



MERCHEM LIMITED

SAFETY DATA SHEET

MERCURE TMTM
MSDS No. 13/20.03.2015

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

1.1 Product Identifier

Product Name Mercure TMTM
Synonym Tetra Methyl Thiuram monosulphide
Use of the Substance/Mixture

Identified uses Rubber vulcanization accelerator

1.2 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

1.3 Emergency Telephone Number

Emergency Telephone Number + 91-484-4089300

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
R22
R43
R51/53

EC Number: 202-605-7

Annex 1 Index Number: 006-080-00-3

REGULATION (EC) No. 1272/2008

Classification of the substance or mixture Acute toxicity, oral Cat.4; Skin sensitization: Cat. 1; Acute toxicity, inhalation Cat.4; Specific target organ toxicity, single exposure; Respiratory tract irritation Cat.3; Hazardous to the aquatic environment, long-term hazard Cat.1



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2.2 Label elements

Product Name:

Mercure TMTM

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

Precautionary Statements - Prevention

- P261 : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P271 : Use only outdoors or in a ventilated area
- P272 : Contaminated work clothing should not be allowed out of the workplace
- P273 : Avoid release to the environment.
- P280 : Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

- P312 : Call a POISON CENTER or doctor/physician if you feel unwell.
- P363 : Wash contaminated clothing before reuse
- P302+P352: If on skin, wash with plenty of soap and water
- P304 + P312: If INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P333 + P313: If SKIN irritation or rash occurs: Get medical advice/attention.
- P304+P340: If inhaled, remove victim to fresh air

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 : May react with nitrosating agents to form nitrosamines (potential cancer causing) Dust may present ignition source for explosion

2.3 Other hazards

None



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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical description: Tetramethylthiuram mono sulphide

Composition/Information on ingredients

Chemical Name	CAS No.	EC No.	Annex-1 Index No.	Weight %
Tetramethylthiuram monosulphide	97-74-5	202-605-7	006-080-00-3	98%

3.2 Mixtures

Not applicable. Substance is not a mixture

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 Contact : Wash immediately with soap and water

Eye Contact : Rinse immediately as long as a possible with plenty of water. Seek Medical advice if irritation persist

Ingestion : Rinse mouth. Do not induce vomiting

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. Very toxic to aquatic life with long lasting effects.

4.3 Indication of immediate medical attention and special treatment needed

No data available

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing media

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



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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 .

Do not allow run-off from fire fighting to enter drains or water courses.

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 by mechanical means. Wet mopping or vacuuming with a unit that contains a HEPA filter is recommended to clean up any dusts generated during processing or handling. 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. Ensure good ventilation and local exhaustion of the working area. There should be a shower facility and eyewash in the building where this product is being stored and handled. Exercise good chemical handling practice

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). An eye wash device should be available in the work area where the product is handled

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 | :Yellow |
| c) Odour | :characteristic |
| d) pH | :No data available |



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- e) Melting point/range : Min.105°C
f) Boiling point /boiling range : Not relevant
g) Flash point :138°C(open cup)
h) Explosive propertive :dust explosion hazard
i) Flammability (solid, gas) :No data available
j) Explosion Limits Not determined:
k) Vapour pressure : Negligible
l) Specific gravity : 1.4
m) Bulk density : 400-450kg/m³ (20 °C)
n) solubility : Soluble in Acetone,T oluene,Benzene,CS₂ and Chloroform; insoluble in water
o) Octanol/water Partition coefficient : log Pow = 3.2
p) Auto-ignitiontemperature :Not available
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

- See Incompatible Materials

10.4 Conditions to Avoid

- High temperature and contact with acids and oxidants

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



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Thermal decomposition into toxic products. During the vulcanization process, traces of carcinogenic nitrosamines may be formed.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity (LD50/oral/rat):	730-1390 mg/Kg
Acute dermal toxicity (LD50/dermal/rabbit):	>2000 mg/Kg
Acute inhalational toxicity:	No reported effect on man
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	No mutagenic effects in animal experiments
Reproductive toxicity:	No toxicity to reproduction
Carcinogenic effects:	Negative in standard tests using bacteria and yeast cells
Human experience	:Patch testing: Sensitizing, Irritating to skin.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Ecotoxicity ; 96h-LC50 (Oncorhynchus mykiss): 2.3 mg/l,
Fish : 96h-LC50 (Lepomis macrochirus): 2.6 mg/l,
Daphnia : 48h-EC50 (Daphnia magna): 1.6 -2.9 mg/l.
Algae: Chlorella Pyrenoidosa C150 96 h 1 mg/l

12.2 Mobility in soil

No data available

12.3 Persistence and degradability

biodegradation : 0% after 28 days..

12.4 Bioaccumulative Potential

The substance is slightly bioaccumulable

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 organisms, may cause long-term adverse effects in the aquatic environment

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



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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. Empty containers can be rinsed with a suitable solvent/surfactant and steamed to remove residual product and fumes before disposal or reuse in accordance with applicable

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 monosulphide)

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 monosulphide)

14.3 Air transport (ICAO-TI/IATA)

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 monosulphide)

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



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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

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)

R22 Harmful if swallowed.

R43 May cause sensitization by skin contact.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

S24 – Avoid contact with skin.

S37 – Wear suitable gloves

S 26-- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S 61--Avoid release to the environment. Refer to special instructions/Safety data sheets

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

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

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