

Safety Data Sheet
According to Regulation (EU) No. 1907/2006
MBT

SDS Record Number: CSSS-TCO-010-120967

Printing date: 15/01/2023

Version 1.2

Revision date: 15/01/2023

1 Identification of the substance and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name: MBT
Additional identification: 2-Mercaptobenzothiazole
Identification of the product: CAS#149-30-4; EC#205-736-8
Index Number: 613-108-00-3
REACH registration No.: Not available

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 Identified uses:

Used as rubber accelerator.

1.2.2 Uses advised against:

Not available.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative): Chemical Inspection & Regulation Service Limited
Supplier(Manufacturer): Shandong Sunsine Chemical Co., Ltd.
Address: Economy & Technical Development Zone, Shanxian City, Shandong Province, China.
Contact person(E-mail): sale@sunsine.com
Telephone: +86 530 4686360
Fax: +86 530 4684121

1.4 Emergency telephone Number:

+353 41 980 6916

Available outside office hours?

YES

☐

NO

☒

2 Hazards Identification

2.1 Classification of the substance

2.1.1 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 codes
Skin Sens. 1	H317
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

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

2.2 label elements

Hazard Pictograms:



Signal Word(S):

Warning

Hazard Statement:

H317 May cause an allergic skin reaction.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statement:

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

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.

P302 + P352: IF ON SKIN: Wash with plenty of water.

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P333 + P313: If skin irritation or rash occurs: Get medical advice/ attention.
P391: Collect spillage.
P362 + P364: Take off contaminated clothing and wash it before reuse.
P501: Dispose of contents/container in accordance with local/
regional/national/international regulation.

2.3 Other hazards

Not available.

3 Composition/information on ingredients

Substance/Mixture: Substance

Ingredient(s):

Chemical Name	Registration No.	CAS No.	EC No.	Concentration
2-Mercaptobenzothiazole	N/A	149-30-4	205-736-8	≥98
H ₂ O	N/A	7732-18-5	231-791-2	≤1.0%
Na ₂ SO ₄	N/A	7757-82-6	231-820-9	≤1.0%

4 First aid measures

4.1 Description of first aid measures:

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

4.1.1 In case of inhalation:

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

4.1.2 In case of skin contact:

Remove all contaminated clothing immediately. Wash off with soap and water. Seek medical advice if irritation develops. Launder clothes before reuse.

4.1.3 In case of eyes contact:

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

4.1.4 In case of ingestion:

Rinse mouth. Give water to drink.

4.2 Most important symptoms and effects, both acute and delayed:

May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed:

If skin irritation or rash occurs, get medical advice/attention.

5 Fire-Fighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Carbon dioxide, appropriate foam or dry chemical, water spray, water mist.

Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture:

Emits toxic fumes under fire conditions: carbon monoxide (CO), Sulfur oxides (SO_x), nitrous gases (NO_x).

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5.3 Advice for firefighters:

Firefighters must wear fire resistant protective equipment. Wear self contained breathing apparatus and protective gloves.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel:

Remove ignition sources. Provide adequate ventilation. Avoid inhalation of vapor or dust. Avoid skin and eye contact. Wear protective gloves/protective clothing/eye protection/face protection.

6.1.2 For emergency responders:

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

6.2 Environmental Precautions

Avoid disposing into drainage/sewer system or directly into the aquatic environment.

6.3 Methods for Containment and Cleaning up:

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal. Clean up affected area.

6.4 Reference to other sections:

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

7.1 Precautions for safe handling:

7.1.1 Protective measures:

Avoid contact with skin and eyes. Avoid dust generation. Take precautionary measures against static discharges.

7.1.2 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.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a cool, dry and well ventilated place. Keep away from sources of ignition - No smoking. Keep container tightly closed. Store separately from oxidizing agents.

7.3 Specific end use(s):

Not applicable.

8 Exposure control/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure limits: Benzothiazol-2-thiol(CAS#149-30-4) : Arbeitsplatzgrenzwert:4 Emg/m3,Bemerkungen: DFG, Y(Germany TRGS 900).

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

8.1.3 DNEL/DMEL and PNEC-Values:

Workers - Hazard via inhalation route-Systemic effects-Long term exposure-DNEL

(Derived No Effect Level):8.8 mg/m³

Workers - Hazard via inhalation route-Systemic effects- Acute/short term exposure-DNEL (Derived No Effect Level): 70.4 mg/m³

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Workers - Hazard via dermal route- Systemic effects- Long term exposure- DNEL

(Derived No Effect Level): 5 mg/kg bw/day

Workers - Hazard via dermal route- Systemic effects- Acute/short term exposure - DNEL (Derived No Effect Level): 40 mg/kg bw/day

General Population - Hazard via inhalation route- Systemic effects- Long term exposure- DNEL (Derived No Effect Level): 2.2 mg/m³

General Population - Hazard via inhalation route- Systemic effects- Acute/short term exposure - DNEL (Derived No Effect Level): 17.6 mg/m³

General Population - Hazard via dermal route- Systemic effects- Long term exposure- DNEL (Derived No Effect Level): 2.5 mg/kg bw/day

General Population - Hazard via dermal route- Systemic effects- Acute/short term exposure - DNEL (Derived No Effect Level): 20 mg/kg bw/day

