



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE CBS  
MSDS No. 08/20.03.2015

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

### 1.1 Product Identifier

Product Name	Mercure CBS
Synonym	N-Cyclohexyl-2-benzothiazolesulfenamide

### 1.2 Use of the Substance/Mixture

Identified uses	Accelerator for rubber vulcanization
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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
Email	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 according to EU directives 67/548/EEC or 1999/45/EC

Xi  
N  
R50/53  
R43

#### REGULATION (EC) No. 1272/2008

Skin sensitizer Cat. 1  
Acute aquatic Cat. 1  
Chronic aquatic Cat. 1

EC Number: 202-411-2

Annex 1 Index Number: 613-131-00-9



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#### 2.2 Label elements

**Product Name:**

Mercure CBS

**Hazard pictograms**



**Signal word**

Warning

**Hazard statement**

H317: May cause an allergic skin reaction

H410: Very toxic to aquatic life with long lasting effects.

**Precautionary statement – Prevention**

P261 Avoid breathing dust/fume/gas/mist/vapours/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

**Precautionary statement – Response**

P302 +P352 - IF ON SKIN: Wash with plenty of soap and water

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention

P321 - Specific treatment (see supplemental first aid instructions on this label)

P363 - Wash contaminated clothing before reuse

P391 - Collect spillage

**Precautionary statement – Storage**

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

**Precautionary statement – disposal**

- P501 - Dispose of contents/container to an approved incineration plant

#### 2.3 Other hazards

**PBT and vPvB assessment**

The product does not meet the criteria to be considered PBT or vPvB.

**Other hazards which do not result in classification**

No information available

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



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### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Not applicable

#### 3.2 Mixtures

##### Chemical description:

N-cyclohexyl-2-benzothiazolesulfenamide

##### Composition/Information on ingredients

Chemical Name	CAS No.	EC No.	Annex-1 Index No.	Weight %
N-cyclohexyl-2-benzo-thiazolesulfenamide	95-33-0	202-411-2	613-131-00-9	>95
White mineral oil	8042-47-5	-	-	1-2

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first-aid measures

##### General Advice

If symptoms persist, call a physician. Show this material safety data sheet to the doctor in attendance. Treat symptomatically. In case of allergic reaction after exposure, any future exposure must be avoided. Provide supportive care and treatment based on the patient's reactions. Give special attention to breathing difficulties.

##### Eye Contact

Flush immediately with plenty of water for at least 15 min. holding the eyelids open. Seek medical attention if irritation persists after washing. Remove contact lenses immediately if worn, unless they have adhered to eyes.

##### Skin Contact

Remove contaminated clothing and thoroughly wash the affected parts of the body with soap and water. Seek medical attention if irritation persists. Wash contaminated shoes and clothing thoroughly before reuse

##### Inhalation

Move the affected person to fresh air. If breathing is difficult, give oxygen and seek immediate medical attention.

##### Ingestion

Seek immediate medical attention. Do not induce vomiting unless told to do so by a poison control centre or doctor. Never administer anything by mouth to an unconscious person.

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

- Repeated or prolonged exposure may cause skin sensitization. Symptoms: reddening, swelling and itching. Inhalation may result in respiratory tract irritation and contact with the eyes may cause irritation. The product exhibits low toxicity when ingested and this route is easily avoided and not frequent.
- For the environment: May cause long term adverse effects in the aquatic environment.



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#### **4.3 Indication of immediate medical attention and special treatment needed**

- No information available

### **SECTION 5: FIRE FIGHTING MEASURES**

#### **5.1 Extinguishing media**

**Suitable extinguishing media:** Use water spray, carbon dioxide, foam or dry powder.

**Extinguishing media which must not be used for safety reasons:** High volume water jet

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

**Specific hazards** Combustible material  
Dust may form explosive mixture in air  
Heating can release noxious and toxic gases:  
Carbon monoxide  
Sulphur oxides  
Nitrogen oxides (NOx)

**Specific methods** Keep product and empty container away from heat and sources of ignition. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains. Collect contaminated fire extinguishing water separately. This must not be discharged into drains

#### **5.3 Protective Equipment and Precautions for Firefighters**

Wear full protective clothing and self-contained breathing apparatus

### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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

- Avoid contact with skin, eyes and clothing
- Evacuate personnel to safe areas
- Keep people away from and upwind of spill/leak
- Wear respiratory protection
- Wear suitable protective clothing, gloves and eye/face protection
- Ventilate closed spaces before entering

#### **6.2 Environmental precautions**

- Prevent product from entering drains



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- Do not flush into surface water or sanitary sewer system

