



## Hangzhou Tianlong Biotechnology Co., Ltd.

Add: Room 1906, Fengqi Times Tower, No.338, Fengqi East Road, Hangzhou, Zhejiang, China.

### MATERIAL SAFETY DATA SHEET

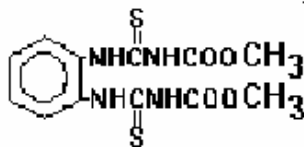
#### 1. Chemical Product Identification

Product Name: Thiophanate Methyl

Molecular Formula: C<sub>12</sub>H<sub>14</sub>N<sub>4</sub>O<sub>4</sub>S<sub>2</sub>

Molecular Weight: 342.42

Structural Formula:



Chemical Name: 1,2-di-(methoxycarbonyl-2-thioureido)benzene

CAS No.: 23564-05-8

Supplier: HANZHOU TIANLONG BIOTECHNOLOGY CO., LTD

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#### 2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Thiophanate Methyl	23564-05-8	95.0
Other ingredients		5.0

#### 3. Hazards Summarizing

Emergency overview: Caution! Keep out of reach of children. Harmful if swallowed, inhaled or absorbed through skin. Cause eye irritation. May cause thyroid & liver damage after repeated exposure based on animal data. May cause allergic skin reaction.

Route of entry: Ingestion inhaled or absorbed through skin.

Health hazards: Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on single exposure animal tests, it is considered to be practically non-toxic if swallowed, no more than slightly toxic if absorbed through skin, slightly toxic if inhaled, non-irritating to skin and slightly irritating to eyes. Repeated exposure may cause an allergic skin reaction. Repeated or long-term exposure may cause adverse effects on the liver or thyroid.

#### 4. First Aid Measures

If Inhaled: Move person to fresh air. If person is not breathing, call an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if

possible. Call a poison control center or doctor for further treatment advice.  
If On Skin Or Clothing: Take off contaminated clothing. Rinse skin

immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

If In Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

If Swallowed: Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

## **5. Fire-Fighting Measures**

Flash Point (Method): N/A

Flammable Limits (vol % in air): N/A

Autoignition Temperature: N/A

Extinguishing Media: Carbon dioxide, foam, water, earth, dry chemical.

Special Fire Fighting Procedures: Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: None

Protective equipment for firefighters: Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear and self-contained breathing apparatus. Fire fighting equipment should be thoroughly decontaminated after use.

## **6. Accidental Release Measures**

Personal protection: Safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

Steps to be taken in Case Material is Released or Spilled: Absorb with sand or inert material, sweep or scoop up and remove, flush area with water.

Dispose of in compliance with all federal, state and local laws.

## **7. Handling and Storage**

Handling: Read the label before use. Keep out of reach of children. Harmful if swallowed. Causes skin irritation and sensitivity. Avoid contact with skin and clothing. After work, remove protective clothing and equipment, wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Clean up spilled material immediately, and wash clothes, equipment and work area after use.

Storage: Store in tightly closed original container in a cool, dry well-ventilated area out of direct sunlight when not in use. This product can be stored in an unheated building. Do not store with food, feed stuffs, fertilizers and seeds.

## **8. Exposure Controls/Personal Protection**

Protective Clothing: Long sleeve shirt, pants, or coveralls, water resistant boots.

Eye Protection: Chemical goggles or safety glasses with side shields recommended when handling concentrate.

Ventilation: Use product outdoors or in a well ventilated area.

Respiratory Protection: For exposures in enclosed areas: a respirator with

either an organic vapor-removing cartridge with a approved organic vapor cartridge or canister filters.

Other: Protective barrier cream may be applied on exposed skin areas.

### **9. Physical and Chemical Properties**

Appearance: white powder

Vapor Pressure (@25°C): 0.0095mPa

Boiling Point: 212°C

PH: 5.0-8.0

Melting Point: 172°C(decompose)

Freezing Point: 28°C

Solubility in Water: Insoluble (dispersible)

## 10. Stability and Reactivity

Stability: Stable under normal conditions.

Incompatible Materials: Highly alkaline materials, oxidizing agents, lime sulfur, bordeaux mixture, copper compounds.

Conditions to Avoid: Extreme heat, high temperatures, incompatible materials

Hazardous Decomposition: Thermal decomposition generates oxides of nitrogen, sulfur, and carbon.

## 11. Toxicological Information

Oral (Acute) LD<sub>50</sub>: 7500 mg/kg (male rat)

Oral (Acute) LD<sub>50</sub>: 6640 mg/kg (female rat)

Oral (Acute) LD<sub>50</sub>: 2270 mg/kg (rabbit)

Dermal (Acute) LD<sub>50</sub>: > 2,000 mg/kg (rat)

Inhalation (acute): 1.7 mg/L (LC<sub>50</sub> rat)

Skin: Mild irritant (rabbit)

Eye: Mild irritant (rabbit)

Chronic (oral): No oncogenicity, no observed effect level, 160 ppm in diet for two years (rat) and 50 mg/kg/day in single dose for two years (dog).

## 12. Ecological Information

Birds:

Acute oral LD<sub>50</sub>: for Japanese quail >5000mg/kg

Fish:

LC<sub>50</sub> (96h): for rainbow trout 7.8, carp 11mg/l

Daphnia:

EC<sub>50</sub> (48h): 20.2mg/l

Bees:

Not toxic to bees. LD<sub>50</sub>: 100 μ g/bee.

This pesticide is toxic to fish. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by disposal of equipment wash waters. Do not apply, allow to drift, or drain or flush equipment onto non-target areas.

## 13. Disposal Considerations

Waste Disposal Methods: Improper disposal of excess pesticide, spray mixture or rinsate is a violation of federal law. If these wastes cannot be disposed of by intended use according to label instructions, contact the appropriate agency in your state for guidance.

## 14. Transport Information

Class: 9

UN No.: 3077  
Packing group III

### **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.