

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**
**Product Identifier**

Perihalan Produk: **4,4-Dimethyl-3-thiosemicarbazide**  
 Product Description: **4,4-Dimethyl-3-thiosemicarbazide**  
 Cat No. : L10337  
 CAS No 6926-58-5  
 Molecular Formula C3 H9 N3 S

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

Recommended Use Laboratory chemicals.  
 Uses advised against No Information available

**Company**

Thermo Fisher Scientific Fisher Scientific (M) Sdn Bhd  
 Hap Seng Business Park, Lot 01-03, 01-04 Aras 1 Unity Square,  
 No 12, Persiaran Perusahaan, Seksyen 23, 40300 Shah Alam,  
 Selangor Darul Ehsan, Malaysia.  
 Main line: +60 3-5525 7888

**Supplier**

E-mail address Enquiry.my@thermofisher.com

**Emergency Telephone Number**

Tel: +03-5525 7888  
 CHEMTREC Malaysia **1-800-815-308** (Malay)  
 CHEMTREC Malaysia (Kuala Lumpur) **+(60)-327884561** (Malay)

**SECTION 2: HAZARDS IDENTIFICATION**
**Classification of the substance or mixture**

Acute oral toxicity	Category 3 (H301)
Acute Inhalation Toxicity - Dusts and Mists	Category 3 (H331)

**Label Elements**

**Signal Word**
**Danger**
**Hazard Statements**

H301 + H331 - Toxic if swallowed or if inhaled

# SAFETY DATA SHEET

4,4-Dimethyl-3-thiosemicarbazide

Revision Date 26-Mar-2025

## Precautionary Statements

### Prevention

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

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

### Response

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P311 - Call a POISON CENTER or doctor

P330 - Rinse mouth

### Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

### Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

## Other Hazards

This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
4,4-Dimethyl-3-thiosemicarbazide	6926-58-5	<=100

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

#### Eye Contact

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

#### Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

#### Ingestion

Call a physician immediately. Clean mouth with water.

#### Inhalation

Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.

#### Self-Protection of the First Aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

### Most important symptoms and effects, both acute and delayed

No information available.

### Indication of any immediate medical attention and special treatment needed

#### Notes to Physician

Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

# SAFETY DATA SHEET

4,4-Dimethyl-3-thiosemicarbazide

Revision Date 26-Mar-2025

## Extinguishing media

### **Suitable Extinguishing Media**

Carbon dioxide (CO<sub>2</sub>). Foam.

### **Extinguishing media which must not be used for safety reasons**

No information available.

## Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

## **Hazardous Combustion Products**

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Sulfur oxides, Hydrogen cyanide (hydrocyanic acid).

## Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation.

### Environmental precautions

See Section 12 for additional Ecological Information.

### Methods and Material for Containment and Cleaning Up

Avoid dust formation. Prevent product from entering drains. Sweep up and shovel into suitable containers for disposal. Do not flush into surface water or sanitary sewer system.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Handle product only in closed system or provide appropriate exhaust ventilation.

### Conditions for Safe Storage, Including any Incompatibilities

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

### Specific End Uses

Use in laboratories.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

# SAFETY DATA SHEET

4,4-Dimethyl-3-thiosemicarbazide

Revision Date 26-Mar-2025

## Exposure Controls

### **Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### **Personal protective equipment**

#### **Eye Protection**

Goggles

#### **Hand Protection**

Protective gloves

#### **Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

#### **Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

#### **Recommended Filter type:**

Particulates filter conforming to EN 143

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

When RPE is used a face piece Fit Test should be conducted

### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice

### **Environmental exposure controls**

No information available

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### **Information on basic physical and chemical properties**

