

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFIER: WESTCO TMTD

Other means of identification

Chemical name: Tetramethyl thiuram disulfide

Synonyms: Bis (dimethylthiocarbamoyl) disulfide, Thiram, TMTD

Recommended use and restrictions on use: Accelerator

Restrictions on use: No additional information available

Supplier information:

Supplier: Western Reserve Chemicals

Supplier Address: 60 S. Seiberling Street
Akron, OH 44305

Telephone: 330-650-2244

Website: www.wrchem.com

Emergency phone number: Chemtrec: 1-800-424-9300 US

SECTION 2 – HAZARD(S) IDENTIFICATION

Classification of the substance or mixture:

Acute Toxicity, Oral, Category 4

Acute Toxicity, Inhalation, Category 4

Skin Irritant, Category 2

Eye Irritant, Category 2A

Skin Sensitizer, Category 1

Specific Target Organ Toxicity-repeated exposure, Oral, Category 2 (Liver)

OSHA Regulatory Status: Classified as hazardous based on components.

GHS Label Elements

Hazard symbol:





Signal word: Warning

Hazard statements:

- Harmful if swallowed or if inhaled.
- Causes skin irritation.
- May cause an allergic skin reaction.
- May cause damage to organs (Liver) through prolonged or repeated exposure if swallowed.

Precautionary Statements:

- Do not breathe dust/fume/gas/mist/vapors/spray.
- Wash skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only indoors or in a well-ventilated area.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release to the environment.
- Wear protective gloves/eye protection/face protection.
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- IF ON SKIN: Wash with plenty of soap and water.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Get medical advice/attention if you feel unwell.
- If skin irritation or rash occurs: Get medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
- Take off contaminated clothing and wash before reuse.
- Collect spillage.
- Dispose of contents/container to an approved waste disposal plant.

Hazard(s) not otherwise classified (HNOC): None known.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture:

| <u>Components</u> | <u>Chemical Identity</u> | <u>CAS Number</u> | <u>Weight%</u> |
|-------------------|---------------------------------------|-------------------|----------------|
| | Tetramethyl thiuram disulfide | 137-26-8 | 98% |
| | White Mineral Oil (Oiled powder only) | 8042-47-5 | 1-2% |

Any concentrations shown as a range is to protect confidentiality or is due to batch variation.
Occupational exposure limits, if available, are listed in Section 8.

SECTION 4 – FIRST AID MEASURES

Inhalation: Remove affected person to fresh air. Seek immediate medical advice. If not breathing provide artificial respiration. If breathing is difficult, get immediate medical attention.

Ingestion: If swallowed, contact a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Skin contact: Immediately wash skin with soap and water and rinse thoroughly. Remove contaminated clothing and launder before reuse. If skin irritation continues, consult a physician.

Eye contact: Remove contact lenses if worn. Immediately flush eyes with plenty of water for at least 15 minutes. If symptoms persist, consult a physician.

General Advice: In case of overexposure or if symptoms develop, seek medical attention. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this Safety Data Sheet to the physician in attendance. Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after incident.

Most important symptoms/effects, acute and delayed:

| | |
|----------------------|---|
| Eye contact: | May cause irritation and reddening. Signs/symptoms can include redness, swelling, pain and tearing. |
| Inhalation: | Harmful by inhalation. Signs/symptoms can include coughing. |
| Skin contact: | Skin sensitizer. May cause irritation. |
| Ingestion: | Harmful if swallowed. Signs/symptoms can include gastric or intestinal disorders, coughing, dizziness, headache. |
| Hazards: | Danger of convulsion. Danger of impaired breathing. Danger of circulatory collapse. Danger of disturbed cardiac rhythm. Adverse reaction can occur when exposed to this product in combination with alcohol. Exposure to this product can also affect the activity of certain prescription drugs. Consult a physician. |

Notes to physician: Provide symptomatic/supportive care as necessary. Treatment based on sound judgment of physician and individual reactions of patient.



Indication of immediate medical attention and special treatment needed: Contains Thiram. Consult literature for specific antidotes.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing method: In case of fire, use water spray, foam, or dry chemical.

Unsuitable extinguishing method: To avoid generating combustible dusts, do NOT use water jet to fight fire.

Specific hazards arising from chemical: Fight fire from a safe distance and from a protected location. Flammable dust when in finely divided and highly suspended state. Use water spray to cool fire exposed surfaces. Do not allow runoff to enter waterways.

