

Sovchem[®] TMTD

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION	
Manufacturer Sovereign Chemical Company 4040 Embassy Parkway, Suite 190 Akron, OH 44333	Emergency Contact Chemtrec: 1-800-424-9300 (USA) (1)330-542-8400 (outside USA)
Trade Name(s): Sovchem [®] TMTD Oiled Powder or Granule	Synonyms: TMTD, thiram, Thioperoxydicarbonic diamide tetramethyl. Bis (dimethylthiocarbamoyl) disulfide
Chemical Name: Tetramethylthiuram disulfide	CAS Number: 137-26-8
Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.	Application of the substance/the preparation: Initial product for chemical reactions.
Issued By: Sovereign Chemical Company According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS	Date of Issue: November 1, 2018

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation:

H400, H410.



GHS08 Health hazard
STOT RE 2

H373 May cause damage to organs through prolonged or repeated



GHS09 Environment
Aquatic Acute 1
Aquatic Chronic 1




H400 Very toxic to aquatic.
H410 Very toxic to aquatic life with long lasting effects.



GHS07
Acute Tox. 4
Acute Tox. 4
Skin Irrit. 2
Eye Irrit. 2
Skin Sens. 1

H302 Harmful if swallowed.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

	Xn; Harmful R22-48/22	Harmful if swallowed. Harmful: danger of serious damage to health by prolonged exposure if
	Xi; Sensitizing R43	May cause sensitization by skin contact.
	N; Dangerous for the environment. R50/53	Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008

The substance is classified and labeled according to the CLP regulation.

Hazard pictograms



This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS)



GHS07 GHS08 GHS09

Signal word: Warning

Hazard-determining components of labeling: thiram

Hazard statements

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H410.

H302+H332	Harmful if swallowed or if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash thoroughly after handling.
P260	Do not breathe dust.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P314	Get medical advice/attention if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.

Additional information: Contains thiram. May produce an allergic reaction.

Hazard description

WHMIS-symbols



D2A –Very toxic material causing other toxic effects

NFPA ratings (scale 0-4)


 Health = 2
 Fire = 0
 Reactivity = 0

HMIS ratings (scale 0-4)

HEALTH	*2
FIRE	0
REACTIVITY	0

 Health = *2
 Fire = 0
 Reactivity = 0

* - Indicates a long-term health hazard from repeated or prolonged exposures.
 HMIS Long Term Health Hazard Substances: Substance is not listed.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

CAS No. Description: 137-26-8 thiram

Identification number(s)

EC number: 205-286-2

Index number: 006-005-00-4

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information

Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident.

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation

Supply fresh air.

Seek immediate medical advice.

In case of irregular breathing or respiratory arrest provide artificial respiration.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

Gastric or intestinal disorders

Coughing

Dizziness

Headache

Disorientation

Hazards

Danger of convulsion.

Danger of impaired breathing.

Danger of circulatory collapse.

Danger of disturbed cardiac rhythm.

Condition may deteriorate with alcohol consumption.

4.3 Indication of any immediate medical attention and special treatment needed

Contains THIRAM. Consult literature for specific antidotes.

If swallowed, gastric irrigation.

If necessary oxygen respiration treatment.

Treat skin and mucous membrane with antihistamine and corticoid preparations.

In cases of irritation to the lungs, initial treatment with cortical steroid inhalants.

Medical supervision for at least 48 hours.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons, unsuitable extinguishing agents: None.

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

Protective equipment

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information: Cool endangered receptacles with water spray.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use respiratory protective device against the effects of fumes/dust/aerosol.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

6.2 Environmental precaution

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Store in cool, dry place in tightly closed receptacles.

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of dust.

Any unavoidable deposit of dust must be regularly removed.

Information about fire - and explosion protection

Dust can combine with air to form an explosive mixture.

Keep respiratory protective device available.

Protect from heat.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles: Avoid storage near extreme heat, ignition sources or open flame.

Information about storage in one common storage facility

Store away from foodstuffs.

Store away from oxidizing agents.

Further information about storage conditions: Keep container tightly sealed.

7.3 Specific end use(s): No further relevant information available.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see Section 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace: Not required.

DNELs: No further relevant information available.

PNECs: No further relevant information available.

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not inhale dust / smoke / mist.

Respiratory protection

Not required under normal conditions of use.

Use suitable respiratory protective device in case of insufficient ventilation.

For spills, respiratory protection may be advisable.

NIOSH or E approved organic vapor respirator equipped with a dust/mist prefilter should be used.

Protection of hands



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection



Safety glasses

Body protection: Protective work clothing.

Limitation and supervision of exposure into the environment: No further relevant information available.

Risk management measures

See Section 7 for additional information.

