



Safety Data Sheet (SDS)

Revision / Review Date: 8/21/15

1. Chemical Product and Company Identification

Product Name: MBTS
Distributed By: HB Chemical
1665 Enterprise Parkway
Twinsburg Oh 44087
Phone - 330-920-8023
MSDS Prepared By (w Suppliers Input): HB Chemical
Chemical Name / Family: Dibenzothiazole disulfide
CAS No: 120-78-5
REACH: Not available
Product Use: Used as rubber antioxidant.
OSHA Status: Hazardous

For emergency health, safety, and environmental information, calls 330-920-8023

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300

2. Hazard(s) Identification

Hazards description

OSHA/HCS status:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture:

COMBUSTIBLE DUSTS, SKIN SENSITIZATION - Category 1

Classification:

The substance is classified as following according to 67/548/EEC and Regulation (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard statement
Skin Sens. 1	H317
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

For full text of H- phrases: see section 2.2.

67/548/EEC	
Hazards characteristics	R-Phrases
Xn	R43
N	R50/53

Label Elements:



<u>Signal Word:</u>	Warning.
<u>Hazard Statement:</u>	H317 May cause an allergic skin reaction. H410 Very toxic to aquatic life with long lasting effects.
<u>Precautionary Statement:</u>	P261 Avoid Breathing dust/fume/gas/mist/vapors/spray. P272 contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves/protective clothing/eye protection/face protection. P273 Avoid release to the environment. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P333+P313 If skin irritation or rash occurs: Get medical advice/Attention. P363 Wash contaminated clothing before reuse. P391 collect spillage P501 dispose of contents/containers to local regulations.
<u>Supplemental Hazard information (EU) :</u>	EUH031 contact with acids liberates toxic gas.
<u>Information pertaining to special dangers for human and environment:</u>	The most important adverse physicochemical effects: not applicable. The most important adverse human health effects; May cause an allergic skin reaction. The most important adverse environmental effects; Very toxic To aquatic life. Very toxic to aquatic life with long lasting effects. Other adverse hazards; Not applicable.

3. Composition / Information on Ingredients

Substance/Mixture: Substance

Hazardous ingredients:

Chemical Name	Registration No.	CAS No.	EC No.	Concentration
Dibenzothiazole disulfide	N/A	120-78-5	204-424-9	≥98%

4. First Aid Measures

General information:

In all cases of double, or when symptoms persist, seek medical attention.

Inhalation:

Move to fresh air. If symptoms persist, seek medical advice.

Eyes:

Rinse immediately and as long as possible with plenty of water. Eyelids should be held away from the eyeballs to ensure thorough rinsing. Seek medical advice if irritation persists.

<u>Skin:</u>	Remove all contaminated clothing immediately. Wash off with plenty of soap and water. Seek medical advice if irritation develops. Launder clothes before reuse.
<u>Ingestion:</u>	Rinse mouth. Give water to drink.
<u>Information to physician:</u>	Symptoms: Dust may be irritating to the respiration tract and cause symptoms of bronchitis. Hazards: Repeated contact may cause skin sensitization. Treatment: See section 8 for information on exposure measures.

5. Fire-Fighting Measures

<u>Suitable Extinguishing Media:</u>	Carbon dioxide, appropriate foam or dry chemical, water spray, water mist.
<u>Unsuitable Extinguishing Media:</u>	Water jet.
<u>Special Fire Fighting Procedures:</u>	Firefighters must wear fire resistant protective equipment. Wear self-contained breathing apparatus and protective gloves.
<u>Special exposure hazards arising from the substance or Mixture itself, combustion products resulting gases:</u>	Emits toxic fumes under fire conditions: Carbon monoxide (CO), Sulfur oxides (SOx), nitrous gases (NOx).

6. Accidental Release Measures

<u>Personal precautions:</u>	Remove ignition sources. Provide adequate ventilation. Avoid inhalation of vapor or dust. Avoid skin and eye contact.
<u>Environmental Precautions:</u>	Avoid disposing into drainage/sewer system or directly into the aquatic environment.
<u>Methods for Containment and Cleaning up:</u>	Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal. Clean up affected area.
<u>Additional information:</u>	See section 7 for information on safe handling. See section 8 for information on personal protection equipment. See section 13 for information on disposal.

7. Handling and Storage:

<u>Handling:</u>	Avoid contact with skin and eyes. Avoid dust generation. Take precautionary measures against static discharges.
<u>Storage:</u>	Store in a cool, dry, ventilated area. Keep away from sources of Ignition-No smoking. Keep container tightly closed. Store separately from oxidizing agents.

Specific Use:

Not applicable.

8. Exposure Controls / Personal Protection

Exposure limit values:

Components with occupational exposure limits resp. Biological occupational exposure limited requiring monitoring; Occupational exposure limits: OES-TEA 5.0mg/m³ Additional exposure limits under the conditions of use; not available. DNEL/DMEL and PNEC-Values: not available.

Exposure controls

Occupational exposure controls:

Ensure good ventilation and local exhaustion of the working area. Avoid dust generation.

Respiratory Protection:

Avoid breathing dust. In cases of insufficient ventilation, wear suitable respiratory.

Protective Gloves:

Wear appropriate gloves to prevent skin exposure.

Eye Protection:

Wear appropriate goggles to prevent eye exposure.

Skin and Body Protection:

Wear suitable protective clothing to prevent skin exposure.

Environmental exposure controls:

Avoid discharge into the environment. The material and its containers must be disposed of as hazardous waste. According Local and Federal official regulations.

Consumer exposure control:

Measures related to consumer uses of substance (as such or in mixtures): As such. Measures related to the service life of the substance in articles: No.

