



MERCHEM LIMITED

SAFETY DATA SHEET

MERCURE TMT
MSDS No. 12/20.03.2015

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name	Mercure TMT
Synonym	Tetra Methyl Thiuram disulphide

1.2 Use of the Substance/Mixture

Identified uses	Rubber vulcanization accelerator ,Biocide
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1.3 Manufacturer or supplier's details

Company/Undertaking identification address	Merchem Limited Grove Centre, 44- Development Plot, Kalamassery, Cochin – 683 109, Kerala, India
Telephone	+ 91-484-4089300
Telefax	+ 91-484-4089310

1.4 Emergency Telephone Number

Emergency Telephone Number	+ 91-484-4089300
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SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to EU directives 67/548/EEC or 1999/45/EC

N
Xn
Xi
R20/22
R36/38
R43
R48/22
R50/53

EC Number: 205-286-2

Annex 1 Index Number: 006-005-00-4

REGULATION (EC) No. 1272/2008

Classification of the substance or mixture	Acute tox: Cat. 4; Skin sensitization: Cat. 1; Aquatic acute: Cat. 1; Germ cell mutagenicity Cat. 2; Specific target organ toxicity, single exposure; Respiratory tract irritation Cat.3
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2.2 Label elements

Product Name:

Mercure TMT

Hazard pictograms



Signal Word Warning

Hazard Statements

- H302 Harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled
- H335 May cause respiratory irritation.
- H341 May cause mutagenic effects
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements - Prevention

- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P262 Avoid contact with skin ,eyes and clothing
- P264 Wash hands thoroughly after handling
- P271 Use only outdoors or in a ventilated area
- P273 Avoid release to the environment.
- P281 Wear protective gloves.

Precautionary Statements - Response

- P301+ P312 If swallowed, seek advice of a medical practitioner
- P302+P352 If on skin, wash with plenty of soap and water
- P304+P340 If inhaled, remove victim to fresh air
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary Statements - storage

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

Precautionary Statements - Disposal

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

Supplemental Hazard Statements: **None**

2.3 Other hazards

None



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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substance is a mixture.

3.2 Mixtures

Chemical description : Tetra Methyl thiuram disulphide

Composition/Information on ingredients

Chemical Name	CAS No.	EC No.	Annex-1 Index No.	Weight %
Tetra Methyl thiuram disulphide	137-26-8	205-286-2	006-005-00-4	98%
White mineral oil	8042-47-5	-	-	1-2

SECTION 4: FIRST AID MEASURES

4.1 Description of first-aid measures

General Advice :If symptoms persist, call a physician. Show this material safety data sheet to the doctor in attendance. Treat symptomatically. Use of alcoholic beverages may enhance toxic effects. In case of allergic reaction after exposure, any future exposure must be avoided.

Inhalation : Move to fresh air, if symptoms persist, seek medical advice

Skin : Wash immediately with soap and water

Eyes : Rinse immediately as long as a possible with plenty of water. Seek medical advice if irritation persist

Ingestion : Rinse mouth ,give water to drink

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. May cause mutagenic effects. Very toxic to aquatic life with long lasting effects.

4.3 Indication of immediate medical attention and special treatment needed

No data available



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SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NOx), Sulphur oxides

5.3 Protective Equipment and Precautions for Firefighters

Wear self contained breathing apparatus for fire fighting if necessary

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal

6.4 Reference to other sections

See section 7, 8 and 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end uses

A part from the uses mentioned in section 1.2 no other specific uses are stipulated



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SECTION 8: EXPOSURE CONTROL/PERSONNEL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal Protective Equipment:

Eye/face Protection :Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection :Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands

Hand Protection :Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

Respiratory Protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | |
|---------------------------------|------------------------|
| a) Appearance Form | :solid powder |
| b) colour | :Light cream |
| c) Odour | :slightly amine like |
| d) pH | :No data available |
| e) Melting point/range | : Min.142°C |
| f) Boiling point /boiling range | : 307°C |
| g) Flash point | :138°C(open cup) |
| h) Explosive property | :dust explosion hazard |



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- i) Flammability (solid, gas) :No data available
j) Explosion Limits :Lower Explosion Limit (LEL): 10 g/m³,
Minimum ignition energy: =<10 mJ,
Limiting oxygen concentration (LOC) (V >=1 m³): 7.4 Vol % Oxygen.
k) Vapour pressure : Negligible
l) Specific gravity : 1.4
m) Bulk density : 410-450kg/m³ (20 °C)
n) solubility ; Insoluble in water and soluble in Acetone and Chloroform
o) Partition coefficient :1.76
p) Auto-ignition temperature :>400°C
q) Decomposition temperature :No data available
r) Viscosity : Not applicable
s) Oxidizing properties :No data available

9.2 Other information

No data available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

- See Incompatible Materials

10.2 Chemical Stability

- Stable under recommended storage and handling conditions (See section 7)

10.3 Possibility of hazardous reactions

- No data available

10.4 Conditions to Avoid

High temperature and contact with oxidizing agents Alkalis, and acids

10.5 Incompatible materials to avoid

Oxidizing agents, Acids, Alkalis and Nitrosating agents for example. nitrites, nitrates and nitrogen oxides.

