

**SOVEREIGN CHEMICAL COMPANY**

1225 West Market St., Akron OH 44313
Phone: 330-869-0500, Fax: 330-869-0518
www.sovchem.net

Material Safety Data Sheet**Sovchem TMTD****1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION**

Sovereign Chemical Company 1225 West Market St. Akron, Ohio 44313 Phone: 330-869-0500 Fax: 330-869-0518	Emergency Contact : Chemtrec: 1-800-424-9300 (continental USA) (1)703-527-3887 (outside continental USA)
Trade Name(s): Sovchem TMTD Oil Powder or Sovchem TMTD Granule	MSDS Number: 1523
Chemical Name: Tetramethylthiuram disulfide	Synonyms: Thioperoxydicarbonic diamide tetramethyl. Bis (dimethylthiocarbamoyl) disulfide TMTD, thiram
Prepared By: Sovereign Chemical Company	Date of Issue: October 3, 2003 (supersedes: December 1, 1999) Revision Number: 2 Change(s): added oil info under ingredients

2. INGREDIENTS

<u>Component</u>	<u>CAS #</u>	<u>Percent</u>	<u>ACGIH (TWA)</u>	<u>OSHA (TWA)</u>	<u>IDLH</u>
Tetramethyl thiuram disulfide	137-26-8	98.0	1 mg/m ³ (total dust)	5 mg/m ³ (8H oel)	100 mg/m ³

Oil Powders are coated with 1-2 % oil for dust suppression.

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

White powder or Granule. Use appropriate personal protective equipment. During fire situations, irritating and toxic gases may be generated. Keep from entering storm or sanitary sewers, ground water, or soil. Avoid contact with skin and eyes and inhalation of dust.

HMIS Rating: Health – 2*, Flammability – 0, Reactivity – 0, Personal Protection Equipment – F** - safety glasses, protective gloves, apron, dust mask

*Classified as a skin sensitizer by OSHA

**This is recommended personal protection equipment, final personal protection equipment should be determined by the plant safety department based on the actual conditions under which the product is used.

Potential Health Effects:

Eye: May cause irritation and reddening .

Skin Contact: Skin sensitizer. May cause irritation.

Ingestion: Harmful if swallowed.

Inhalation: Harmful by inhalation.

Chronic & Carcinogenicity: The product is classified as a mutagen and skin sensitizer by OSHA (1910.1200). May aggravate pre-existing respiratory and skin disorders.

Specific Hazards: An adverse reaction can occur when exposed to this product in combination with alcohol. Exposure to this product can also effect the activity of certain prescription drugs (consult a physician).

4. FIRST AID MEASURES

Skin: Wash off immediately with plenty of soap and water. Seek medical advice in case of skin rash. Prolonged or repeated contact with skin can cause eczema-like dermatitis

Eye: Rinse immediately with plenty of water for at least 15 minutes. If irritation persists, consult an ophthalmologist.

Ingestion: Seek medical help.

Inhalation: Remove to fresh air. Consult a doctor.

5. FIRE FIGHTING MEASURES

Flash Point: ND

LEL: ND

UEL: ND

Auto Ignition Temperature: ND

Use water, dry powder or regular foam to extinguish fires. Product in or near fires should be cooled with a water spray or fog. A self contained breathing apparatus (SCBA) operating in the positive pressure mode and full fire fighting protective clothing should be worn for combating fires. During a fire the product can form sulfur oxides and nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES

Individuals involved in the cleanup should wear appropriate personal protective equipment. See Section 8. Unnecessary personnel should be kept clear of the area. Take up any spilled product by mechanical means (avoid dust formation) and place into sealed containers for proper disposal. Do not allow product to enter sewage or ground water. Dispose of waste materials including empty product bags or drums in accordance with Local, State and Federal regulations. Avoid contact with skin and eyes and inhalation of dust.

7. HANDLING AND STORAGE

Storage Conditions Do not store at high temperatures or near acids and oxidants. Store in closed containers in a dry environment.

Handling: Good housekeeping and engineering practices should be employed to prevent the generation and accumulation of dusts. Individuals handling this product should wear personal protective equipment specified in Section 8. Plant environment should include controls and equipment specified in Section 8. Wet mopping or vacuuming with a unit that contains a HEPA filter is recommended to clean up any dusts generated during processing or handling. Avoid contact with skin and eyes and inhalation of dust.

