

# SAFETY DATA SHEET

## 1. IDENTIFICATION

**Product name:** Tetramethylthiuram Disulfide  
**Company:** HENAN KAILUN CHEMICAL CO.,LTD.  
**Address:** Lijiang East Rd,Hua County,Henan Province,China  
**Responsible Department:** Sales Department  
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## 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

**PHYSICAL HAZARDS**

Not classified

**HEALTH HAZARDS**

Acute toxicity (Oral)

Category 4

Skin corrosion/irritation

Category 3

Serious eye damage/eye irritation

Category 2B

Skin sensitization

Category 1

Germ cell mutagenicity

Category 1B

Reproductive toxicity

Category 2

Specific target organ toxicity

Nervous system

- Single exposure [Category 1]

Specific target organ toxicity

Thyroid gland

- Repeated exposure [Category 1]

Specific target organ toxicity

Nervous system Testis

- Repeated exposure [Category 2]

**ENVIRONMENTAL HAZARDS**

Acute aquatic hazard

Category 1

Long-term aquatic hazard

Category 1

Label elements

Pictograms or hazard symbols



Signal word

Danger

Hazard statements

Harmful if swallowed

Causes mild skin irritation

Causes eye irritation

May cause an allergic skin reaction May cause genetic defects

Suspected of damaging fertility or the unborn child

Causes damage to organs : Nervous system

Causes damage to organs through prolonged or repeated exposure : Thyroid gland

May cause damage to organs through prolonged or repeated exposure : Nervous system Testis

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

**Precautionary statements**

**[Prevention]**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood. Do not breathe dust, fume, mist, vapors or spray.  
Avoid release to the environment.  
Do not eat, drink or smoke when using this product.  
Contaminated work clothing should not be allowed out of the workplace. Wash hands and face thoroughly after handling.

**[Response]**

Wear protective gloves, protective clothing, face protection.  
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.  
IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Take off contaminated clothing. And wash it before reuse.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

**[Storage]**

**[Disposal]**

If exposed or concerned: Call a POISON CENTER or doctor. Collect spillage.  
Store locked up.  
Dispose of contents and container in accordance with local, regional, national regulations.

**Other hazards which do not result in classification**

Dust explosion possible if in powder or granular form, mixed with air.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance/mixture:** Substance  
**Components:** Tetramethylthiuram Disulfide  
**Percent:** >98.0%(N)  
**CAS RN:** 137-26-8  
**Synonyms:** Bis(dimethylthiocarbamoyl) Disulfide , TMTD  
**Chemical Formula:** C<sub>6</sub>H<sub>12</sub>N<sub>2</sub>S<sub>4</sub>

**4. FIRST AID MEASURES**

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.  
**Skin contact:** Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Call a POISON CENTER or doctor/physician.  
**Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Call a POISON CENTER or doctor/physician.  
**Ingestion:** Call a POISON CENTER or doctor/physician. Rinse mouth.  
**Protection of first-aiders:** A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

**5. FIRE-FIGHTING MEASURES**

**Suitable extinguishing media:** Dry chemical, foam, water spray, carbon dioxide.  
**Specific hazards arising from the chemical:** Take care as it may decompose upon combustion or in high temperatures to generate poisonous fume.  
**Precautions for firefighters:** Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.

**Special protective equipment for firefighters:** When extinguishing fire, be sure to wear personal protective equipment

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

**Environmental precautions:** Be careful not to let it flow into rivers, etc., since adverse effects on the environment are concerned.

**Methods and materials for containment and cleaning up:** Sweep dust to collect it into an airtight container, taking care not to disperse it. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Technical measures:** Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent dispersion of dust. Wash hands and face thoroughly after handling.

**Advice on safe handling:** Use a closed system if possible. Use a local exhaust if dust or aerosol will be generated.

**Conditions for safe storage, including any incompatibilities**

**Storage conditions:** Keep container tightly closed. Store in a cool and dark place. Store locked up. Store away from incompatible materials such as oxidizing agents.

