

**Safety Data Sheet (SDS)**

1. **Chemical Product and Company Identification**

* Product Name: MBTS
* Distributed By: Arihant Reclamation Pvt. Ltd. 40.3 KM milestone, GT Karnal Road, Bahalgarh, Sonepat, Haryana – 131021 Phone - +91-8860732624
* MSDS Prepared By: Arihant Reclamation Pvt. Ltd.
* Chemical Name / Family: Mercapto Benzothiazole Disuphide
* CAS No: 120-78-5
* Product Use: Used as rubber antioxidant.
* OSHA Status Not Hazardous
* Advice against other uses: None identified

1. **Details of the supplier of the safety data sheet**

* Supplier: Arihant Reclamation Pvt. Ltd.
* Address: . 40.3 KM milestone, GT Karnal Road, Bahalgarh, Sonepat, Haryana – 131021
* Telephone: +91-8860732624
* Emergency Contact (24 Hrs.): Arihant Reclamation Pvt. Ltd. 36, PU Block, Vishakha Enclave, Pitampura, New Delhi-110034
* Telephone No. :+91 9811041433
* E-mail : [arihantreclamationpvtltd@gmail.com](mailto:arihantreclamationpvtltd@gmail.com)

1. **Classification according to GHS**

|  |  |  |
| --- | --- | --- |
| Classification | Category | Exposure Route |
| Skin Sensitization | **1** | **-** |
| Aquatic Acute | **1** | **-** |
| Aquatic Chronic | **1** | **-** |

1. **Label elements**

Labelling according to GHS

Hazard pictogram:

Signal word:

Warning Hazard Statements:

H317: May cause an allergic skin reaction.

H400: Very toxic to aquatic life

H410:Very toxic to aquatic life with long lasting effects

Safety Data Sheet According to GHS

Precautionary Statements:

Prevention:

P261: Avoid breathing dust.

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. Response: P302+352: IF ON SKIN: Wash with plenty of soap and water.

P333+313: If skin irritation or rash occurs: Get medical advice/attention.

P363: Wash contaminated clothing before reuse.

P391: Collect spillage. Disposal:

P501 Dispose of contents/container in accordance with local/regional/national/international regulation. NFPA Ratings (Scale 0 – 4): Health: 1, Fire: 1, Reactivity: 0 2.3. Other hazards EUH031: Contact with acids liberates toxic gas SECTION 3: Composition/information on ingredients 3.1. Substances Name CAS N Safety Data Sheet According to GHS 5.3. Advice for firefighters Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water courses. Use water delivered as a fine spray to control fire and cool adjacent area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. SECTION 6: Accidental release measures 6.1. Personal precautions, protective equipment and emergency procedures 6.1.1. For non-emergency personnel Wear suitable protective equipment. 6.1.2. For emergency responders Remove ignition sources and provision of sufficient ventilation, evacuate the danger area and consult experts. 6.2. Environmental precautions Take precautions to prevent entry into waterways, sewers, or surface drainage systems. Dispose according to local or international regulations. 6.3. Methods and material for containment and cleaning up Use appropriate tools to put the spilled solid in suitable container for recovery or disposal, avoid raising dust. SECTION 7: Handling and storage 7.1. Precautions for safe handling Avoid ingestion, inhalation, skin and eye contact. Minimize dust generation and accumulation. Handle in accordance with good industrial hygiene practice and any legal requirements. 7.2. Conditions for safe storage, including any incompatibilities Suitable container: Metal can or drum. Check all containers are clearly labelled and free from leaks. Storage incompatibility: Avoid reaction with strong acid, alkali and oxidizing agents. SECTION 8: Exposure controls/personal protection 8.1. Control parameters At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum. Derived No Effect Level (DNEL) Exposure Pattern Workers General Population Acute - systemic effects 40 mg/kg bw/day 20 mg/kg bw/day Acute - systemic effects 70 mg/m³ 17.6 mg/m³ Acute - local effects No data available 10 mg/kg bw/day Long-term - systemic effects 5 mg/kg bw/day 2.5 mg/kg bw/day Long-term - systemic effects 8.8 mg/m³ 2.2 mg/m³ Long-term - local effects Not relevant data 1.25 mg/kg bw/day PNEC water PNEC aqua (freshwater): 0.027 mg/L sediment PNEC sediment (freshwater): 14.27 mg/kg sediment dw Stp PNEC stp (mg/L):3.8 PNEC aqua (marine water): 0.0027 mg/L PNEC sediment (marine water): 1.427mg/kg sediment dw Soil PNEC soil: 2.83 mg/kg soil dw 8.2. Exposure controls Appropriate engineering controls Use: process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. General Personal Protection: Safety goggles or face shield, protective chemical resistant gloves, protective clothing. SECTION 9: Physical and chemical properties 9.1. Information on basic physical and chemical properties Physical state: Organic solid Colour: Cream Odour: Aromatic Date: 02 MARCH 2015 Issue : 2 Revision: 0 Page : 3 of 6 Safety Data Sheet According to GHS Oduour threshold No data available pH: Not applicable Melting range 164 - 179°C Boiling point: Decomposes before boiling. Flash point: 271°C (open cup) Evapotation rate: Not applicable Flammability (solid, gas): Not a readily combustible solid Upper/lower flammability: >= 0.2 Kg/m3 Explosive limits: No data available Vapour pressure: 1.35\*10-9 hPa at 25°C Relative density: 1.5 at 19°C compared to water at 4°C. Solubility(ies): 0.27 - 0.37 mg/L at 25°C Partition coefficient: n-octanol/water: 4.5 at pH 7 Auto-ignition temperature: Does not undergo spontaneous combustion Viscosity: No data available Explosive properties: Dust Explosion Hazard Oxidising properties: No data available SECTION 10: Stability and reactivity 10.1. Reactivity See section 7.2 10.2. Chemical stability Stable under normal condition. 10.3. Possibility of hazardous reactions See section 7.2 10.4. Conditions to avoid Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result. 