#### **Appearance**

Beige

#### **Physical State**

Solid

#### **Odor**

No information available

#### **Odor Threshold**

No data available

#### **pH**

No information available

#### **Melting Point/Range**

149 - 153 °C / 300.2 - 307.4 °F

#### **Softening Point**

No data available

#### **Boiling Point/Range**

No information available

#### **Flash Point**

No information available

**Method -** No information available

#### **Evaporation Rate**

Not applicable

Solid

#### **Flammability (solid,gas)**

No information available

#### **Explosion Limits**

No data available

#### **Vapor Pressure**

No data available

#### **Vapor Density**

Not applicable

Solid

# SAFETY DATA SHEET

4,4-Dimethyl-3-thiosemicarbazide

Revision Date 26-Mar-2025

Specific Gravity / Density	No data available
Bulk Density	No data available
Water Solubility	Insoluble
Solubility in other solvents	No information available

## Partition Coefficient (n-octanol/water)

Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
Viscosity	Not applicable	Solid
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Molecular Formula	C3 H9 N3 S
Molecular Weight	119.2

## SECTION 10: STABILITY AND REACTIVITY

### Reactivity

None known, based on information available.

### Chemical Stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

Hazardous Polymerization	No information available.
Hazardous Reactions	No information available.

### Conditions to Avoid

Incompatible products.

### Incompatible Materials

Strong oxidizing agents.

### Hazardous Decomposition Products

Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulfur oxides.  
Hydrogen cyanide (hydrocyanic acid).

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

#### Product Information

(a) acute toxicity;

# SAFETY DATA SHEET

4,4-Dimethyl-3-thiosemicarbazide

Revision Date 26-Mar-2025

Oral	Category 3
Dermal	No data available
Inhalation	Category 3

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;  
Respiratory No data available  
Skin No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available  
There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available  
Target Organs No information available.

(j) aspiration hazard; Not applicable  
Solid

Other Adverse Effects The toxicological properties have not been fully investigated.

Symptoms / effects, both acute and delayed No information available.

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity effects Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

Persistence and degradability  
Persistence Insoluble in water.

Bioaccumulative potential May have some potential to bioaccumulate

Mobility in soil Spillage unlikely to penetrate soil. Is not likely mobile in the environment due to its low water solubility.

# SAFETY DATA SHEET

4,4-Dimethyl-3-thiosemicarbazide

Revision Date 26-Mar-2025

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**Other adverse effects** No information available

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods**  
**Waste from Residues/Unused Products** Waste is classified as hazardous Dispose of in accordance with the European Directives on waste and hazardous waste Dispose of in accordance with local regulations

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point.

**Other Information** Waste codes should be assigned by the user based on the application for which the product was used Do not empty into drains

## SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO**  
**UN-No** UN2811  
**Hazard Class** 6.1  
**Packing Group** II  
**Proper Shipping Name** TOXIC SOLID, ORGANIC, N.O.S. 4,4-Dimethyl-3-thiosemicarbazide

**Road and Rail Transport**  
**UN-No** UN2811  
**Hazard Class** 6.1  
**Packing Group** II  
**Proper Shipping Name** TOXIC SOLID, ORGANIC, N.O.S. 4,4-Dimethyl-3-thiosemicarbazide

**IATA**  
**UN-No** UN2811  
**Hazard Class** 6.1  
**Packing Group** II  
**Proper Shipping Name** TOXIC SOLID, ORGANIC, N.O.S. 4,4-Dimethyl-3-thiosemicarbazide

**Special Precautions for User** No special precautions required

## SECTION 15: REGULATORY INFORMATION

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

**International Inventories** X = listed

**National Regulations**

# SAFETY DATA SHEET

4,4-Dimethyl-3-thiosemicarbazide

Revision Date 26-Mar-2025

**Persistent Organic Pollutant**  
**Ozone Depletion Potential**

This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

## SECTION 16: OTHER INFORMATION

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**POW** - Partition coefficient Octanol:Water

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

### **Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**Prepared By**

**Revision Date**

**Revision Summary**

Health, Safety and Environmental Department

26-Mar-2025

Not applicable.

**In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013**

### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**