



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE MBS  
MSDS No.09/20.03.2015

#### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

##### 1.1 Product Identifier

Product Name	Mercure MBS
Synonym	2-(4-Morpholinothio)benzothiazole

##### 1.2 Use of the Substance/Mixture

Identified uses	Rubber vulcanization accelerator
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##### 1.3 Manufacturer or supplier's details

Company/Undertaking identification address	Merchem Limited Grove Centre, 44- Development Plot, Kalamassery, Cochin – 683 109, Kerala, India
Telephone	+ 91-484-4089300
Telefax	+ 91-484-4089310
E mail	mail@merchem.com

##### 1.4 Emergency Telephone Number

Emergency Telephone Number	+ 91-484-4089300
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#### SECTION 2: HAZARDS IDENTIFICATION

##### 2.1 Classification of the substance or mixture

Classification as per Directive 67/548/EEC

N  
Xi  
R43  
R51/53  
R36/38

Classification as per Regulation (EC) n.1272/2008

Skin irritation (Category 2), H315  
Eye irritation (Category 2), H319  
Skin sensitisation (Category 1), H317  
Chronic aquatic toxicity (Category 2), H411

EC Number: 203-052-4

Annex 1 Index Number: 613-113-00-0



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#### Label elements

**Product Name:**

Mercure MBS

**Hazard pictograms**



**Signal Word** - Warning

**Hazardous statements**

H315 : Causes skin irritation.  
H317 : May cause an allergic skin reaction.  
H319 : Causes serious eye irritation.  
H411 : Toxic to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention**

P264 Wash hands thoroughly after handling.  
P280: Wear protective gloves / clothing / eye / face protection.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

**Precautionary statements**

**Response**

P363 Wash contaminated clothing before reuse.  
P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P302 + P352 IF ON SKIN: wash with plenty of soap and water.

**Precautionary statements**

**Storage**

P403 Store in a well-ventilated place.  
P410 Protect from sunlight.

**Precautionary statements**

**Disposal**

P501: Dispose of contents/container in accordance with national regulations.

**Note :** For the full text of the R phrases, S phrases, and symbols mentioned in this Section, see Section 16

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Not applicable



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#### 3.2 Mixtures

**Chemical description:**

2-(4-Morpholinothio)benzothiazole(Active ingredient)

**Composition/Information on ingredients**

Chemical Name	CAS No.	EC No.	Annex-1 Index No.	Weight %
2-(4-Morpholinothio)benzothiazole	102-77-2	203-052-4	613-113-00-0	> 97
White mineral oil	8042-47-5	-	-	1-2

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first-aid measures

**Inhalation**

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

**Ingestion**

Rinse mouth, give water to drink

**Contact with the skin**

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

**Contact with the eyes**

Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.

**Notes to Physician**

Provide supportive care and treatment based on the patient's reactions. Give special attention to breathing difficulties

### SECTION 5: FIRE FIGHTING MEASURES

#### 5.1 Extinguishing media

**Suitable extinguishing media**

Use water spray, carbon dioxide, foam or dry powder

**Special recommendations**

Fight fire from a safe distance and from a protected location. Use water spray to cool surfaces exposed to the fire. Avoid the presence of airborne dust because it is combustible. Avoid discharge into drains or watercourses

#### 5.2 Specific hazards arising from the substance or mixture

#### 5.3 Protective Equipment and Precautions for Firefighters

Fire-fighting personnel must wear approved protective clothing for fire fighting and self-contained breathing apparatus

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions ,protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.



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#### 6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

#### 6.3 Methods and materials for containment and cleaning up.

Solid spillages are collected with shovels or other means and placed into sealed plastic bags or drums for later recycling or managed as waste.

#### 6.4 Reference to other sections

See section 7,8 &13

### SECTION 7: HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.  
Incompatible Materials: Oxidizers, strong acids and alkalis.  
At temperatures above 40°C and/or in high humidity conditions the product gradually decomposes emitting irritant vapours.

### SECTION 8: EXPOSURE CONTROL/PERSONNEL PROTECTION

#### 8.1 Control parameters

Particulates not otherwise classified (PNOC)  
Inhalable particulate: 10 mg/m<sup>3</sup>  
Respirable particulate: 4 mg/m<sup>3</sup>

#### 8.2 Exposure Controls

**Appropriate engineering controls** Ensure adequate ventilation and extraction systems in the workplace. Have eye wash systems and showers in the workplace.

**Personal protective equipment** Respiratory: Full-face protective mask with filter.  
Eye: Approved safety goggles  
Skin: Gloves (rubber, PVC, polychloroprene). Long sleeve overall and appropriate footwear to avoid contact with skin.

#### Hygiene measures in the workplace

Shower with hot water and soap at the end of the day. Do not use solvents for cleaning the body. Both clothing and equipment should be changed frequently and dry cleaned, check the condition of the gloves to avoid internal contamination and discard if signs of cuts or holes are detected. Use skin creams after work.



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#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	solid pellets
Colour	Pale yellow
Vapour pressure	Not available
Odour	mild, amine like
Vapour density	No data available
pH	not determined
Relative density	1.36 g/cm <sup>3</sup>
Melting point	82 – 88 °C
Solubility in water	approx. 40 mg/l (Practically insoluble)
Boiling point	not relevant
Partition coefficient n-octanol/water	Log Pow = 3.49 (25 °C)
Flash point	No data available
Autoignition temperature	No data available
Evaporation rate	No data available
Decomposition temp.	No data available
Flammability	No data available
Viscosity	No data available
Combustion, Properties	No data available
Explosive properties	No data available

#### SECTION 10: STABILITY AND REACTIVITY

##### 10.1 Reactivity

No data available

##### 10.2 Chemical stability

Stable under recommended storage and handling conditions .