9. Physical and Chemical Properties

Physical Form:

Dedusted powder, powder, granule.

Appearance & Odor:

White or light yellow/Aromatic

Melting point/range (°C):

>167°C

Boiling point/range (°C):

260°C

Flash point (°C):

Not determined

Ignition temperature (°C):

Approx. 440-460 °C

Vapor pressure (20 °C):

Negligible at room temperatures.

Oxidising properties:

Not Applicable

Density (g/cm³) (20°C):

1.54 g/cm³

Bulk density (kg/m³):

320-360 kg/m³(PH5) 0.049kg/m³(PH9)

<u>n-Octanol /Water (log Po/w):</u>	4.5
<u>Molecular weight:</u>	332.49
<u>Viscosity, dynamic (mPa s):</u>	Not applicable.
<u>Dust explosion hazards:</u>	Not available.
<u>Explosion limits</u>	Lower: 30-40g/m3 Upper: Not determined.
<u>Substance group relevant properties:</u>	Environmentally hazardous substance, solid.

10. Stability and Reactivity

<u>Stability:</u>	Stable under recommended storage and handling conditions(see section 7)
<u>Incompatibility (Materials to Avoid):</u>	Strong oxidizing agents, acids.
<u>Conditions to Avoid:</u>	Heating >250 °C May catch fire.
<u>Hazardous decomposition products:</u>	Thermal decomposition products: carbon monoxide (CO), nitrous gases (NOx), Sulfur oxides (Sox). Contact with acids liberates toxic gas.

11. Toxicological Information

<u>Toxicokinetics, metabolism and distribution:</u>	Not applicable.
<u>Acute Toxicity:</u>	LD50 (Oral, Rat):7940 mg/kg LD50 (Dermal Rabbit) >7940 mg/kg
<u>Skin corrosion/Irritation effects:</u>	Slightly irritation to skin but not sufficient for classification.
<u>Eye corrosion/Irritation effects:</u>	Slightly irritating to eyes but not sufficient for classification.
<u>Sensitization:</u>	May cause an allergic skin reaction.
<u>Repeated dose toxicity (sub-acute to chronic):</u>	Not applicable.
<u>STOT-single exposure:</u>	Not applicable.
<u>STOT-repeated exposure:</u>	Not applicable
<u>CMR effects(Carcinogenicity, mutagenicity and Toxicity for reproduction):</u>	Not applicable.

12. Ecological Information

Ecotoxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	82 mg/l	96h	Fish(Lepomis macrochirus)	OECD 203	N/A	N/A
LC50	82 mg/l	48h	Daphnia	OECD 202	N/A	N/A
EC50	0.7 mg/l	96h	Algae	OECD 201	N/A	N/A

Mobility: Not applicable.

Persistence and degradability: Not readily biodegradable.

Bio accumulative potential: Not applicable.

Result of PBT and vPvB assessment: Not applicable.

Other information: Do not allow to enter waters, waste water, or soil.

13. Disposal Considerations

Disposal methods of substance/Mixture: Avoid discharge into the environment. This material and its container must be disposed of as hazardous waste. According to local, state, and federal regulations.

Disposal methods of the contaminated Packaging: Disposal must be made according to official regulations as the Methods of substance/mixture.

14. Transport Information

D.O.T. Shipping Name Not regulated.

Air - ICAO (international Civil Aviation Organization) UN 3077 Class: 9 Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Dibenzothiazole disulfide)
Packaging group: III

Sea - IMDG (International Maritime Dangerous Goods) UN 3077 Class: 9 Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Dibenzothiazole disulfide)
Packaging group: III

15. Regulatory Information

Chemical Safety Assessment has been carried out? YES NO

Relevant information regarding authorization: Not Applicable.

Relevant information regarding restriction: Not applicable.

<u>Other EU regulations:</u>	Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.
<u>Canadian DSL:</u>	All ingredients listed.
U.S. Federal regulations	
<u>TSCA:</u>	All ingredients listed on the TSCA inventory.
<u>SARA 302/304 Composition/information on ingredients:</u>	No products were found.
<u>SARA 311/312 Classification:</u>	Fire hazard, Immediate (acute) health hazard.
State regulations	
<u>Massachusetts:</u>	None of the components are listed.
<u>New York:</u>	None of the components are listed.
<u>New Jersey:</u>	None of the components are listed.
<u>Pennsylvania:</u>	None of the components are listed.
<u>California Prop. 65:</u>	None of the components are listed.
International regulations	
<u>Europe inventory:</u>	All components are listed or exempted.
<u>Canada inventory:</u>	All components are listed or exempted.
<u>Australia inventory (AICS):</u>	All components are listed or exempted.
<u>China inventory (IECSC):</u>	All components are listed or exempted.
<u>Japan inventory:</u>	All components are listed or exempted.
<u>Korea inventory:</u>	All components are listed or exempted.
<u>New Zealand Inventory of Chemicals (NZIoC):</u>	All components are listed or exempted.
<u>Philippines inventory (PICCS):</u>	All components are listed or exempted.

16. Other Information

The above information has been compiled from what we believe to be credible sources. To our knowledge the information is accurate and reliable, however, it is not guaranteed. Any recommendations issued by HB Chemical personnel or literature is derived from experience and by no means should be taken as fact or construed as a recommendation to violate of any law, regulation or patent. It is the users responsibility to determine the suitability of any HB supplied material in their application. The individual conditions of each customer are well outside of our control and we cannot be held liable for its functionality and use. Please contact our office should you need specific information beyond what is supplied above. As with all Chemical usage safety precautions beyond the stated are highly recommended.