No further relevant information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information

Appearance Form: Granulate or Flakes. Color: Light Yellow.	Change in Condition Melting Point/Melting Range: 194-266 °C (measured softening point). Boiling Point/Boiling Range: >482 °C (>900 °F)
Odor: Petroleum-like.	Octanol/Water Partition Coefficient: Not determined.
Odor threshold: Not determined.	pH Value: Not applicable.
Vapor pressure: Not applicable.	Flash point: >270 °C (>518 °F).
Density at 20 °C: Not determined.	Flammability (solid, gaseous): Product is not flammable.
Relative density: Not determined.	Ignition temperature: Not determined.
Vapor density: Not applicable.	Decomposition temperature: Not determined.
Evaporation rate: Not applicable.	Self-igniting: Not determined.
Solubility in / Miscibility with water: Insoluble.	Danger of explosion: Product does not present an explosion hazard.
Viscosity Dynamic: Not applicable. Kinematic: Not applicable.	Explosion limits Lower: Not determined. Upper: Not determined.

9.2 Other information: No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Toxic fumes may be released if heated above the decomposition point.

As the product is supplied it is not capable of dust explosion; however, enrichment with fine dust causes risk of dust explosion.

Reacts with strong oxidizing agents.

Reacts with strong acids.

10.4 Conditions to avoid

Keep ignition sources away - Do not smoke.

Store away from oxidizing agents.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products

Sulfur oxides (SO_x)

Nitrogen oxides (NO_x)

Carbon monoxide and carbon dioxide

Hydrogen cyanide (prussic acid)

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Primary irritant effect

On the skin: Irritant to skin and mucous membranes.

On the eye: Irritating effect.

Sensitization

Sensitizing effect through inhalation is possible by prolonged exposure.

Sensitization possible through skin contact.

Additional toxicological information

Harmful

Toxic and/or corrosive effects may be delayed up to 24 hours.

Danger through skin adsorption.

Sensitization: Sensitization possible by inhalation and/or dermal contact.

Repeated dose toxicity: Repeated exposures may result in skin and/or respiratory sensitivity.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: Toxic for aquatic organisms.

12.2 Persistence and degradability: Not easily biodegradable.

12.3 Bioaccumulative potential: May be accumulated in organism.

12.4 Mobility in soil: No further relevant information available.

Ecotoxicological effects

Remark

Very toxic for fish.

Toxic for water fleas.

Additional ecological information

General notes

The product may not be released into the environment without control.

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment cannot be excluded.

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water.

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also, poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

Un-cleaned packaging

Recommendation: Disposal must be made according to official regulations.

14. TRANSPORTATION INFORMATION

14.1 UN-Number

DOT, ADR, IMDG, IATA

UN3077

14.2 UN proper shipping name:

DOT

Environmentally hazardous substances, solid, n.o.s. (thiram)

ADR

3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID,
N.O.S (thiram)

IMDG

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(thiram), MARINE POLLUTANT

IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(thiram)

14.3 Transport hazard class(es)
DOT, IMDG, IATA



Class
Label



9 Miscellaneous dangerous substances and articles.
9

ADR



Class
Label



9 (M7) Miscellaneous dangerous substances and articles.
9

14.4 Packing group

DOT

N/A

ADR, IMDG, IATA

III

14.5 Environmental hazards

Marine pollutant

Product contains environmentally hazardous substances: thiram

Special Marking (ADR)

Yes Symbol (fish and tree)

Special Marking (IATA)

Symbol (fish and tree)

Symbol (fish and tree)

14.6 Special precautions for user

Danger code (Kemler)

Warning: Miscellaneous dangerous substances and articles.

EMS Number

90

F-A, S-F.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

Transport/Additional information

ADR

Limited quantities (LQ)

5 kg

Transport category

3

Tunnel restriction code

E

UN "Model Regulation"

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (thiram), 9, III

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
United States (USA)

SARA Section 311/312 Hazards	Acute Health Hazard, Chronic Health Hazard, Fire Hazard
SARA Section 313 (Specific toxic chemical listings)	Substance is listed.
TSCA (Toxic Substances Control Act)	Substance is listed.

Proposition 65 (California)	
Chemicals known to cause cancer	Substance is not listed.
Chemicals known to cause reproductive toxicity for females	Substance is not listed.
Chemicals known to cause reproductive toxicity for males	Substance is not listed.
Chemicals known to cause developmental toxicity	Substance is not listed.
Carcinogenic Categories	
EPA (Environmental Protection Agency)	Substance is not listed.
IARC (International Agency for Research on Cancer)	97-77-8 disulfiram 3
TLV (Threshold Limit Value established by ACGIH)	97-77-8 disulfiram A4
NIOSH-Ca (National Institute for Occupational Safety and Health)	Substance is not listed.
OSHA-Ca (Occupational Safety & Health Administration)	Substance is not listed.
Canada	
Canadian Domestic Substances List (DSL)	Substance is listed.
Canadian Ingredient Disclosure list (limit 0.1%)	Substance is not listed.
Canadian Ingredient Disclosure list (limit 1%)	Substance is listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association.
- GHS: Globally Harmonized System of Classification and Labeling of Chemicals
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- WHMIS: Workplace Hazardous Materials Information System (Canada)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)