



Material Safety Data Sheet

Section 1: Identification

Product Name: Thiophanate methyl Technical

Chemical Name/Synonyms: dimethyl 4,4'-(o-phenylene)bis(3-thioallophanate)

CAS Number: 23564-05-8

Product Use: Fungicide

Company Name: Meghmani Industries Limited

Registered Office: 5th, 8th & 9th Floor, B-wing, Siddhi Vinayak Towers, Nr. Kataria Arcade, S G Highway, Makarba, Ahmedabad-380051, Gujarat, India.

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Section 2: Hazard(s) Identification

Hazard Classification:

Acute toxicity, Inhalation (Category 4), H332

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 2), H351

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410

Signal Word(s):

Hazard Statements:

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer.

H410 Very toxic to aquatic life with long lasting effects.

Pictograms:





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Precautionary Statements:

P202 Do not handle until all safety precautions have been read and understood.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/ face protection.

P302 + P352 IF ON SKIN: Wash with plenty of water.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Description of 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.

Section 3: Composition/ Information on Ingredients

Chemical Name	Synonym	CAS#	Conc.
Thiophanate methyl	4,4'-(o-phenylene)bis(3-thioallophanate)	23564-05-8	98.00 %
Other impurities			2.00%

Section 4: First-Aid Measures

General advice

Consult a physician.

After skin contact: Take off immediately all contaminated clothing. Rinse skin with running water/ shower for 15 minutes.

After eye contact: 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.

After inhalation: Remove the patient from the exposure area to fresh air immediately. If breathing has stopped perform the artificial respiration. Keep person warm and rest. Get medical attention immediately.

After swallowing: Immediately make victim drink water (two glasses at most).



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Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction.
Harmful if inhaled.
Suspected of causing genetic defects.
Suspected of causing cancer.
Very toxic to aquatic life with long lasting effects.

Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Fire-Fighting Measures

Suitable extinguishing agents: Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO_x)

Sulfur oxides

Combustible.

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

Special protective equipment for firefighters: Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Section 6: Accidental Release Measures

Personal precautions: Advice for non-emergency personnel: Avoid inhalation of dusts.

Avoid substance contact.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

Measures for environmental protection: Do not let product enter drains.

Measures for cleaning/collecting: Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean



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up affected area. Avoid generation of dusts.

Section 7: Handling and Storage

Handling: Work under hood. Do not inhale substance/mixture.

Storage: Tightly closed. Dry.

Storage class

Storage class (TRGS 510): 11: Combustible Solids

Section 8: Exposure Controls/Personal Protection

Chemical Name	OSHA PEL	OSHA PEL (ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Data Not Available	Data Not Available	Data Not Available	Data Not Available	Data Not Available

General protective and hygienic measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Breathing equipment: Full Face Mask with Cartridge, BUBBLE HOOD, Air line Respiratory system as per ISI : 10245, HALF FACE CARTRIDGE RESPIRATOR, Dust Mask / (N95).

Protection of hands: Chemical Resistant Hand Gloves as per IS approved

Eye protection: Chemical Splash Goggles as per IS:8520 government standards such as NIOSH (US) or EN 166(EU): Face Shield as per IS-8521 marked.

Body Protection: Chemical Protection Suit/ Air Pressure Suit as per ISI: 4501 marked., Disposable Apron

Section 9: Physical and Chemical Properties

Form: Solid White to off white powder

Odor: Odorless

Odor threshold: no data available

pH: no data available

Melting point/melting range: 172 °C (decomp.)

Boiling point/boiling range: 478.4°C at 760 mmHg

Flash point: no data available



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Evaporation rate: no data available

Flammability: no data available

Upper/lower flammability or explosive limits: no data available

Auto ignition temperature: no data available

Danger of explosion: no data available

Vapor pressure: 0.0095 mPa (25 °C)

Vapor density: no data available

Relative density: no data available

Solubility in/Miscibility with water: Practically insoluble in water (23 °C). In acetone 58.1, cyclohexanone 43, methanol 29.2, chloroform 26.2, acetonitrile 24.4, ethyl acetate 11.9 (all in g/kg, 23 °C). Slightly soluble in hexane.

