



MERCHEM LIMITED

SAFETY DATA SHEET

MERCIDE SM/SEE 36%
MSDS No. 44/20.03.2015

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

1.1 Product Identifier

Product Name Mercide SM/SEE 36%
Synonym Blend containing disodium ethylenebisdithiocarbamate and sodium dimethyl dithiocarbamate in water

Use of the Substance/Mixture

Identified uses Biocide & water treatment chemical

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

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

R22.
R50/53
Xi
N

EC Number: Nil

Annex 1 Index Number: Nil

REGULATION (EC) No. 1272/2008

Classification of the substance or mixture Acute toxicity, oral: cat 4; Sensitisation, Skin: cat.1; Hazardous to the aquatic environment, long-term hazard: cat 1

2.2 Label elements

Product Name Mercide SM/SEE 36%
Hazard Pictogram





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Signal word Warning

Hazard statement(s)

- H302- Harmful if swallowed
- H317 -May cause an allergic skin reaction.
- H410- Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)- Prevention

- P264 -Wash skin thoroughly after handling
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/faceprotection.

Precautionary statement(s) – Response

- P363 - Wash contaminated clothing before reuse
- P302 + P352 IF ON SKIN: wash with plenty of soap and water.
- P333 + P313 IF SKIN irritation or rash occurs: Get medical advice
- P305+P351+P338; IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy do. Continue rinsing.

Precautionary statement(s) - Storage

P403 +P404 + P235 Store in a dry place. Store in a closed container. Keep cool.

Precautionary statement(s) – Disposal

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

Supplemental Hazard Statements None

2.3 Other hazards - None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substance is a mixture.

3.2 Mixtures

Chemical description : Disodium ethylenebisdithiocarbamate in water

Composition/Information on ingredients

Chemical Name	CAS No.	EC No.	Annex-1 Index No.	Weight %
Disodium ethylene bisdithiocarbamate	142-59-6	--	--	18 approx.
Sodium dimethyl dithiocarbamate	128-04-1	--	--	18 approx.
Water	7732-18-5	--	--	64 approx.



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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. In case of allergic reaction after exposure, any future exposure must be avoided.
- Inhalation** : If breathed in, move person into fresh air. If not breathing, give artificial Respiration. Consult a physician
- Skin Contact** : In case of contact, immediately wash with plenty of soap and water
Seek medical attention.
- Eye Contact** : Rinse immediately as long as a possible with plenty of water. Seek medical advice if irritation persist
- Ingestion** : Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician..

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects

5. benzene is not investigated. tetraethylthiuram and other halogenated hydrocarbons properties have not

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.

5.2 Specific hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Sodium oxides

5.3 Protective Equipment and Precautions for Firefighters

Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

- Use personal protective equipment.
- Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
- Evacuate personnel to safe areas



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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

- Stop leakage if possible.
- Collect as much as possible in a clean container for (preferable) reuse or disposal.
- Cover the remainder with inert absorbent (e.g. vermiculite) 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 breathing vapors and mists.
- Avoid direct or prolonged contact with skin and eyes.
- Use personal protective equipment.
- The usual precautions for handling chemicals should be observed

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 further relevant information available

SECTION 8: EXPOSURE CONTROL/PERSONNEL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

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).



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Skin Protection :

Skin contact should be minimized through use of gloves and suitable long-sleeved clothing. 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 .

Body 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

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	: Liquid
b) colour	: Greenish yellow
c) Odour	: Slight ammoniacal odor
d) pH	: 9.0-11.0
e) Melting point/range	: Not applicable
f) Boiling point /boiling range	: >100°C
g) Flash point	: Not applicable
h) Explosive propertive	: No data available
i) Flammability (solid, gas)	: No data available
j) Explosion Limits	: No data available
k) Vapour pressure	: No data available
l) Specific gravity	: 1.2 (approx.)
m) Vapour Density	: No data available
n) Solubility	: Soluble in water
o) Partition coefficient	: No data available
p) Auto-ignition temperature	: No data available
q) Viscosity @25°C	: Not determined
r) Oxidizing properties	: No data available

9.2 Other information

No data available



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SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

- See incompatible material

10.2 Chemical Stability

- Stable when stored at NTP in closed containers.
- Stable under normal conditions of handling, use & transportation

10.3 Possibility of hazardous reactions

- No data available

10.4 Conditions to Avoid

- Keep away from heat, sparks and flame.. Avoid contact with strong oxidants.

10.5 Incompatible materials to avoid

- Oxidising agents, acids and alkalis.

