EAST COAST ORGANICS PRIVATE LIMITED

Regd. Office & Factory: 237/2, Vellivoyal Chavadi, Chennai – 600 103, Phone: 9043339509

MATERIAL SAFETY DATA SHEET

DISULFIRAM-BP

1. INDENTIFICATION OF THE PREPARATION AND OF THE COMPANY:

Product Name : DISULFIRAM BP

Application : TETRA ETHYL THIURAM DI SULPHIDE

Company Identification : East Coast Organics (P) Ltd.,

Tamilnadu, INDIA.

Office Telephone No : 9043339509

2. INGREDIENTS :

Component CAS # ENEICS# Percent (TWA) (TWA)
Tetra ethylthiuram disulfide 97-77-8 202-607-8 100 $2mg/M^{-3}$ $2 mg/M^{-3}$

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

Off white powder . Use appropriate personal protective equipment. During fire situations, irritating and toxic gases may be generated. Keep from entering storm or sanitary sewers, ground water, or soil. Avoid dust formation. Dust may form explosive mixture with air at concentrations above 20 g/m3. Avoid contact with skin and eyes and inhalation of dust.

Potential Health Effects:

Eye: May cause irritation.

Skin Contact: May cause irritation. Risk of sensitization.

Ingestion: Harmful if swallowed.

Inhalation: Irritating to the respiratory system.

Chronic & Carcinogenicity: The product is not known to be carcinogenic. Not considered a

carcinogen by NTP or IARC.

Specific Hazards: An adverse reaction can occur when exposed to this product in combination

with alcohol.

4. FIRST AID MEASURES:

Skin: Wash off immediately with plenty of soap and water. Seek medical advice in case of skin rash.

Eye: Rinse immediately with plenty of water for at least 15 minutes. If irritation persists, consult an ophthalmologist.

Ingestion: Get medical help.

Inhalation: Remove to fresh air. Consult a doctor.

5. FIRE FIGHTING MEASURES:

Flash Point: NA LEL: 20 g/m3 (dust in air) UEL: NE Auto Ignition Temperature: 240-280°C Use water spray, dry powder or regular foam to extinguish fires. Product in or near fires should be cooled with a water spray or fog. A self contained breathing apparatus (SCBA) operating in the positive pressure mode and full fire fighting protective clothing should be worn for combating fires. During a fire the product can form sulfur dioxide, nitrogen oxides, and toxic fumes. Dust may form explosive mixture with air at concentrations above 20 g/m3.

6. ACCIDENTAL RELEASE MEASURES:

Take up any spilled product by mechanical means (avoid dust formation) and place into sealed containers for proper disposal. Do not allow product to enter sewage or ground water. Dispose of waste materials including empty product bags or drums in accordance with Local, State and Federal regulations. Avoid dust formation. Avoid contact with skin and eyes and inhalation of dust.

7. HANDLING AND STORAGE:

Storage Conditions: Do not store at high temperatures, near oxidants and strong acids. Store in closed containers in a dry environment.

Handling: Good housekeeping and engineering practices should be employed to prevent the generation and accumulation of dusts. Wet mopping or vacuuming with a unit that contains a HEPA filter is recommended to clean up any dusts generated during processing or handling. Avoid dust formation. Keep away from sources of ignition.

Avoid accumulation of electrostatic discharges. Dust may form explosive mixture with air at concentrations above 20 g/m3. Avoid contact with skin and eyes and inhalation of dust.

8. EXPOSURE CONTROL - PERSONAL PROTECTION:

Engineering Controls: Local exhaust ventilation should be provided. The need for local exhaust ventilation should be evaluated by a professional industrial hygienist. Local exhaust ventilation systems should be designed by a professional engineer.

Respiratory Protection: Use as a minimum a NIOSH approved 1/2 face piece respirator equipped with cartridges approved for organic vapors, acid gases, and particulate matter with an exposure limit of not less than 0.05 mg/M3.

Eye Protection: Chemical protective goggles are recommended where there is a possibility of eye contact with the product. Safety glasses with side shields are recommended for all other operations. An eye wash device should be available in the work area where the product is handled.

Skin Protection: Neoprene or nitrile gloves should be worn to prevent irritation and possible absorption. Cloth gloves are not recommended. Neoprene or nitrile rubber coated apron or other body covering may be required if there is a possibility of regular work clothing becoming contaminated with the product. All soiled or dirty clothing and personal protective equipment should be thoroughly cleaned before reuse. A shower is recommended after handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance/Physical State: Off white powder Melt Point: 67°C minimum

Vapor Density (Air = 1): NA

Octanol/Water Partition Coefficient: log Pow = 3.88 Vapor Pressure: Negligible

Evaporation Rate BuOAC = 1: NA
Odor: Slight amine Specific Gravity: 1.3

% Volatile by Volume: <0.5% by mass

Boiling Point: NA

Solubility in Water: 0.02 g/100ml

pH: NA

Other Solubility: Soluble in Benzene, Carbon disulfide organic

liquid, Ethanol

Other: None

10. STABILITY AND REACTIVITY:

Stability /Polymerization: Stable

Incompatibility (conditions to avoid): High temperatures and contact with acids and oxidants. Hazardous Decomposition Products: Nitrogen oxides, carbon dioxide and sulfur oxides.