Section 10: Stability and Reactivity

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.

Chemical stability: Stable in neutral, aqueous solution at room temperature. Stable to air and sunlight. Quite stable in acidic solution at room temperature; unstable in alkaline solution; DT50 24.5 h (pH 9, 22 °C). Formulated product is stable 32 y below 50 °C.

Conditions to avoid: no information available

Incompatible materials: No data available

Hazardous decomposition products: In the event of fire: see section 5

Section 11: Toxicological Information

Acute toxicity:

LD50 Oral - Rat - male - 6640 mg/kg

LC50 Inhalation - Rat - 4 h - 1.7 mg/l

LD50 Dermal - Rabbit - > 10000 mg/kg

Potential routes of exposure/potential health effects

Skin: Rabbit Result: No skin irritation

Eye: Rabbit Result: No eye irritation



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Inhalation: May cause an allergic skin reaction.

Ingestion: No data available

Carcinogenic effects: Suspected of causing cancer.

Mutagenic effects: In vitro tests showed mutagenic effects

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: gene mutation test

Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Micronucleus test

Test system: Human lymphocytes

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 487

Result: Equivocal evidence.

Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Gavage

Method: OECD Test Guideline 474

Result: positive



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Reproductive toxicity: No data available

Sensitization: No data available

Target organs:

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Section 12: Ecological Information (non-mandatory)

Ecotoxicity:

Toxicity

Birds Acute oral and percutaneous LD50 for Japanese quail >5000 mg/kg.

Fish LC50 (48 h) for rainbow trout 7.8, carp 11 mg/l.

Daphnia LC50 (48 h) 20.2 mg/l.

Algae EC50 (96 h) for Chlorella 0.8 mg/l.

Bees Not toxic to bees; LD50 (topical) >100 mg/bee.

Mobility: No data available

Biodegradation: Biodegradability: aerobic - Exposure time 28 d Result: 4 % - Not readily biodegradable. (OECD Test Guideline 301C)

Bioaccumulation: No data available

Results of PBT and vPvB assessment

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.

Section 13: Disposal Considerations (non-mandatory)

Waste treatment methods

Offer surplus and non-recyclable solutions to a licensed disposal company. 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 Directive on waste 2008/98/EC as well as other national and local regulations. Leave



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chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

Section 14: Transport Information (non-mandatory)

UN number

ADR/RID: 3077 IMDG: 3077 IATA: 3077

UN proper shipping name

ADR/RID : Environmentally Hazardous Substance, Solid, N.O.S. (Thiophanate methyl)
IMDG : Environmentally Hazardous Substance, Solid, N.O.S. (Thiophanate methyl)
IATA : Environmentally hazardous substance, solid, n.o.s. (Thiophanate methyl)

Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

Packaging group

ADR/RID: III IMDG: III IATA: III

Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: yes

Special precautions for user

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packaging and combination packaging containing inner packaging with dangerous goods >5L for liquids or >5kg for solids.

DOT regulations: No data available

- **Hazard class:** No data available
- **Land transport ADR/RID (cross-border):** No data available
- **ADR/RID class:** No data available
- **Maritime transport IMDG:** No data available

Air transport ICAO-TI and IATA-DGR: No data available

ICAO/IATA Class: No data available

Section 15: Regulatory Information (non-mandatory)

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



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or mixture

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

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of Major-accident hazards involving dangerous substances: Environmental Hazards

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

US Federal Regulations

SARA Section 355 (extremely hazardous substances): No data available

SARA Section 313 (specific toxic chemical listings): No data available

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs): No data available

TSCA (Toxic Substances Control Act): No data available

Section 16: Other Information

To the best of Meghmani Industries Ltd's knowledge, the above information is true and accurate as of the date of preparation of this material safety data sheet. The above information is not intended to be exhaustive. Additional or other information may be required depending on actual conditions of use and handling. Meghmani Industries Ltd make no warranties, expressed or implied and shall not be liable for any damages or injury, howsoever caused, arising out of the use of this data sheet.

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