Combustion products: Toxic emissions may result if product is involved in a fire. During a fire the product can form sulfur oxides and nitrogen oxides.

Special firefighting equipment and precautions for firefighters: Avoid breathing smoke or fumes. Firefighters should wear a self-contained breathing apparatus (SCBA) operating in positive pressure mode and full protective clothing for combating fires. To avoid generating combustible dusts, do NOT use water jet to fight fire. Do not allow runoff to enter drains or waterways.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment specified. See Section 8. Unnecessary personnel should be kept clear of the area. Avoid contact with skin and eyes and inhalation of dust. Avoid the generation of dust. Take up any spilled product by mechanical means and place into sealed containers for proper disposal.

Methods and materials for containment and cleaning up:

Isolate area and remove sources of friction, impact, heat, low level electrical current and RF energy. Isolate spill and patch the leak package immediately. Remove ignition sources and work with non-sparking tools. DO NOT spread spilled product with water.

Environmental precautions:

Do not allow discharge into the environment-water runoff can cause environmental damage. In the event of a spill or accidental release that cannot be contained, notify the relevant authorities in accordance with all applicable regulations.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling: Good hygienic practices should be observed. Work clothes should be washed separately at the end of each work day. Disposable clothing should be discarded with material. Avoid generating or breathing dust. Avoid contact with eyes, skin and clothing. Reclose containers of unused product. Wash hands before eating, chewing gum, using tobacco or using the toilet.

Conditions for safe storage, including any incompatibilities: Store closed containers in a cool, dry, well-ventilated area. Avoid exposure to direct sunlight. Keep material away from heat sources. Store away from oxidizing materials. Do not store near acids and oxidants.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:

Component

Exposure Limits

Tetramethyl thiuram disulfide

OSHA PEL/8Hr-TWA = 5/mg/m³
ACGIH TLV/8Hr TWA = 1 mg/m³

White Mineral Oil.

OSHA PEL/8Hr-TWA = 5/mg/m³
ACGIH TLV/8Hr TWA = 5 mg/m³

Appropriate engineering controls: General, local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during use of this product. Adequate ventilation should be provided to keep dust concentration below acceptable exposure limits. Discharge from the ventilation system should comply with applicable air pollution control regulations. Facilities storing or utilizing this material should be equipped with eye wash station(s) and safety shower(s).

Individual protection measures, such as personal protective equipment:

Eye/face protection: Safety glasses or goggles.

Skin/Hand protection: Wear impervious gloves to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with good laboratory practices. Wash hands with soap and water.

Body protection: To protect the body, wear impervious clothing such as coveralls to minimize skin contact. Select protective equipment according to the concentration and amount of the dangerous substance at the specific workplace. Launder contaminated clothing before reuse.

Respiratory protection: Appropriate respiratory protection shall be worn when applied engineering controls are not adequate to protect against inhalation exposure. If dust is generated, wear NIOSH-approved dust respirator or dust mask. If



vapors/dust are generated above exposure limits, use NIOSH approved full-face organic cartridge filter respirator, air supplied respirator or SCBA. Respirators should be selected and used in accordance with OSHA, Subpart 1 (29 CFR 1910.134)

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

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

| | |
|--|------------------------------|
| Appearance: | White granular or oil powder |
| Odor: | Characteristic |
| Decomposition Temperature: | No data available |
| Odor Threshold: | No data available |
| pH: | No data available |
| Boiling Point/Range: | No data available |
| Melting Point/Freezing Point: | 142-152°C |
| Flash Point (°C): | No data available |
| Flammable/Explosion Limits: | No data available |
| Relative Density (Specific Gravity): | 1.42 g/m ³ @ 25°C |
| Vapor Pressure: | No data available |
| Vapor Density: | No data available |
| Solubility: | Insoluble in cold water |
| Evaporation Rate: | No data available |
| Partition Coefficient (n-octanol/water) | No data available |
| Auto-ignition Temperature: | No data available |
| Viscosity: | No data available |
| Explosive Properties: | No data available |

SECTION 10 - STABILITY & REACTIVITY

Reactivity: No specific test data available for this product.

Chemical stability: Stable when stored at room temperature in closed, original container. Stable under normal conditions of handling, use and transportation. Stable if protected from heat and exposure to air. Avoid contact with acids and oxidants. Hazardous polymerization will not occur.

Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions are not anticipated.

Conditions to avoid: Keep away from heat, sparks and flame. Avoid generating dust. Avoid excessive heat. Avoid contact with acids and oxidants.