Special Sensitivity: Dust may form explosive mixture with air at concentrations above 20 g/m3.

11. TOXICOLOGICAL INFORMATION:

Acute Toxicity: Inhalation: No data available.

Ingestion: LD50 (oral, rat) 4573 mg/kg

Skin-contact: LC50 2050 mg/kg

Local Effects: Inhalation: Irritating to respiratory system.

Skin-contact: Not irritating to skin.

Eye-contact: DRAIZE assay (eyes, rabbit) 100 mg/24 hours

Sensitization: Skin-contact: Risk of skin sensitization.

Further Information: See Potential Health Effects.

US Regulatory: Health and safety data reporting 40 CFR 716.120(d)

Reporting and recordkeeping 40CFR 712.30(x) NTP, Levels of Evidence of Carcinogenicity:

Male Rats: Negative Female Rats: Negative Male Mice: Negative Female Mice: Negative

12. ECOLOGICAL INFORMATION:

Aquatic Toxicity: Acute toxicity: Fish: Pocecilia Reticulate LC50, 96h 0.32 mg/l

Daphnia: Daphnia Magna CE(1)50, 48 h 0.12 mg/l

Algae: EC50, 96h 1.8 mg/l

Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

US Superfund, reportable quantity 40 CFR 302.4 App. A, reportable quantity 1 lb.

13. DISPOSAL CONSIDERATIONS:

Product should be disposed of in an EPA approved incinerator in accordance with all local, state, and/or federal

regulations. US Superfund, reportable quantity 40 CFR 302.4 App. A, reportable quantity 1 lb. U403

RCRA Hazardous Constituents 40 CFR 261 App VIII, U403, 1 lb. reportable quantity. Superfund Reportable Quantity Chemicals 40 CFR 302.4, 1 lb. reportable quantity. Water pollution, hazardous substance designation, 40 CFR 116.4 Table A, 40 CFR 116.4 Table B

14. TRANSPORTATION INFORMATION:

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.

(N,N,N',N'-tetraethyl-thioperoxydicarbonic diamide)

DOT Hazard Class: CLASS 9

UN/NA Number: UN3077 Packing Group: III

Certification of : IIP (Indian Institute of Packaging)



LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Environmentally hazardous substance, solid, n.o.s.

(N,N,N',N'-tetraethyl-thioperoxydicarbonic diamide)

UN Number: 3077 Packing Group: III

Hazard Class: CLASS 9

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Environmentally hazardous substance, solid, n.o.s.

(N,N,N',N'-tetraethyl-thioperoxydicarbonic diamide)

UN Number: 3077 Packing Group: III

Hazard Class: CLASS 9 IATA Classification: 9

Additional Transport: Transport in accordance with local, state, and federal regulations.

Information: When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous

Goods/Excepted Quantity

15. REGULATORY INFORMATION:

CERCLA/RCRA: Superfund, reportable quantity 40 CFR 302.4 App. A, reportable quantity 1 lb. U403

SARA Title III, Section 313, NTP, IARC, 1910.119 Process Safety Management Proposition 65 (CA), Clean Air:

Not listed.

WHMIS: Listed 1%

Subpart Z: Recently removed from list.

TSCA: All ingredients listed on the TSCA inventory.

Canadian DSL: All ingredients listed.

ECC Hazardous Substances Statements:

R 22 Harmful if swallowed.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S 22 Do not breathe dust.

S 24 Avoid contact with skin.

S 61 Avoid release to the environment.

16. OTHER INFORMATION:

NE = Not Established NA = Not Applicable ND = Not Determined

IMPORTANT SAFETY NOTICE: The information in the Material Safety Data Sheet relates only to the specific material(s) described herein and does not relate to use in combination with any other material or substance or in any process. We believe that the information contained herein is current as of the date of issue of this Material Safety Data Sheet. Since the use of this information and these opinions and the conditions of use of this product are not within the control of Sovereign Chemical Company, it is the user's obligation to determine the conditions of safe use of the product. Users of this product should study this Material Safety Data Sheet and become aware of the product hazards and safety information before using the product. Users should also notify their employees, agents, and contractors of the information on this Material Safety Data Sheet and any product hazards and safety information in order to provide safe use of this product.