#### **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**

- Do not eat, drink or smoke while handling the product
- Use appropriate protective equipment to avoid direct contact or inhalation of the product and avoid generating dust
- Eliminate all ignition sources in the material handling area: sparks, flames, static electricity and other heat sources.
- Avoid contact with the skin, eyes and clothing.
- Reseal containers containing unused product.
- Handle the product in areas with efficient ventilation systems.
- Wash hands with a neutral soap after handling work has finished.
- Remove contaminated clothing and protective equipment before entering eating areas

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

- Store the product in a cool, dry, well-ventilated area.
- Store protected from direct sunlight and away from strong oxidizers.
- Stored in locations equipped with fire-fighting equipment.
- At temperatures above 40°C and/or in high humidity conditions the product gradually decomposes emitting irritant vapours (cyclohexamine).
- Incompatible Materials: Strong reducing agents, oxidizers, strong acids and alkalis.

#### **7.3 Specific end uses**

No further relevant information available.

### **SECTION 8: EXPOSURE CONTROL/PERSONNEL PROTECTION**

#### **8.1 Control parameters**

**Occupational exposure limit values :**

Particulates not otherwise classified (PNOC):

Inhalable particulate: 10 mg/m<sup>3</sup>

Respirable particulate: 3 mg/m<sup>3</sup>



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DNELs calculated for workers:

Acute dermal: 534 mg/kg body weight/day

Acute Inhalation: 11 mg/m<sup>3</sup>

Chronic dermal: 67 mg/kg body weight/day

Chronic Inhalation: 11 mg/m<sup>3</sup>

The product is a moderate skin sensitizer for which has not been possible to establish a dose response relationship.

### 8.2 Exposure controls

#### Engineering Controls:

Ensure adequate ventilation and extraction systems in the workplace. Have eye wash systems and showers in the workplace. Avoid dust generation. Ensure good ventilation and Local exhaustion of the working area

#### Personal Protective Equipment:

##### Eye/face Protection

Approved safety goggles or Face-shield

##### Skin Protection

Gloves (rubber, PVC, polychloroprene). Long sleeve overall and appropriate footwear to avoid contact with skin.

##### Respiratory

Full-face protective mask with filter

##### Eye

Approved safety goggles

#### Environmental exposure controls

Prevent product from entering drains

Do not contaminate surface water

Avoid subsoil penetration

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical State	Powder/Pellets
Color	off-white
Odor	odourless
Boiling point/Range	Not determined
Melting point/Range	99 - 100°C
Flash Point	177°C (cleaveland open cup)
Flammability	Not readily flammable
Auto-ignition temperature	349 °C ( for powder )
Explosive properties	No data available
Oxidizing properties	No data available
Vapor pressure	< 4,53*10 <sup>-7</sup> hPa at 25°C
Density	1200 Kg /m <sup>3</sup>
Bulk density	540 – 590 Kg per m <sup>3</sup>
Solubility in water	0.00032 Kg/m <sup>3</sup> at 25°C
Solubility in other solvents	Acetone, alcohol



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pH	NA
Partition coefficient (n-Octanol-water)	4.93 (n-octanol – water) Log Pow: 3.36 at 25°C and pH
Vapor density	Not applicable
Viscosity	Not applicable
Decomposition temperature	145°C
Explosive properties	Explosion class: St2 Kst: 169-237 bar.m/s Lower explosive limit: 20 g/m <sup>3</sup> Minimum ignition energy:<3mJ
Combustion properties	Not available

#### **9.2 Other information**

No data available

### SECTION 10: STABILITY AND REACTIVITY

#### **10.1 Reactivity**

- See Incompatible Materials

#### **10.2 Chemical Stability**

- The product is stable when stored at room temperature in its original packaging. Stable under normal conditions of use, handling and transport. (See section 7). When the product gets wet, it slowly decomposes releasing cyclohexylamine vapours .

#### **10.3 Possibility of hazardous reactions**

- See Incompatible Materials

#### **10.4 Conditions to Avoid**

- Keep away from heat sources, sparks and flames. Also avoid contact with sources of moisture

#### **10.5 Incompatible materials to avoid**

- Oxidizing agents, strong acid and alkalis

#### **10.6 Hazardous Decomposition Products**

- Thermal decomposition generates amines (cyclohexylamine, aniline) and derivatives of a sulphurous nature . In case of combustion see section 5.

