



Hangzhou Tianlong Biotechnology Co., Ltd.

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MATERIAL SAFETY DATA SHEET

1. Chemical Product and company Identification

Product Name: Isoprothiolane

Molecular Formula: C₁₂H₁₈O₄S₂

Molecular Weight: 290.4

Structural Formula:



Chemical Name: diisopropyl 1,3-dithiolan-2-ylidenemalonate

CAS No.: 50512-35-1

Supplier: HANZHOU TIANLONG BIOTECHNOLOGY CO., LTD

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2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Isoprothiolane	50512-35-1	95.0
Other ingredients		5.0

3. Hazards Identification

More important danger for the man: none

Dangers for the environment: toxic to aquatic.

Physical-chemical dangers: can decompose at high temperatures forming toxic gases.

4. First Aid Measures

Skin: remove contaminated clothing and shoes, flush with plenty of water and soap.

Eyes: flush with plenty of clear water for 15-20 minutes.

Inhalation: move affected person to fresh air and keep at rest until recovered. If not breathing, give artificial respiration and get to a doctor.

Ingestion: do not induce vomiting; drink plenty of water. Then see doctor immediately.

5. Fire-Fighting Measures

Extinguishing media

To be used: water spray, foam, dry chemical powder and carbon dioxide.

Don't use: not applicable

Particular risk: none.

Measures of personal protection: safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

Environmental cautions

EX: prevent the contamination of the floor and of beds of water.

6. Accidental Release Measures

Personal cautions: The product is harmful if inhaled or swallowed. Will irritate the eyes, nose, throat and skin. Avoid inhaling spray mist. Keep people and animals away.

Cleaning methods

EX: clear the liquid formation. Transfer to a properly labelled deposit that will be closed and sealed until the recovery of elimination of the product.

Environmental cautions

EX: prevent the contamination of the floor and of beds of water.

7. Handling and Storage

Formulation is stable if stored in an airtight container and free of moisture and high humidity. Keep out of reach of children. Do not contaminate water, food, or feed by storage or disposal. Keep from contact with fertilizers, insecticides, fungicides, and seeds during storage. Avoid breathing dust or spray mist. Avoid contact with skin, eyes, and clothing. Do not apply, drain, or flush equipment on or near desirable trees or other plants.

8. Exposure Controls/Personal Protection

PEL: not applicable

Personal protective equipment: full-length overalls

Respiratory protection: approved respirator.

Protective gloves: rubber gloves

Eye protection: safety goggles or face shield.

Industrial hygiene: ventilation

Physical And Chemical Properties

9. Physical and Chemical Properties

Appearance: Pale yellow powder

Melting point: 54.5-55°C

Boiling point: 167-169°C /66.7Pa

Vapor pressure : 18.8mPa@25°C

Solubility : in Water: 48ppm / 20°C

In Organic solvent: Easily soluble; Solubility in organic solvents at 25°C: methanol 150g/100g solvent; dimethyl sulfoxide 230g/100g solvent; acetone 400g/100g solvent; chloroform 230g/100g solvent; benzene 300g/100g solvent; xylene 230g/100g solvent; n-hexane 4g/100g solvent.

Relative density: 1.044

Partition coefficient ; KowlogP=3.3

10. Stability and Reactivity

Conditions to avoid: avoid heat and fire.

Products to avoid: not applicable

Thermal decomposition: not applicable

Hazardous decomposition products: toxic gases.

Hazardous reaction: none;

11. Toxicological Information

Acute Oral LD₅₀ : 1190mg/kg (for male rat)

1340mg/kg (for female rat)

Dermal LD₅₀: >10250mg/kg

Contact with the skin: non-irritation to skin for rabbit;

Contact with the eyes: slight irritation to eyes for rabbit

Inhalation(rat,4h): >2.7mg/L

Ingestion: not applicable;

Sensitisation: no-sensitive;

12. Ecological Information

Fish toxicity:

48 hour LC₅₀, Rainbow trout- 6.8mg/L

48 hour LC₅₀, Carp- 0.7mg/L

Avian toxicity:

Oral LD₅₀, Japen male quail- 4710mg/Kg

Oral LD₅₀, Japen female quail - 4180mg/kg

3 hour LD₅₀ daphnia : 62mg/L

13. Disposal Considerations

Waste: Pesticide wastes are acutely hazardous. Dispose of in accordance with applicable local laws and regulations,

Container: Refer to product label.

14. Transport Information

Not applicable

15. Regulatory Information

Safety Phrases: Keep out of reach of children

Keep away from food, drink and animal feeding stuff

Do not breathe spray

When using do not eat, drink or smoke

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

In case of accident or if you feel unwell, seek medical advice immediately (Show the label where possible)

Use appropriate containment to avoid environmental contamination

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.