



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDBC (Coated)  
MSDS No. 23/20.03.2015

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

##### 1.1 Product Identifier

Product Name	Mercure ZDBC
Synonym	Zinc di-n-butylthiocarbamate

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

Identified uses	Rubber vulcanization accelerator
-----------------	----------------------------------

##### 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

##### 1.4 Emergency Telephone Number

Emergency Telephone Number	+ 91-484-4089300
----------------------------	------------------

#### 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  
R36/37/38  
R43  
N  
R50-53

**EC Number:** 205-232-8

**Annex 1 Index Number:** 006-081-00-9



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDBC (Coated)  
MSDS No. 23/20.03.2015

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

**Classification of the substance or mixture** Skin sensitization: Cat. 1; Skin corrosion/irritation Cat. 2; Specific target organ toxicity, single exposure Respiratory tract irritation Cat.3; Hazardous to the aquatic environment, long-term hazard Cat.4

#### 2.2 Label elements

**Product Name:**

Mercuré ZDBC

**Hazard pictograms**



**Signal Word**

Warning

#### Hazard Statements

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H335: May cause respiratory irritation.

H413: May cause long lasting harmful effects to aquatic life

#### Precautionary Statements - Prevention

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

P264 - Wash face, hands and any exposed skin thoroughly after handling

P271: Use only outdoors or in a well-ventilated area.

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

#### Precautionary Statements - Response

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

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P321: Specific treatment (see on this label).

P332+P313: If skin irritation occurs: Get medical advice/attention.

P333 + P313 IF skin irritation or rash occurs: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

P363: Wash contaminated clothing before reuse.



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDBC (Coated)  
MSDS No. 23/20.03.2015

#### Precautionary statement – Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up

#### Precautionary statement – disposal

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

#### 2.3 Other hazards

#### PBT and vPvB assessment

No data available

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

Risk of dust explosion

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

Substance is a mixture.

#### 3.2 Mixtures

##### Chemical description:

Zinc di-n-butyldithiocarbamate

##### Composition/Information on ingredients

Chemical Name	CAS No.	EC No.	Annex-1 Index No.	Weight %
Zinc di-n-butyldithiocarbamate	136-23-2	205-232-8	006-081-00-9	97%
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. Use of alcoholic beverages may enhance toxic effects. In case of allergic reaction after exposure, any future exposure must be avoided.

##### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes Remove contact lenses Obtain medical attention

##### Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Thoroughly clean shoes before reuse.  
If skin irritation persists, call a physician



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDBC (Coated)  
MSDS No. 23/20.03.2015

<b>Inhalation</b>	Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. Immediate medical attention is required
<b>Ingestion</b>	Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting. Treat symptomatically. If swallowed, seek medical advice immediately.

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

- Causes mild eye irritation. Symptoms may include redness, pain, swelling and tearing
- May cause allergic skin reaction. May cause skin defatting with prolonged exposure
- May cause irritation of the respiratory tract and alcohol intolerance

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

- General advice for dithiocarbamates. No further relevant information available

### SECTION 5: FIRE FIGHTING MEASURES

#### **5.1 Extinguishing media**

**Suitable extinguishing media:** CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam

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

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

<b>Specific hazards</b>	Heating can release hazardous gases: Sulphur dioxides (SO <sub>2</sub> ) Nitrogen oxides (NO <sub>x</sub> ) Hydrogen cyanide (HCN)
<b>Specific methods</b>	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



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDBC (Coated)  
MSDS No. 23/20.03.2015

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

Wear full protective clothing and self-contained breathing apparatus with full face piece operated in pressure demand and operated in other positive pressure mode

### **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

#### **6.2 Environmental precautions**

- Remove immediately adhering matter
- Prevent product from entering drains
- Do not flush into surface water or sanitary sewer system
- Inform respective authorities in case of seepage into water course or sewage system.

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

- Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container
- Do not flush with water
- Avoid dust formation
- Ensure adequate ventilation

#### **6.4 Reference to other sections**

See section 7, 8 and 13

### **SECTION 7: HANDLING AND STORAGE**

#### **7.1 Precautions for safe handling**

- Use only in area provided with appropriate exhaust ventilation
- Use spark-proof tools and explosion-proof equipment
- Avoid dust formation
- Avoid contact with skin, eyes and clothing
- Wear personal protective equipment
- Do not breathe vapours/dust
- Do not eat, drink or smoke when using this product
- Wash hands after handling
- Remove contaminated clothing and protective equipment before entering eating areas



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDBC (Coated)  
MSDS No. 23/20.03.2015

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

- In accordance with local and national regulations
- Keep in a dry, cool place
- Do not store near acids
- Do not store together with oxidizing and self-igniting products
- Use spark-proof tools and explosion-proof equipment
- Keep away from heat, sources of ignition, and direct sunlight

#### 7.3 Specific end uses

No further relevant information available.

