

MATERIAL SAFETY DATA SHEET

Thallium (I) Acetate

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers :

Product name : Thallium (I) Acetate

Product number : 0000563688

Brand : Discovery

Reach No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require registration or the registration is envisaged for a later

Registration deadline.

Cas No. : 563-68-8

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

Identified uses : laboratory chemicals, manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Discovery Fine Chemicals Ltd
Unit 4A, Old Forge Road, Ferndown Ind. Estate,
Wimborne, Dorset, BH21 7RR.
United Kingdom

Telephone: +44 (0)1202 874517

Fax: +44 (0)845 0944 385

E-mail: discovery@discofinechem.com

1.4 Emergency telephone : +44 (0)7912 646956

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 2), H300

Acute toxicity, Inhalation (Category 2), H330

Specific target organ toxicity - repeated exposure (Category 2), H373

Long-term (chronic) aquatic hazard (Category 2), H411

For the full text of the H-Statements mentioned in this section see section 16

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word: Danger

Hazard statement(s)

H300+ H330 Fatal if swallowed or if inhaled

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects

Precautionary statement(s)

P260 Do not breathe dust.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P314 Get medical advice/ attention if you feel unwell.

Supplemental Hazard statements: none

Reduced Labeling (<= 125 ml)

Pictogram



Signal Word

Danger

Hazard statement(s)

H300 + H330 Fatal if swallowed or if inhaled.

Precautionary statement(s)

P260 Do not breathe dust.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

Supplemental Hazard statements: none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula: C₂H₃O₂Tl

Molecular Weight: 263.43 g/mol

Cas No: 563-68-8

E.C.No: 209-257-5

Index-No.081-002-00-9

Component

Thallium (I) Acetate

CAS-No.563-68-8

E.C.No. 209-257-8

Classification

acute tox 2. STOT RE2;

Aquatic chronic 2;.H300

H330, H373, H411

Concentration

<=100%

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

If inhaled - After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact – Remove all contaminated clothing. Rinse skin with water. Consult a physician.

In case of eye contact – Flush eyes with water. Remove contact lenses. Call an ophthalmologist.

If swallowed – If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

4.2 Most important symptoms and effects, both acute and delayed – the most important known symptoms and effects are described in the labelling (see section 2.2 and/or in section 11).

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media – use water foam carbon dioxide (CO₂)

Unsuitable extinguishing media – for this substance/mixture limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides thallium oxides (NO_x)

Combustible

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters – stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance.

5.4 Further information – Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions - Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up – Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections - For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Immediately change contaminated clothing, apply preventative skin protection. Wash hands and face after working with substance.

For precautions see section 2.2

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Hygroscopic

Storage class Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No.	Control parameter s	Value	Basis
thallium(I)- acetate	563-68-8	TWA	0.1 mg/m ³	UK. EH40 WEL - Workplace
Exposure Limits	Remarks			

Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

8.2 Exposure controls

Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those

stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact Material:

Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741

Dermatril® L Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741

Dermatril® L

Body Protection

protective clothing

Respiratory protection

required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P3 The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance - Form: solid
 - b) Odour - no data available
 - c) Odour Threshold - no data available
 - d) Melting point/range: - 131°C
 - e) Initial boiling point and boiling range - no data available
 - f) Flammability (solid, gas) - no data available
 - g) Upper/lower flammability or explosive limits - no data available
 - h) Flash point – not applicable
 - i) Autoignition temperature - no data available
 - j) Decomposition temperature - no data available
 - k) pH - no data available
 - l) Viscosity – viscosity,kinematic: no data available
- viscosity dynamic: no data available
 - m) Water solubility –soluble
 - n) Partition coefficient: no data available .
 - o) Vapour pressure - no data available
 - p) Density - no data available
Relative density – no data available
 - q) Relative vapour density - no data available
 - r) Particle characteristics - no data available
 - s) Explosive properties – no data available
 - t) Oxidizing properties - no data available
- 9.2 Other safety information - no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

The product is chemically stable under recommended storage conditions; room temperature.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Heat, no information available

10.5 Incompatible materials

Strong oxidizing agents, strong acids.

10.6 Hazardous decomposition products

In the event of fire see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 oral-mouse 5.1 mg/kg

(Expert judgment) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2) Acute toxicity estimate Inhalation - 4 h - 0.051 mg/l - dust/mist (Expert judgment) Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Dermal: No data available

Skin corrosion/irritation - no data available

Serious eye damage/eye 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

Specific target organ toxicity - single exposure

May cause damage to organs through prolonged or repeated exposure. Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Endocrine disrupting properties

Product

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

The most characteristic symptom of thallium exposure is alopecia (loss of hair). Cutaneous effects may include dry, scaly skin and impairment of nail growth often resulting in the appearance of crescent-shaped strips across fingernails and toenails (Mees' line).

Other symptoms in acute poisoning relate chiefly to the gastrointestinal tract, nervous system, skin, eyes, and cardiovascular system.

Acute poisoning results in swelling of the feet and legs, arthralgia, vomiting, insomnia, hyperesthesia and paresthesia of the hands and feet, mental confusion, polyneuritis with severe pain in the legs and loins, partial paralysis of the legs, angina-like pains, nephritis, wasting and weakness, and lymphocytosis and eosinophilia. In chronic poisoning, central and peripheral nervous system abnormalities may persist including ataxia, tremor, incoordination, paralysis of extremities, endocrine disorders, memory loss, and psychoses may develop.

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

12. ECOLOGICAL INFORMATION

12.1 Toxicity - no data available

12.2 Persistence and degradability - no data available

12.3 Bio-accumulative potential - no data available

12.4 Mobility in soil - no data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself according to notice directive on waste 2008/98/EC.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: - 1707

IMDG: 1707

IATA: 1707

14.2 UN proper shipping name

ADR/RID: THALLIUM COMPOUND, N.O.S. (thallium(I)-acetate)

IMDG: THALLIUM COMPOUND, N.O.S. (thallium(I)-acetate)

IATA: Thallium compound, n.o.s. (thallium(I)-acetate)

14.3 Transport hazard class(es)

ADR/RID: - 6.1

IMDG: 6.1

IATA: 6.1

14.4 Packaging group

ADR/RID: - II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: yes

IMDG: Marine Pollutant: yes

IATA: no

14.6 Special precautions for user

Tunnel restriction code : (D/E)

Further information :

No data available

15. REGULATORY INFORMATION

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of DIR 94/33/EC on the protection of young people at work

15.2 Chemical Safety Assessment –

For this product a chemical safety assessment was not carried out.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases(s) mentioned in Section 2 and 3

H300 Fatal if swallowed.

H300 + H330 Fatal if swallowed or if inhaled.

H330 Fatal if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Fatal if swallowed or if inhaled.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good

Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further 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.

WARRANTY

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.

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