General Population - Hazard via oral route- Systemic effects- Long term exposure- DNEL (Derived No Effect Level): 1.25mg/kg bw/day

General Population - Hazard via oral route- Systemic effects- Acute/short term exposure - DNEL (Derived No Effect Level): 10mg/kg bw/day

Hazard for aquatic organisms- PNEC aqua (freshwater): 0.004 mg/L

Hazard for aquatic organisms- PNEC aqua (marine water): 0 mg/L

Hazard for aquatic organisms-PNEC aqua (intermittent releases): 0.005 mg/L Hazard for aquatic organisms- PNEC STP: 0.3 mg/L

Hazard for aquatic organisms- PNEC sediment (freshwater): 0.147 mg/kg sediment dw

Hazard for aquatic organisms- PNEC sediment (marine water): 0.015 mg/kg sediment dw

Hazard for terrestrial organisms- PNEC soil: 0.027 mg/kg soil dw

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

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

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection Wear appropriate goggles to prevent eye exposure.

Hand protection Wear appropriate gloves to prevent skin exposure.

Body protection Wear suitable protective clothing to prevent skin exposure.

Respiratory protection Avoid breathing dust. In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear suitable protective clothing to prevent heat.

8.2.3 Environmental exposure controls:

Avoid discharge into the environment.

According to local regulations, Federal and official regulations.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	Granule
Colour:	Light yellow
Odour:	Odourless
Odour threshold:	Not available
pH:	Not available
Melting point/range (°C):	180-182 °C
Boiling point/range (°C) :	Not available
Flash point (°C) :	200 °C
Evaporation rate:	Not applicable
Flammability (solid, gas);	Not available
Ignition temperature (°C) :	Not available

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Upper/lower flammability/explosive limits:	Not available.
Vapour pressure (25°C) :	Not available
Vapour density:	Not applicable
Relative Density:	1.42g/cm ³
Bulk density (kg/m ³) :	670-700kg/m ³ (25 °C)
Water solubility (g/l) :	118 mg/l at 25°C
n-Octanol/Water (log Po/w) :	log Pow=2.42
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity, dynamic (mPa s) :	Not determined
Explosive properties:	Not determined
Oxidising properties:	Not applicable
Molecular Formula:	C ₇ H ₅ NS ₂
Molecular Weight:	167.25

9.2. Other information:

Fat solubility(solvent– oil to be specified) etc:	Not available
Surface tension:	Not available
Dissociation constant in water(pKa):	The pKa of 2 -mercaptobenzothiazole at 20 +/- 1°C is 7.03 with a deviation of ±0.04
Oxidation-reduction Potential:	Not available

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10 Stability and reactivity

10.1 Reactivity:

The substance is stable under normal storage and handling conditions.

10.2 Chemical stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

10.3 Possibility of hazardous reactions:

No dangerous reactions known.

10.4 Conditions to avoid:

Incompatible materials. Heating > 100°C: May catch fire.

10.5 Incompatible materials:

Strong oxidizing agents.

10.6 Hazardous decomposition products:

Thermal decomposition products: carbon monoxide (CO), nitrous gases (NOx), Sulfur oxides (SOx).

11 Toxicological information

11.1 Toxicokinetics, metabolism and distribution

Non-human toxicological data: Not available

Method: Not available

Dosis: Not available

Routes of administration: Not available

Results: Not available

Absorption: Not available

Distribution: Not available

Metabolism: Not available

Excretion: Not available

11.2 Information on toxicological effects

Acute toxicity:

LD50(Oral, Rat): 3800 mg/kg

LD50(Dermal Rabbit): > 7940 mg/kg

LD50(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

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STOT-repeated exposure: Not classified
Aspiration hazard: Not classified

12 Ecological information

Toxicity:

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	0.73 mg/L	96h	Fish	OECD 203	N/A	N/A
LC50	0.71 mg/L	48h	Daphnia	OECD 202	N/A	N/A
EC50	0.5 mg/L	72h	Algae	OECD 201	N/A	N/A

Persistence and degradability: Not readily biodegradability.
Bioaccumulative potential: BCF < 0.8.
Mobility in soil: log K_{oc}: >= 2.51 - <= 3.55.
Results of PBT&vPvB assessment: Neither PBT nor vPvB.
Other adverse effects: Very toxic to aquatic life with long lasting effects.

13 Disposal considerations

13.1 Waste treatment methods

The material should be disposed of by incineration in a chemical incinerator in compliance with national and regional requirements.

14 Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number:	UN3077	UN3077	UN3077
UN Proper shipping name:	Environmentally hazardous substance, solid, n.o.s. (2-Mercaptobenzothiazole)	Environmentally hazardous substance, solid, n.o.s. (2-Mercaptobenzothiazole)	Environmentally hazardous substance, solid, n.o.s. (2-Mercaptobenzothiazole)
Transport hazard Class:	9	9	9
Packaging group:	III	III	III
Environmental hazards:	Environmentally hazardous substances	Environmentally hazardous substances	Environmentally hazardous substances
Special precautions for user:	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	IBC 08	IBC 08	IBC 08

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15 Regulation information

15.1 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

16.1 Indication of changes Version 1.2 Amended by EU No 2015/830

16.2 Training instructions:

Not applicable.

16.3 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.4 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.