**Packaging material:** Comply with laws.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering controls:** Install a closed system or local exhaust. Also install safety shower and eyebath.

**Exposure limits:**

**ACGIH TLV(TWA):** 0.05 mg/m<sup>3</sup> (IFV) (sen)

**OSHA PEL(TWA):** 5 mg/m<sup>3</sup>

**Personal protective equipment**

**Respiratory protection:** Dust respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

**Hand protection:** Impervious gloves.

**Eye protection:** Safety goggles. A face-shield, if the situation requires.

**Skin and body protection:** Impervious protective clothing. Protective boots, if the situation requires.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state (20°C):** Solid

**Form:** Crystal - Powder

**Colour:** White - Slightly pale yellow

**Odour:** Characteristic

**pH:** No data available

**Melting point/freezing point:** 154°C

**Boiling point/range:** 129°C /2.7kPa

**Flash point:** No data available

**Flammability or explosive limits:**

**Lower:** No data available

**Upper:** No data available

**Vapour pressure:** 2.3mPa/25°C

**Relative density:** No data available

**Solubility(ies):**

**[Water]** Insoluble

**[Other solvents]**

**Very soluble:** Benzene, Chloroform, Ethanol

**Soluble:** Ether, Acetone

**Log Pow:** 1.82

**Autoignition temperature:** 250°C

## 10. STABILITY AND REACTIVITY

<b>Chemical stability:</b>	Stable under proper conditions.
<b>Possibility of hazardous reactions:</b>	Dust explosion possible if in powder or granular form, mixed with air.
<b>Conditions to avoid:</b>	Static discharge
<b>Incompatible materials:</b>	Oxidizing agents, Acids, Reducing agents
<b>Hazardous decomposition products:</b>	Carbon dioxide, Carbon monoxide, Nitrogen oxides (NOx), Sulfur oxides

## 11. TOXICOLOGICAL INFORMATION

<b>Acute Toxicity:</b>	ihl-hmn TCLo:30 ug/m <sup>3</sup> /5Y-I ihl-rat LC50:500 mg/m <sup>3</sup> /4H orl-rat LD50:560 mg/kg skn-rbt LDLo:1000 mg/kg
<b>Skin corrosion/irritation:</b>	skn-rbt 100% MLD
<b>Serious eye damage/irritation:</b>	eye-rbt 100 mg/24H MOD
<b>Germ cell mutagenicity:</b>	mno-sat 50 ug/plate (+S9) msc-ham-Ing 5 mg/L pic-esc 1 ug/tube
<b>Carcinogenicity:</b>	orl-rat TDLo:108 mg/kg/1Y-C scu-mus TDLo:46 mg/kg
<b>IARC =</b>	Group 3 (Not classifiable as carcinogenic to humans)
<b>NTP =</b>	No data available
<b>Reproductive toxicity:</b>	orl-rat TDLo: 300 mg/kg (15D preg)
<b>RTECS Number:</b>	JO1400000

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	
<b>Fish:</b>	No data available
<b>Crustacea:</b>	No data available
<b>Algae:</b>	No data available
<b>Persistence / degradability:</b>	2.8% (by BOD)
<b>Bioaccumulative potential(BCF):</b>	1.1 - 4.4(conc. 25 ug/L) , <3.4(conc. 2.5 ug/L)
<b>Mobility in soil</b>	
<b>Log Pow:</b>	1.82
<b>Soil adsorption (Koc):</b>	No data available
<b>Henry's Law (PaM<sup>3</sup>/mol):</b>	No data available

## 13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

## 14. TRANSPORT INFORMATION

<b>Hazards Class:</b>	9: Miscellaneous dangerous goods.
<b>UN-No:</b>	3077
<b>Proper shipping name:</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Packing group:</b>	III
<b>Marine pollutant</b>	Y

## 15. REGULATORY INFORMATION

**Regulations on the Control over Safety of Dangerous Chemicals (State Council announces on January 26, 2002 and revised on February 16,2011):** Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

**This product is included in the list of dangerous chemicals(2015)/Serial No.: 2004**

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