



Safety Data Sheet (SDS)

Revision / Review Date: 3/11/14

1. Chemical Product and Company Identification

Product Name: ZMBT
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: Zinc di(benzothiazol-2-yl) disulphide
CAS No. 155-04-4
REACH: Not available.
Product Use: Rubber accelerator

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

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 categorie	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
-	R43
N	R50/53

Label elements:

Hazard Pictograms:



Signal word:

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/container to local regulations.
<u>Other hazards:</u>	Not applicable.

3. Composition / Information on Ingredients

Substance/Mixture

Substance

Ingredients:

Chemical Name	Registration No.	CAS No.	EC No.	Concentration
Zinc di(benzothiazol-2-yl) disulphide	N/A	155-04-4	205-840-3	96%

4. First Aid Measures

Description of first aid measures:

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

Inhalation:

Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

<u>Eyes:</u>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
<u>Skin:</u>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<u>Ingestion:</u>	Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband
<u>Most important symptoms and effects, Both acute and delayed:</u>	May cause an allergic skin reaction.
<u>Indication of any immediate medical attention and Special treatment needed:</u>	if skin irritation or rash occurs, get medical advice/attention.

5. Fire-Fighting Measures

<u>Suitable Extinguishing Media:</u>	In case of fire, use water spray (fog), foam, dry chemical or Co ₂ .
<u>Unsuitable extinguishing Media:</u>	Not available.
<u>Special hazards arising from the substance mixture:</u>	No specific fire or explosion hazard. Decomposition products may include the following materials: Carbon oxides, nitrogen oxides, sulfur oxides, metal oxide/oxides.
<u>Special firefighting methods and special Protective actions for fire-fighters:</u>	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Put on appropriate personal protective equipment.

For Emergency responders:

Wear an appropriate NIOSH/MSHA approved respirator if dust is generated.

Environmental Precaution:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Methods for Containment and Cleaning up:

Large spill: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Reference to other sections:

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

7. Handling and Storage:

Precautions for safe handling:

Protective measures:

Put on appropriate personal protective equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Advice on general occupational hygiene: Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities:

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-

ventilated area, away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Packaging materials: Recommended: Use original container. Remarks: Take precautionary measures against electrostatic discharges.

Specific end use(s):

Not applicable.

8. Exposure Controls / Personal Protection

Control parameters:

Occupational exposure limits:

Not available.

Additional exposure limits under the conditions of use: Not available.

DNEL/DMEL and PNEC-Values: Not available.

Exposure Controls:

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

Respiratory Protection:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of product and safe working limits of the selected respirator.

Protective Gloves:

Material Nitrile rubber. Minimum layer thickness:0,11mm. Break through time: > 480 min.

Eye Protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashed, mist, gases or dust. Recommended: safety glasses with side-shields.

Skin and Body Protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Thermal hazards:

Wear suitable protective clothing to prevent heat.

Environmental exposure controls:

Avoid discharge into the environment. According to Local regulations, Federal and official regulations.

9. Physical and Chemical Properties

Physical Form:

Solid

Appearance & Odor:

Pale yellow/Not available

Odour threshold:

Not available

pH:

Not available

<u>Melting point/range (°C):</u>	≥300°C
<u>Boiling point/range (°C):</u>	Not available
<u>Flash point (°C):</u>	Not available
<u>Evaporation rate:</u>	Not available
<u>Flammability limit - lower (%):</u>	Not available
<u>Flammability (solid, gas):</u>	Not a readily combustible solid.
<u>Ignition temperature (°C):</u>	Not available
<u>Upper/lower flammability/explosive limits:</u>	Not available
<u>Vapour pressure (20°C):</u>	Not available
<u>Vapour density:</u>	Not available
<u>Relative Density:</u>	1.63 g/cm ³
<u>Bulk density (kg/m³):</u>	Not available
<u>Water solubility (g/l):</u>	ca. 20.6 mg/L(20°C,PH= 6.3)
<u>n-Octanol/Water (log Po/w):</u>	Not available
<u>Auto-ignition temperature:</u>	Not available
<u>Decomposition temperature:</u>	Not available
<u>Viscosity, dynamic (mPa.s):</u>	Not available
<u>Explosive properties:</u>	Not available
<u>Oxidising properties:</u>	Not available
<u>Molecular Formula:</u>	C14H8N2S4Zn
<u>Molecular Weight:</u>	397.88
<u>Other information:</u>	Fat solubility(solvent– oil to be specified)etc: Not available Surface tension: Not available Dissociation constant in water(pKa): Not available Oxidation-reduction Potential: Not available Specific gravity: Not available

10. Stability and Reactivity

<u>Reactivity:</u>	The substance is stable under normal storage and handling conditions.
<u>Chemical Stability:</u>	Stable at room temperature in closed containers under normal storage and handling conditions.
<u>Possibility of hazardous reactions:</u>	No dangerous reactions known. Decomposition temperature: 315°C
<u>Incompatibility (Materials to Avoid):</u>	No specific data.
<u>Conditions to Avoid:</u>	Incompatible material. In the case of dusty organic products the possibility of a dust explosion should always be considered. Take precautionary measures against static discharges.
<u>Hazardous decomposition products:</u>	Carbon oxides, nitrogen oxides, sulfur oxides, metal oxide/oxides.

11. Toxicological Information

Toxicokinetics, metabolism and distribution

Non-human toxicological data: Not available

Information on toxicological effects: Acute toxicity: LD50(Oral, Rat): 7500 mg/kg bw
LD50(Dermal, Rabbit): >7940 mg/kg bw
LC50(Inhalation, Rat): Not available

Skin corrosion/Irritation: Not classified

Serious eye damage/irritation: Not classified

Respiratory or skin sensitization: May cause an allergic skin reaction.

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

STOT- single exposure: Not classified

STOT-repeated exposure: Not classified

Aspiration hazard: Not classified

12. Ecological Information

Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	N/A	96h	Fish	OECD 203	N/A	N/A
LC50	N/A	48h	Daphnia	OECD 202	N/A	N/A
EC50	N/A	96h	Algae	OECD 201	N/A	N/A

Persistence and degradability: Not available.

Bioaccumulative potential: Not available.

Mobility in soil: Not available.

Results of PBT&vPvB assessment: Not available.

Other adverse effects: Not available.

13. Disposal Considerations

Waste treatment methods: The material should be disposed of by incineration in a chemical incinerator in compliance with national and

regional requirements.

Product/packaging disposal:

If empty container retains product residues, all label precautions must be observed. Return for reuse or dispose according to national or local regulations.

14. Transport Information

D.O.T. Shipping Name

UN 3077 Class: 9 Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Zinc di(benzothiazol-2-yl) disulphide) Packaging group: III

Air - ICAO (international Civil Aviation Organization)

UN 3077 Class: 9 Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Zinc di(benzothiazol-2-yl) disulphide) Packaging group: III

Sea - IMDG (International Maritime Dangerous Goods)

UN 3077 Class: 9 Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Zinc di(benzothiazol-2-yl) disulphide) Packaging group: III

Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code:

IBC08

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant information regarding authorization:

Not applicable.

Relevant information regarding restriction:

Not applicable.

Other EU regulations:

Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Other National regulations:

Not applicable

Chemical Safety Assessment has been carried out?

YES

NO

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.