8. EXPOSURE CONTROL - PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation should be provided. Design details for local exhaust ventilation systems may be found in the latest edition of "Industrial Ventilation: A Manual of Recommended Practices" published by the ACGIH Committee on Industrial Ventilation, P.O. Box 16153, Lansing, MI 48910. The need for local exhaust ventilation should be evaluated by a professional industrial hygienist. Local exhaust ventilation systems should be designed by a professional engineer.

Respiratory Protection: Use as a minimum a NIOSH approved 1/2 face piece respirator equipped with cartridges approved for organic vapors, acid gases, and particulate matter with an exposure limit of not less than 0.05 mg/M³.

Eye Protection: Chemical protective goggles are recommended where there is a possibility of eye contact with the product. Safety glasses with side shields are recommended for all other operations. An eye wash device should be available in the work area where the product is handled.

Protection Gloves: Neoprene or nitrile gloves should be worn to prevent irritation and possible absorption. Cloth gloves are not recommended.

Other Protection Items: Neoprene or nitrile rubber coated apron or other body covering may be required if there is a possibility of regular work clothing becoming contaminated with the product. All soiled or dirty clothing and personal protective equipment should be thoroughly cleaned before reuse. A shower is recommended after handling product.

Do not consume alcohol, eat or smoke while handling this product. Persons using prescription drugs while handling this product should consult their physician.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State: White Powder or granule	Melt Point: 142-152°C
Vapor Density (Air = 1): Not applicable	Octanol/Water Partition Coefficient: Not established
Vapor Pressure: Not applicable	Evaporation Rate BuOAC = 1: Not applicable
Odor: Characteristic	Specific Gravity: 1.42 g/m ³ (at 25°C)
% Volatile by Volume: Not applicable	Boiling Point: Not applicable
% Solubility (H₂O) : Insoluble in cold water	pH: Not established
Other: Soluble in alcohols, acetone, chloroform, benzene, methyl chloride	

10. STABILITY AND REACTIVITY

Stability/Polymerization: Stable

Incompatibility (conditions to avoid): High temperatures and contact with acids and oxidants.

Hazardous Decomposition Products: Thermal decomposition may form toxic products.

Special Sensitivity: None

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Inhalation: LC₅₀ (inhalation, rat) 4 h: 500 mg/m³ for tetramethylthiuram disulfide

Ingestion: LD₅₀ (oral, rat) 560 mg/kg for tetramethylthiuram disulfide

Skin-contact: LD₅₀ (dermal, rabbit) >2000 mg/kg for tetramethylthiuram disulfide

Local Effects:

Inhalation: Irritating to respiratory system

Skin-contact: Prolonged or repeated contact with skin can cause eczema-like dermatitis.

Eye-contact: DRAIZE assay (eyes, rabbit) 100 mg/24 hours

Sensitization:

Skin-contact: Risk of sensitization by skin contact.

Specific Effects: Mutagenicity: cat 3

Further Information: Alcohol antabuse effect.

12. ECOLOGICAL INFORMATION

Persistence/Degradability:

In water: Biodegradation: 2.8% after 14 days

Bioaccumulation: Bioconcentration factor: 4.4

Aquatic Toxicity:

Acute Toxicity: Fish: LEPOMIS MACROCHIRUS LC50, 96 h : 0.13 mg/l for tetramethylthiuram disulfide
Daphnia: DAPHNIA MAGNA CE(1)50, 58 h: 0.21 mg/l for tetramethylthiuram disulfide
Algae: SCENEDESMUS SUBSPICATUS C150, 96 h: <0.1 mg/l for tetramethylthiuram disulfide
P. Reticula CL50 96 Hours: 0/27 mg/l for tetramethylthiuram disulfide
P. Phosphoreum CE50 15 minutes: 0.10 mg/l for tetramethylthiuram disulfide TD

Mobility: D. Magma CL 50 48 Hours: 0.21 mg/l for tetramethylthiuram disulfide

13. DISPOSAL CONSIDERATIONS

Product should be disposed of in an EPA approved incinerator in accordance with all local, state, and/or federal regulations.

