium disappeared slowly from organs. In the group receiving oral thallous malonate the urinary elimination rate constant was 0.175/day, and the fecal rate was 0.500. In the group receiving thallous malonate ip the urinary elimination rate constant was 0.086, and the fecal rate was 0.081. The urinary elimination rate constant in animals treated orally with thallous sulfate was 0.073 and the fecal rate was 0.054. Ip treatment with thallous sulfate resulted in a urinary elimination rate of 0.063 and fecal rate of 0.084. It was concluded that thallous malonate, an

organic thallium compound, showed slightly higher elimination rate constants but similar toxicity and distribution patterns to thallosulfate, an inorganic thallium compound.

SECTION 5: Firefighting measures

Suitable extinguishing media

Water, carbon dioxide, foam, dry chemical. Soluble thallium compound

Specific hazards arising from the chemical

Non-Specific -- Thallium Salts, n.o.s.) Fire may produce irritating or poisonous gases. Runoff from fire control or dilution water may cause pollution. (EPA, 1998)

Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

SECTION 7: Handling and storage

Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state: Thallous malonate is a solid. (EPA, 1998)

Colour: no data available

Odour: no data available

Melting point/freezing point: no data available

Boiling point or initial boiling point and boiling range: no data available

Flammability: no data available

Lower and upper explosion limit/flammability limit: no data available

Flash point: no data available

Auto-ignition temperature: no data available

Decomposition temperature: no data available

pH: no data available

Kinematic viscosity: no data available

Solubility: no data available

Partition coefficient n-octanol/water: no data available

Vapour pressure:	no data available
Density and/or relative density:	no data available
Relative vapour density:	no data available
Particle characteristics:	no data available

SECTION 10: Stability and reactivity

Reactivity

15 mg/cu m (as Tl). Thallium (soluble cmpds, as Tl)

Chemical stability

no data available

Possibility of hazardous reactions

Salts, basic, such as THALLOUS MALONATE, are generally soluble in water. The resulting solutions contain moderate concentrations of hydroxide ions and have pHs greater than 7.0. They react as bases to neutralize acids. These neutralizations generate heat, but less or far less than is generated by neutralization of the bases in reactivity group 10 (Bases) and the neutralization of amines. They usually do not react as either oxidizing agents or reducing agents but such behavior is not impossible.

Conditions to avoid

no data available

Incompatible materials

no data available

Hazardous decomposition products

When heated to decomposition it emits acrid smoke and fumes.

SECTION 11: Toxicological information

Acute toxicity

Oral: no data available

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

SECTION 12: Ecological information**Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

SECTION 13: Disposal considerations**Disposal methods****Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

UN Number

ADR/RID: UN1707 (For reference only, please check.)

IMDG: UN1707 (For reference only, please check.)

IATA: UN1707 (For reference only, please check.)

UN Proper Shipping Name

ADR/RID: THALLIUM COMPOUND, N.O.S. (For reference only, please check.)

IMDG: THALLIUM COMPOUND, N.O.S. (For reference only, please check.)

IATA: THALLIUM COMPOUND, N.O.S. (For reference only, please check.)

Transport hazard class(es)

ADR/RID: 6.1 (For reference only, please check.)

IMDG: 6.1 (For reference only, please check.)

IATA: 6.1 (For reference only, please check.)

Packing group, if applicable

ADR/RID: II (For reference only, please check.)

IMDG: II (For reference only, please check.)

IATA: II (For reference only, please check.)

Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

EC Inventory

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Listed.

China Catalog of Hazardous chemicals 2015

Listed.

New Zealand Inventory of Chemicals (NZIoC)

Not Listed.

(PICCS)

Not Listed.

Vietnam National Chemical Inventory

Listed.

IECSC)

Not Listed.

Korea Existing Chemicals List (KECL)

Not Listed.

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:
http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Disclaimer: 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. We as supplier shall not be held liable for any

