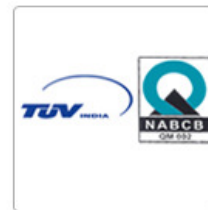




EAST COAST ORGANICS PRIVATE LIMITED

Regd. Office & Factory : 237/2, Vellivoyal Chavadi,
Chennai – 600 103. India.



MATERIAL SAFETY DATA SHEET

DISODIUM ETHYLENE BIS DITHIO CARBAMATE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: NABAM 40% AQUEOUS SOLUTION
Company Identification: 237/2, Vellivoyal Chavadi
Chennai – 600 103. Tamilnadu
Office Telephone No: 044 64606747

2. COMPOSITION / INFORMATION OF INGREDIENTS

Chemical description: Disodium Ethylene Bis Dithio carbamate

CHEMICAL NAME CAS NO.	CAS NO.	EINECS NO.	WT%
Disodium Ethylene Bis Dithio Carbamate	142-59-6	205-547-0	38-40
Water	7732-18-5	-	62-60

3. HAZARD IDENTIFICATION

Classification of the substance or mixture :

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

R22. R37, R43, R50/53, Xn, Xi, N

Classification of the substance or mixture

Acute toxicity, oral:cat4; Sensitization, Skin:cat1; Hazardous to the aquatic environment, long-term hazard: cat1

Label elements :

Hazard Statements

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

Precautionary Statements Prevention

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

Precautionary Statements 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/attention.

Precautionary Statements - storage

P403+P404+P235-- Store in a dry place.



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Precautionary Statements - Disposal

Store in a closed container. Keep cool.

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

4. 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 in to 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..

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 chemicals structurally related to tetra ethyl thiuram and other halogenated hydrocarbons properties have not been thoroughly investigated.

5. FIRE FIGHTING MEASURES

Extinguishing Media:

Use water spray, alcohol- resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture:

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

Protective Equipment and Precautions for Firefighters

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

6. ACCIDENTAL RELEASE MEASURES

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

Environmental precautions:

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



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Methods and material for containment and cleaning up:

Stop leakage if possible. Collect as much as possible in a clean container for (preferable) reuse or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid breathing vapors and mists. Avoid direct prolonged contact with skin and eyes. Use personal protective equipment. The usual precautions for handling chemicals should be observed

Conditions for safe storage, including any incompatibilities & Storage:

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

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Control parameters
Exposure controls
Engineering Controls:

Components with work place control parameters

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

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 EN166(EU). 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 (with out 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.

Skin Protection :

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.

9. PHYSICAL AND CHEMICAL PROPERTIES



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Appearance:	Liquid
Colour:	Light Yellow
Odour:	Slight ammoniacal odour
pH-value:	9.0-11.0
Melting point/Melting range:	No data available
Boiling point/Boiling range:	□ 100 □ C
Flash point :	No data available
Explosive propertive :	No data available
Flammability (solid, gas) :	No data available
Explosion Limits :	No data available
Vapour pressure :	approx. 2.2 kPa (20 °C)
Specific gravity :	1.12 (approx.)
Vapour Density :	No data available
Solubility :	Soluble in water
Partition coefficient :	No data available
Auto-ignition temperature :	No data available
Viscosity @25°C :	Not determined
Oxidizing properties :	No data available

10. STABILITY AND REACTIVITY

Reactivity	See incompatible material
Chemical stability	Stable when stored at NTP in closed containers. Stable under normal conditions of handling, use & transportation
Possibility of hazardous reactions	No data available
Conditions to avoid	Keep away from heat, sparks and flame. Avoid contact with strong oxidants.
Incompatible materials:	Oxidising agents, acids and alkalis.
Hazardous decomposition products :	Carbon oxides, nitrogen oxides(NOx), Sulphur oxides, Sodium oxides, Hydrogen sulphide

11. TOXICOLOGICAL INFORMATION

Acute toxicity: (LD50/oral/rat)	395 mg/kg
Inhalation :	Limited possibility of over-exposure.
Skin irritation / sensitisation	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



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Target Organ Effects:
Carcinogenicity :

No data available
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.



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12. ECOLOGICAL INFORMATION

Eco toxicity :

Toxicity to fish LC50 :

Cyprinodon variegatus (sheep she admin now) - 0,14mg/l - 96,0h

Toxicity to daphnia and other aquatic invertebrates:

EC50 - Daphnia magna (Water flea) - 0,14 - 5,60mg/l - 48h

Toxicity to algae Growth inhibition :

EC50 - Chlorella pyrenoidosa - 2,4mg/l - 96h

Mobility in soil

No data available

Persistence and degradability:

No data available

Bio accumulative potential:

No data available

Results of PBT and vPvB assessment :

No data available

13. DISPOSAL CONSIDERATIONS

Waste Disposal methods

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 after burner and scrubber.

Contaminated Packing

Clean and Dispose of a sun used product

14. TRANSPORT INFORMATION

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, liquid, N.O.S
(Disodium ethylene bis dithio carbamate)

Sea transport (IMDG)

ADR/RID Class

9

UN-No

3077

Packing Group

III

Marine pollutant

Yes

Hazard Label

Hazardous for the environment

Proper Shipping Name

Environmentally hazardous substance, liquid, N.O.S
(Disodium ethylene bis dithio carbamate)

Air transport (ICAO-TI/IATA)

ADR/RID Class

9

UN-No

3077

Packing Group

III



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Proper Shipping Name

Environmentally hazardous substance, liquid, N.O.S
(Disodium ethylene bis dithio carbamate)

15. REGULATORY INFORMATION

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

Chemical safety assessment:

No data available

16. OTHER INFORMATION

Emergency seek Medical Aids