CERCLA/RCRA: U244, reportable quantities 10 pounds (40 CFR 302)

RQ : The reportable quantity (RQ) for this product is 10 lbs. Any package containing more than 10 lbs. must be labelled, marked, and shipped as a hazardous material. Single packages containing less than 10 lbs. are considered non-hazardous for shipment

14. TRANSPORTATION INFORMATION

US DOT and Canadian TDG: *Environmentally Hazardous Substance*, Solid, n.o.s. (tetramethylthiuramdisulfide), 9, UN3077, PG III, net _____ lbs.
24 hour emergency contact: (800) 424-9300

The reportable quantity (RQ) for this product is 10 lbs. Any package containing more than 10 lbs. must be labeled, marked, and shipped as a hazardous material. Single packages containing less than 10 lbs. are considered non-hazardous for shipment.

ADR/RID: Class 9, Item (letter): 12°c, prescriptions: labeling 9

IMDG: Class 9, packaging group: III, UN Nr (IMDG) 9029, prescriptions: labeling 9 and "MARINE POLLUTANT"

IATA: Class 9, packaging group: III, labeling: 9, passengers: packaging instruction 911 (no restricted quantity by package), cargo: packaging instruction 911 (no restricted quantity by package), special disposition: A 97

15. REGULATORY INFORMATION

OSHA Hazard Communication Classification: Skin sensitizer, mutagen and target organ effects (1910.1200)

Hazardous Statements:

R 20/22 Harmful by inhalation and if swallowed.

R 36/37 Irritating to eyes and respiratory system.

R 40 Possible risk of irreversible effects.

R 43 May cause sensitization by skin contact.

S 36/37 Wear suitable protective clothing and gloves.

SUBPARTZ: Yes.

WHMIS 1%

CERCLA/RCRA: U244, reportable quantities 10 pounds (40 CFR 302)

SARA Title III, Section 313: Listed

NTP, IARC: Not listed

Clean Air Act: Listed

TSCA: Listed on the TSCA inventory

Canadian DSL: All ingredients listed.

16. OTHER INFORMATION

NE = Not Established

NA = Not Applicable

ND = Not Determined

Information contained in this MSDS sheet have been gathered from the following documents:

Chemical REG-A-DEX, J.J.Keller, March 2000

WHMIS Compliance Manual, Carswell, April 2000

Transportation of Dangerous Good, J.J.Keller, February 2000

Code of Federal Regulations, Transportation, 49 CFR Parts 100 to 185, October 1998

NIOSH Pocket Guide to Chemical Hazards, June 1997

ACGIH Threshold Limit Values, 1999

HMIS Implementation Manual, 2nd Edition

Toxicity and Safe Handling of Rubber Chemicals, BRMA, 3rd Edition

ChemCheck Handbook, Specialty Technical Publishers, March 2000

IARC WEB site

NTP WEB site

IMPORTANT SAFETY NOTICE: The information in the Material Safety Data Sheet relates only to the specific material(s) described herein and does not relate to use in combination with any other material or substance or in any process. We believe that the information contained herein is current as of the date of issue of this Material Safety Data Sheet. Since the use of this information and these opinions and the conditions of use of this product are not within the control of Sovereign Chemical Company, it is the user's obligation to determine the conditions of safe use of the product.

Users of this product should study this Material Safety Data Sheet and become aware of the product hazards and safety information before using the product. Users should also notify their employees, agents, and contractors of the information on this Material Safety Data Sheet and any product hazards and safety information in order to provide safe use of this product.

Sovereign Chemical Company
341 White Pond Drive
Akron, OH 44320

Dear Customer:

Section 313 of SARA Title III (also known as the Emergency Planning and Community Right to Know Act, or EPCRA) require certain suppliers of mixtures or tradename products to notify their customers when such mixtures or tradename products contain chemicals listed in Section 313. This letter constitutes a supplier notification that the following product you ordered contains one or more chemicals on the Section 313 list (*) as noted below:

Product Name:	Sovchem TMTD	
Chemical Name (*)	CAS #	% Composition
Tetramethyl thiuram disulfide	137-26-8	100

In addition, an MSDS for this product is enclosed for your use.

If you are a distributor and you sell this product to another customer (s), you are required under Section 313 to furnish the same information and MSDS to that customer (s).

If you have any questions, please do not hesitate to contact our Technical Department, Sovereign Chemical Company at 330-869-0500.

Sovereign Chemical Company