### SECTION 11: TOXICOLOGICAL INFORMATION



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#### **11.1 Information on toxicological effects**

<b>Acute oral toxicity (LD50/oral/rat):</b>	5300 mg/Kg
<b>Acute dermal toxicity (LD50/dermal/rabbit):</b>	7940 mg/Kg
<b>Organs affected/routes of exposure:</b>	Eyes, respiratory tract, skin / inhalation, contact.
<b>Ingestion:</b>	While the product is slightly toxic by ingestion, discomfort and/or adverse effects may result from the ingestion of relatively large amounts of product.
<b>Contact with the skin:</b>	The product is mildly irritating to the skin; may cause an allergic skin reaction
<b>Contact with the eye:</b>	The product may cause mild irritation to eyes, with symptoms typical of conjunctivitis
<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>Medical conditions aggravated by exposure:</b>	Skin and lung diseases. Haematological problems and liver and/or kidney disease. The product or its emissions during use may cause sensitization effects or allergic reactions that may aggravate pre-existing systemic diseases
<b>Carcinogenicity:</b>	Negative in standard in vitro tests. Neither the product or any of the impurities/additives present in amounts exceeding 0.1% have been classified by NTP, IARC or OSHA as a carcinogen or suspected carcinogen.
<b>Genotoxicity:</b>	Negative for genetic activity for in vitro and in vivo tests using mammalian cells.
<b>Reproductive toxicity:</b>	No evidence of teratogenicity in animal studies using rats, mice and hamsters]
<b>Other information of interest:</b>	The product generates amine vapour during the vulcanization process which can cause respiratory sensitization, in eyes and skin.





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## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Ecotoxicity

Component information:	Active ingredient
Toxicity to fish:	96h-LC <sub>50</sub> (Lepomis macrochirus): 7.9 mg/l 96h-LC <sub>50</sub> (Oncorhynchus mykiss): 5.4 mg/l 96h-LC <sub>50</sub> (Pimephales promelas): >1000 mg/l
Toxicity to algae:	NOEC (72h) (Scenedesmus capricornutum): 1.1 mg/l
Toxicity to invertebrates:	48h-EC <sub>50</sub> (Daphnia magna): 18 mg/l

### 12.2 Mobility in soil

Not known

### 12.3 Persistence and degradability

The product is rapidly degraded by hydrolysis, but not readily biodegradable

The tests performed with the material indicate that the product is not persistent

### 12.4 Bioaccumulative Potential

The tests performed with the material indicate that the product is not bioaccumulative.

### 12.5 Results of PBT and vPvB assessment

The product does not meet the criteria to be considered PBT or vPvB.

### 12.6 Other adverse effects

None known based on information supplied

### 12.7 Other information

Do not allow product to reach ground water, water course or sewage system. Also, poisonous for fish and plankton in water bodies. Toxic for aquatic organisms. Do not allow product to reach ground water, water course or sewage system, even in small quantities.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste Disposal Method

#### Product

- Recycle the product whenever possible. If reuse is not possible, dissolve or mix the material with a combustible solvent and burn in an incinerator equipped with an appropriate gas treatment system.



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- Dispose of in accordance with local regulations
- In any case, avoid discharge into the environment in an uncontrolled way.

#### Packing

- Contaminated packaging should be treated as for the substance/preparation. Used containers should be handled so as not to generate dust during collection, transportation, and final disposal

### SECTION 14: TRANSPORT INFORMATION

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

ADR/RID Class	9
UN-No	3077
Packing Group	III
Hazardous label	Hazardous for the environment
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

#### 14.2 Sea transport (IMDG)

IMDG Class	9
UN-No	3077
Packing Group	III
Hazardous label	Hazardous for the environment
EMS Number	F-A, S-F
Marine pollutant	Yes
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

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

Class	9
UN-No	3077
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

#### 14.4 Other information

No data available

#### 14.5 Environmental hazards

Product contains environmentally hazardous substances: N-cyclohexyl- 2-benzothiazolesulfenamide

#### 14.6 Special precautions for user

Warning: Miscellaneous dangerous substances and articles

#### 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

##### **Other Regulations**

The product is listed in the following inventories:

USA (TSCA), Canada (DSL), EU (EINECS), Japan (ENCS), Korea (ECL),

Australia (AICS), New Zealand (NZ), Philippines (PICCS), China (CLECS).

Regulated for rubber articles intended for repeated use in contact with food, as per

US FDA 21 CFR 177.2600

France order 9/11/94

Product covered by Seveso Dir. Category 9i

##### **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

##### **Classification of dangerous substance directive (67/548/EEC)**

- Xi; Sensitising
- N; Dangerous for the environment
- R43: May cause sensitisation by skin contact.
- R50/53 - Very 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**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.

**End of Material Safety Data Sheet**