##### 10.3 Possibility of Hazardous reactions

No data available

##### 10.4 Conditions to avoid:

Heating > 130 °C

##### 10.5 Incompatible Materials:

Oxidizing agents

##### 10.6 Hazardous decomposition products:

Thermal decomposition products: carbon monoxide (CO), nitrous gases (NO<sub>x</sub>), Sulfur oxides (SO<sub>x</sub>), MORPHOLINE . ( Harmful by inhalation and in contact with skin and if swallowed, Corrosive )

During the vulcanization process, traces of carcinogenic N-nitrosamines may be formed from decomposition products (amines) in the presence of nitrosating agents.



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**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effect**

<b>Acute oral toxicity LD50 (mg/kg)</b>	> 7,940 mg/kg (rat)
<b>Acute dermal toxicity LD50 (mg/kg)</b>	> 7,940 mg/kg (rabbit)
<b>Organs affected/routes of Exposure</b>	Eyes, respiratory tract / Inhalation, contact.
<b>Ingestion</b>	The product is slightly toxic if ingested. Even after ingesting large amounts of product, this is not expected to cause significant health problems
<b>Contact with the skin</b>	Slightly irritating to the skin, however it can cause sensitization and allergic reaction on the skin
<b>Inhalation</b>	May cause mild irritation of the upper respiratory tract (mouth, nose and throat). Symptoms may include pain in the nose and throat, coughing and sneezing repeatedly.
<b>Contact with the eyes</b>	May cause slight irritation to the eyes but not enough to be classified as an irritant.
<b>Medical conditions aggravated by exposure</b>	Skin and lung diseases : Dust may be irritating to the respiratory tract and cause symptoms of bronchitis. Repeated contact may cause skin sensitization.
<b>Carcinogenicity:</b>	
Carcinogenicity - mouse – Subcutaneous	
<b>Tumorigenic :</b>	
Neoplastic by RTECS criteria. Lungs, Thorax, or Respiration:Tumors. Liver:Tumors.	
<b>Reproductive toxicity</b>	Developmental Toxicity - rat - Parenteral Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death. May cause sensitization by prolonged or repeated contact .



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#### Additional Information

Repeated dose toxicity - rat - male and female - Oral - No observed adverse effect level - 50 mg/kg -  
Lowest observed adverse effect level - 400 mg/kg  
Repeated dose toxicity - rabbit - male and female - Dermal - No observed adverse effect level - > 2.000 mg/kg.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Ecotoxicity

Toxicity to fish flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,31 mg/l - 96h  
Daphnia  
Toxicity to algae static test EC50 - Daphnia magna (Water flea) - 2,84 mg/l - 48 h  
Toxicity to bacteria EC50 - Sludge Treatment - > 10.000 mg/l - 3 h

### 12.2 Mobility in soil

No data available

### 12.3 Persistence and Degradability

Biodegradability

aerobic - Exposure time 28 d  
Result: 0 % - Not readily biodegradable.

### 12.4 Bioaccumulation Potential

No data available .

### 12.5 Results of PBT and vPBT assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

Toxic to aquatic life with long lasting effects.

### 12.7 Other information

Do not discharge product unmonitored into environment

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste disposal method

#### For the product

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.



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#### Contaminated containers

Dispose of as unused product

#### Handling:

Avoid contact with eyes. Avoid contact with skin. Avoid dust generation

### SECTION 14: TRANSPORT INFORMATION

#### 14.1 Road transport (ADR/RID/ADN)

ADR/RID class:	9
Packaging group:	III
UN No.	3077
Hazardous label	Hazardous for the environment
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (2-Morpholinothio)benzothiazole)

#### 14.2. Sea transport IMDG)

IMDG class	9
Packaging group:	III
UN No.	3077
Hazardous label	Hazardous for the environment
Marine Pollutant	yes
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (2-Morpholinothio)benzothiazole)

#### 14.3. Air transport( ICAO-TI/IATA-DGR )

ICAO-TI/IATA-DGR class	9
Packaging group	III
UN No.	3077
Proper shipping name	Environmentally hazardous substance, solid, n.o.s. (2- (Morpholinothio)benzothiazole)

#### 14.4 Other information

No data available

#### 14.5 Environmental Hazards

See section 14.1-14.3

#### 14.6 Special precautions for user

No data available

#### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant





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**SECTION 15: REGULATORY INFORMATION**

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

Regulation 1907/2006 REGULATION (EC) No 1272/2008  
Classification according to EU directives 67/548/EEC or 1999/45/EC

**15.2 Chemical safety assessment** No data available

**SECTION 16: OTHER INFORMATION**

Issue No.	2
Issue date	20.03.2015
Revision No.	0
Reason for revision	Reviewed & revamped based on the guide lines of Regulation (EC) No 1907/2006

**List of relevant R(isk)-phrase(s)**

N	Dangerous for the environment
Xi	Irritant
R36/38	Irritating to eyes and skin.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Training advice**

Provide adequate information, instruction and training to operators

**Further information for the material safety data sheet**

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

**End of Material Safety Data Sheet**