Incompatible materials: Oxidizing agents. Acids.

Hazardous decomposition products: Carbon monoxide. Oxides of nitrogen. Oxides of sulfur.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity

Oral: LD50 (Rat): 560 mg/kg
Dermal: LD50 (Rabbit): >2,000 mg/kg
Inhalation: LC50 (Rat) 4h: 500 mg/m³

Irritation/Corrosion:

Skin: Skin irritation (Rabbit, 4 hours)
Result: No skin irritation
Eyes: Draize assay (Eyes/Rabbit 100 mg/24 hours)
Result: Irritating to eyes
Respiratory: No data available

Sensitization:

Skin: In vivo assay – Guinea pig
Result: May cause sensitization by skin contact.
Respiratory: No data available

Mutagenicity:

No data available

Carcinogenicity:

Both negative and positive results have been found in standard tests using bacteria. Negative, positive and equivocal results have been found in standard in vitro and in vivo tests using animals, animal bacterial cells.

IARC: Group 3: Not classifiable as to its carcinogenicity to humans (Thiram).

May react with nitrosating agents during rubber vulcanization to form nitrosamines. Some nitrosamines are suspect human carcinogens.

Reproductive/Developmental

Toxicity: Animal studies have shown some adverse effects-low birth weight of pups, maternal toxicity-on female animals. Chronic animal studies have shown this material to cause reproductive effects, blood effects and organ weight changes. Some animal studies have shown adverse effects on fetal development.

Specific target organ toxicity-single exposure: No data available

Specific target organ toxicity-repeated exposure: Oral-May cause damage to organs through prolonged or repeated exposure (Liver)

Information on likely routes of exposure: Routes of entry: Inhalation, Dermal-Skin

Potential acute health effects:

Eye contact: May cause irritation and reddening.

Inhalation: Harmful by inhalation. Exposure to dust particles generated from material may cause irritation of the respiratory tract. Inhalation may cause alcohol intolerance. Signs/symptoms can include coughing.

Skin contact: Skin sensitizer. May cause an allergic skin reaction. May be absorbed through the skin and product effects similar to those caused by inhalation and or/ingestion.

Ingestion: Harmful if swallowed. May cause alcohol intolerance. (Antabuse effect). Signs/symptoms can include gastric or intestinal disorders.

Symptoms related to the physical, chemical and toxicological characteristics:

Inhalation: Signs/symptoms can include coughing.

Skin Contact: Signs/symptoms can include irritation, redness.

Eye Contact: Signs/symptoms can include redness, swelling, pain and tearing.

Ingestion: Signs/symptoms can include headache, dizziness, nausea, vomiting, gastrointestinal irritation.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Short term exposure:

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Long term exposure:

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Potential chronic health effects: Not available.

SECTION 12 - ECOLOGICAL INFORMATION

**Ecotoxicity:
Component**

Tetramethyl thiuram disulfide **Fish:** LC50 (96 hr): 0.13 mg/L (Lepomis Macrochirus)
LC50 (96 hr): 0.13 mg/L (Blue Gill)
LC50 (96 hr): 0.13 mg/L (Rainbow Trout)
Crustaceans: LC50 (48 hr): 0.21 mg/L (Daphnia magna)
Algae: EC50 (96 hr): <0.1 mg/L (Scenedesmus Subspicatus)

Persistence and degradability: Not readily biodegradable.

Bioaccumulative potential: No data available

Mobility in soil: No data available

Other adverse effects: Very toxic to aquatic life with long lasting effects.

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal instructions: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Empty containers should be handled in a manner not to cause dusting during collection, transportation and disposal. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues and must be treated as waste. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14 - TRANSPORTATION INFORMATION

Special shipping information

DOT (US):

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

IMDG:

RQ, UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., (THIRAM), 9, III, MARINE POLLUTANT



SECTION 15 - REGULATORY INFORMATION

U.S.:

TSCA Inventory Status: Chemical components are listed or exempt.

Title III SARA Status:

SARA Section 302-Extremely Hazardous Substance

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA Section 311 & 312-Hazardous Categories

(Immediate) Acute health hazard, (Delayed) Chronic health hazard

SARA Section 313-Toxic Chemicals

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

CAS No. 137-26-8-Listed as "Thiram"

California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.

RCRA Status

The following chemical components are listed under (40 CFR 261): RCRA Hazardous Waste U244

SECTION 16 - OTHER INFORMATION

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