10.5. Incompatible materials See section 7.2 10.6. Hazardous decomposition products Thermal decomposition products: carbon monoxide, carbon dioxide gases nitrogen oxides and sulphur dioxide fumes. SECTION 11: Toxicological information 11.1. Information on toxicological effects Acute toxicity: Dibenzothiazole disulphide (CAS No. 120-78-5): LD50 Oral (Rat): >7940 mg/kg bw LD50 Dermal (Rabbit): >7940 mg/kg bw White mineral oil(8042-47-5): LD50 Oral (Rat): >5000mg/kg b/w LD50 Inhalation (Rat): > 5 mg/L air LD50 Dermal (Rabbit): > 2000 mg/kg b/w Skin corrosion/irritation: Dibenzothiazole disulphide (CAS No. 120-78-5): Skin: Not irritating White mineral oil(8042-47-5): Skin: Not irritating Serious eye damage/irritation: Dibenzothiazole disulphide (CAS No. 120-78-5): Eye: Not Irritating White mineral oil(8042-47-5): Eye: Not Irritating Respiratory or skin sensitisation: Dibenzothiazole disulphide (CAS No. 120-78-5): Skin: Sensitising White mineral oil(8042-47-5): Skin: Not Sensitising Germ cell mutagenicity: Dibenzothiazole disulphide (CAS No. 120-78-5): Negative White mineral oil(8042-47-5): Negative Date: 02 MARCH 2015 Issue : 2 Revision: 0 Page : 4 of 6 Safety Data Sheet According to GHS Carcinogenicity: Dibenzothiazole disulphide (CAS No. 120-78-5): LOAEL (rat/Oral): 375 mg/kg bw/day (male)；LOAEL:188 mg/kg bw/day (female) NOAEL (mouse): 1577 ppm (male/female) White mineral oil(8042-47-5): NOAEL: >= 1200 mg/kg bw/day Reproductive toxicity: Dibenzothiazole disulphide (CAS No. 120-78-5): NOAEL: 15000 ppm White mineral oil(8042-47-5): NOAEL(P): >= 2000 mg/kg bw/day Specific target organ toxicity (single exposure): No data available Specific target organ toxicity (repeated exposure): No data available Aspiration hazard: No data available SECTION 12: Ecological information 12.1. Toxicity Acute (short-term) toxicity: Dibenzothiazole disulphide (CAS No. 120-78-5): Fish (Salmo gairdneri): No acute toxicity of MBTS was observed to Oncorhynchus mykiss up to its water solubility. Aquatic invertebrates (Daphnia magna): No acute toxicity of MBTS up to water solubility (<=0.3 mg/L) Algae and aquatic plants (Scenedesmus subspicatus): No growth inhibition of MBTS on Desmodesmus subspicatus was observed up to its water solubility (100mg/L Aquatic invertebrates (Daphnia magna/48h) LL50: > 100 mg/L 12.2. Persistence and degradability Dibenzothiazole disulphide (CAS No. 120-78-5): Abiotic Degradation: No data available Physical- and photo-chemical elimination: No data available Biodegradation: Not readily biodegradable 12.3. Bioaccumulative potential Dibenzothiazole disulphide (CAS No. 120-78-5): Partition coefficient n-octanol /water (log value) : 4.5 at pH 7 Bioconcentration factor (BCF): 1.4-51 12.4. Mobility in soil Dibenzothiazole disulphide (CAS No. 120-78-5): Known or predicted distribution to environmental compartments: No data available Surface tension: No data available Adsorption/Desorption: (log Koc): log Koc: 3.72-5.75 12.5. Other adverse effects No data available. SECTION 13: Disposal considerations 13.1. Waste treatment methods Product disposal: Observe specific national regulation. Contaminated packaging: Contaminated, empty containers must be disposed of as chemical waste. SECTION 14: Transport information Land transport (ADR / RID / GGVSE) 14.1 UN number 3077 14.4 Packing group III 14.2 UN proper shipping name Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(contains Dibenzothiazole disulphide) 14.5 Environmental hazard No relevant data 14.3 Transport hazard class(es) 9 14.6 Special precautions for user Hazard identification (Kemler) 90 Air transport (ICAO-IATA / DGR) 14.1 UN number 3077 14.4 Packing group III 14.2 UN proper shipping name Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains Dibenzothiazole disulphide) 14.5 Environmental hazard No relevant data 14.6 Special precautions for user No data available 14.3 Transport hazard class(es) IMO/IMDG Class: 9 Date: 02 MARCH 2015 Issue : 2 Revision: 0 Page : 5 of 6 Safety Data Sheet According to GHS Maritime transport (IMDG) 14.1 UN number 3077 14.4 Packing group III 14.2 UN proper shipping name Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains Dibenzothiazole disulphide) 14.5 Environmental hazard Yes 14.6 Special precautions for user EMS Number F-A, S- F 14.3 Transport hazard class(es) 9 14.7. Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code No data available SECTION 15: Regulatory information Worldwide Inventory Status USA (TSCA) Listed Canada (DSL) Listed Canada (NDSL) Not Applicable. Listed on the DSL. European Union (EINECS/ELINCS) Listed Japan (ENCS) Listed Korea (ECL) Listed Australia (AICS) Listed New Zealand (NZ) Listed Phillipines (PICCS) Listed China (CLECS) Listed SECTION 16: Other information Chemical Name: Dibenzothiazole disulphide Information contained in this Material Safety Data Sheet is believed to be reliable but no representation guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is up to the user/distributor to ensure that the information contained in the Material Safety Data Sheet is relevant to the product manufactured handled or sold by him as the case may be. NOCIL makes no warranties, expressed or implied in respect of adequacy of this document for any particular purpose. SEC.NO. ISSUE NO. REV. NO. DATE OF REV. PAGE NO. NATURE OF CHANGE All 2 0 02 MARCH 2015 All MSDS Reviewed and updated