10.6 Hazardous Decomposition Products

- Heating or fire can release toxic gas
Nitrogen oxides (NO_x)
Sulphur dioxide (SO₂)
Carbon oxides (CO_x)

10.7 Other Information : During the vulcanization process, traces of carcinogenic N-nitrosamines may be formed from decomposition products (amines) in the presence of nitrosating agents.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity (LD50/oral/rat): 1080 mg/Kg



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Acute dermal toxicity (LD50/dermal/rabbit):	>7900 mg/Kg
Acute inhalational toxicity:	rat:4.42mg/l
Ingestion:	Harmful if swallowed. May cause head ache, nausea, vomiting, and gastrointestinal irritation.
Eye irritation:	Irritating to eyes
Skin irritation/Sensitization:	Irritating to skin, Sensitization possible through skin contact
Mutagenic Effects	shows mutagenic effects in animal experiments
Reproductive toxicity:	No toxicity to reproduction
Carcinogenic effects:	Negative in standard tests using bacteria and yeast cells
Human experience:	No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Ecotoxicity ; 96h-LC50 (Oncorhynchus mykiss): 0.13 mg/l,
Fish : 96h-LC50 (Lepomis macrochirus): 0.13 mg/l,
Daphnia : 96h-LC50 (Pimephales promelas): 0.27 mg/l.
Algae : 48h-EC50 (Daphnia magna): 0.24 mg/l.
Bacteria; :96h-LC50: 1.0 mg/l (Chlorel a pyrenoidosa) (Lit.).
15min-EC50: 1.9 mg/l (Photobacterium phosphoreum) (Lit.)

12.2 Mobility in soil

No data available

12.3 Persistence and degradability

The substance is substantially biodegradable. There is evidence of photo degradation in water.

12.4 Bioaccumulative Potential

The substance has low potential for bioaccumulation

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

Very toxic to aquatic life with long lasting effects.

12.7 Other information

Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Very toxic for aquatic organisms

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Method

Product

Avoid discharge into the environment. This material and its container must be disposed of as hazardous waste. Disposal should be in accordance with local, state or national legislation

Packing

- Dispose off in accordance with local regulations



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SECTION 14: TRANSPORT INFORMATION

14.1 Road transport (ADR/RID/ADN)

ADR/RID Class	9
UN-No	3077
Packing Group	III
"Hazard label"	Hazardous for the environment
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Tetra Methyl thiuram disulphide)

14.2 Sea transport (IMDG)

Class	9
UN-No	3077
Packing Group	III
Marine pollutant	Yes
"Hazard label"	Hazardous for the environment
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Tetra Methyl thiuram disulphide)

14.3 Air transport (ICAO-TI/IATA)

Class	9
UN-No	3077
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Tetra Methyl thiuram disulphide)

14.4 Other information

No data available

14.5 Environmental hazards

Information on environmental hazards, if relevant, pls. see 14.1 - 14.3.

14.6 Special precautions for user

No data available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15: REGULATORY INFORMATION

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

Regulation 1907/2006 REGULATION (EC) No 1272/2008
Classification according to EU directives 67/548/EEC or 1999/45/EC

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out



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SECTION 16: OTHER INFORMATION

This data sheet contains changes from the previous version in section(s)

Issue No.	2
Issue date :	20.03.2015
Revision No.	0
Reason for revision	Reviewed & revamped based on the guide lines of Regulation (EC) No 1907/2006

List of relevant R(isk)-phrase(s)

R20/22 Harmful by inhalation and swallowed.
R36/38 Irritating to eyes and skin.
R43 May cause sensitization by skin contact.
R 48/22 Harmful: danger of serious damage to health by prolonged exposure ifswallowed
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

List of relevant S(afety)-phrase(s)

S 26 In case of contact with eyes, rinse immediately with plenty of water and seekmedical advice
S 36/37 Wear suitable protective clothing and gloves
S 60 This material and its container must be disposed of as hazardous waste
S 61 Avoid release to the environment. Refer to special instructions/Safety data sheet

Classification of dangerous substance directive (67/548/EEC)

- Xi - Irritants
- N - Substances or preparations those are dangerous for the environment
- Xn-Harmful

Training advice

Provide adequate information, instruction and training to operators

Further information for the material safety data sheet

Special notes:· Prolonged exposure to TMTD has been associated with the development of chronic conjunctivitis. Tests for carcinogenesis were inconclusive but TMTD reacts under nitrosating conditions to produce carcinogenic N-nitrosodimethylamine. A number of co agents have been implicated in the nitrosation of the dimethylamine generated from TMTD on vulcanization, carbon black being the focus of recent research. That adsorbed species on the carbon black can function in this way has been demonstrated, as has the possibility of moderating this effect by attention to dump temperatures.· TMTD, the most toxic of the thiurams, produced deaths and malformations in chicken embryos. Similar effects have been reported in hamsters· The possibility of neurotoxin effects from exposure has been reported.· If absorbed into human system before or after consumption of alcohol may give rise to unpleasant side effects (e.g. nausea, vomiting, flushing, etc). Even small quantities, if absorbed by inhalation, may suffice to produce this effect .· Listed by the International Contact Dermatitis Group for routine skin patch testing in appropriate circumstances. 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 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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.

End of Material Safety Data Sheet