10.6 Hazardous Decomposition Products

- Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Sodium oxides,Hydrogen sulphide

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity (LD50/oral/rat) :

Disodium ethylenebisdithiocarbamate in water - 395 mg/kg

Sodium di methyl dithio carbamate in water - 5150 mg/kg (Aqueous solution, 40 %)

Inhalation	: Limited possibility of over-exposure.
Skin irritation	: May cause skin irritation./ Not sensitizing
Respiratory or skin sensitization	: May cause allergic skin reaction.
Eye Irritation	: May cause irritation or damage.
Ingestion	: Moderate oral Toxicity; may cause nausea, vomiting
Mutagenic Effects	: No data available
Reproductive toxicity	: No data available
Target Organ Effects	: No data available
Carcinogenicity	: No data available



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SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Disodium ethylenebisdithiocarbamate in water

Fish 96h LC50 - *Cyprinodon variegatus* (sheepshead minnow) - 0,14 mg/l

Daphnia and other aquatic invertebrates 48h EC50 - *Daphnia magna* (Water flea) - 0,14 - 5,60 mg/l

Algae Growth inhibition 96h EC50 - *Chlorella pyrenoidosa* - 2,4 mg/l

Sodium di methyl dithio carbamate in water

Fish 96h-LC50 (*Oncorhynchus mykiss*, OECD 203): 0.76 mg/l.

96h-LC50 (*Poecilia reticulata*): 2.6 mg/l (Lit.).

Daphnia 48h-EC50 (*Daphnia magna*, OECD 202): 0.67 mg/l

Algae 96h-IC50 (*Raphidocelis subcapitata*, OECD 201): 0.19 - 0.26 mg/l.

96h-IC50 (*Chlorella pyrenoidosa*): 0.8 mg/l (Lit.).

Bacteria 3h-EC50 (OECD 209): 3.65 mg/l.

Degradation Abiotic Hydrolytically unstable at pH (Lit.):

3.8: $t_{1/2} = 0.04$ hours (20 °C)

5.7: $t_{1/2} = 2.4$ hours (20 °C)

7.0: $t_{1/2} = 62$ hours (20 °C)

8.0: $t_{1/2} = 483$ hours (20 °C)

9.0: $t_{1/2} = 111$ days (20 °C)

Bioaccumulation Bio Concentration Factor (BCF) (calculated): 3.16 (EPIWIN v3.10)

12.2 Mobility in soil

No data available

12.3 Persistence and degradability

No data available.

12.4 Bioaccumulative Potential

No data available.

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available.

12.7 Other information

Wastes are hazardous to environment and any disposal should be as per the local regulations .The components of this formulation are listed on Toxic Substances Control Act (TSCA).



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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Method

Product

- Offer surplus and non-recyclable solutions to a licensed disposal company.
- Contact a licensed professional waste disposal service to dispose of this material.
- Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated Packing

- Clean and Dispose of as unused product

SECTION 14: TRANSPORT INFORMATION

14.1 Road transport (ADR/RID/ADN)

ADR/RID Class	9
UN-No	3082
Packing Group	III
"Hazard label"	Hazardous for the environment
Proper Shipping Name	Environmentally hazardous substance, liquid, N.O.S (Blend containing disodium ethylenebisdithiocarbamate and sodium dimethyl dithiocarbamate in water)

14.2 Sea transport (IMDG)

Class	9
UN-No	3082
Packing Group	III
Marine pollutant	Yes
"Hazard label"	Hazardous for the environment
Proper Shipping Name	Environmentally hazardous substance, liquid, N.O.S (Blend containing disodium ethylenebisdithiocarbamate and sodium dimethyl dithiocarbamate in water)

14.3 Air transport (ICAO-TI/IATA)

Class	9
UN-No	3082
Packing Group	III
Proper Shipping Name	Environmentally hazardous substance, liquid, N.O.S (Blend containing disodium ethylenebisdithiocarbamate and sodium dimethyl dithiocarbamate in water)

14.4 Other information

No data available

14.5 Environmental hazards

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



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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

No data available

SECTION 16: OTHER INFORMATION

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 Risk-phrase(s)

- R22 Harmful if swallowed.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

List of relevant Safety phrase(s)

- S8 Keep container dry.
- S24/25 Avoid contact with skin and eyes.
- S 36: Wear suitable protective clothing.
- S46 If swallowed, seek medical advice immediately and show this container or label.
- S60 This material and its container must be disposed of as hazardous waste.
- S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets

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

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

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