### SECTION 8: EXPOSURE CONTROL/PERSONNEL PROTECTION

#### 8.1 Control parameters

##### Occupational exposure limit values

No data available

#### 8.2 Exposure controls

##### Engineering Controls:

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

##### Personal Protective Equipment:

##### Eye/face Protection

Tightly fitting safety goggles or Face-shield

##### Skin Protection

Wear suitable protective clothing/equipment

##### Hand Protection

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

##### Respiratory Protection

In accordance with local and national regulations  
In case of insufficient ventilation, wear suitable respiratory equipment  
Suitable mask with particle filter P3 (European Norm 143) self-contained breathing apparatus (EN 133) (in case of higher concentration)

##### Environmental exposure controls

Prevent product from entering drains  
Do not contaminate surface water  
Avoid subsoil penetration



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDBC (Coated)  
MSDS No. 23/20.03.2015

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical State	Solid powder
Color	White
Odor	Characteristic
Boiling point/Range	Not applicable
Melting point/Range	100 – 112
Flash Point	No data available
Flammability	No data available
Auto-ignition temperature	400°C
Explosive properties	Dust explosion hazard
Explosion Limit	No data available
Oxidizing properties	No data available
Vapor pressure	Negligible at room temperature
Density	1270 Kg/M3 at 20°C
Bulk density	310 – 350 Kg/M3
Solubility in water	Practically insoluble (0.001 g/L at 20°C)
Solubility in other solvents	Acetone, carbon disulfide. Partly soluble in hexane.
pH	Neutral
Partition coefficient	Log P = 7.04 (Octanol/water)
Relative vapor density	No data available
Viscosity	No data available

### 9.2 Other information

No data available

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

- See Incompatible Materials

### 10.2 Chemical Stability

- Stable under recommended storage and handling conditions (See section 7)

### 10.3 Possibility of hazardous reactions

- See Incompatible Materials

### 10.4 Conditions to Avoid

- Avoid dust formation
- Keep away from heat, sources of ignition, and direct sunlight



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDBC (Coated)  
MSDS No. 23/20.03.2015

#### 10.5 Incompatible materials to avoid

- Strong acids
- Oxidizing agents

#### 10.6 Hazardous Decomposition Products

- Heating or fire can release toxic gas
  - Nitrogen oxides (NOx)
  - Sulphur dioxide (SO<sub>2</sub>)
  - Hydrogen cyanide (HCN)

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

<b>Acute oral toxicity</b> (LD50/oral/rat):	>5000 mg/Kg
<b>Acute dermal toxicity</b> (LD50/dermal/rabbit):	>2000 mg/Kg
<b>Acute inhalational toxicity:</b>	No data available
<b>Ingestion:</b>	Harmful if swallowed. May cause head ache, nausea, vomiting, and gastrointestinal irritation
<b>Eye irritation:</b>	Irritating to eyes
<b>Skin irritation/Sensitization:</b>	Irritating to skin, Sensitization possible through skin contact
<b>Mutagenic Effects</b>	Did not show mutagenic effects in animal experiments
<b>Reproductive toxicity:</b>	No toxicity to reproduction
<b>Carcinogenic effects:</b>	Did not show carcinogenic effects in animal experiments
<b>Target Organ Effects:</b>	No data available
<b>Human experience:</b>	No data available

### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1 Ecotoxicity

<b>Component information:</b>	Active ingredient
EC50/48h/daphnia magna:	0.074 mg/L
EC50/21 d/daphnia magna:	14 ug/L
EC50/96h/algae (Chlorella pyrenoidosa):	1.1 mg/L
EC50/3 h/activated sludge (microorganisms):	1428 mg/L
LC50 Short-term (toxicity to fish, 96-h):	> 16 mg/L (Poecilia reticulata)
NOEC Long-term (toxicity to fish, 10-d):	10000 µg/L (Danio rerio)





## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDBC (Coated)  
MSDS No. 23/20.03.2015

#### **12.2 Mobility in soil**

No relevant information is available

#### **12.3 Persistence and degradability**

No relevant information is available

#### **12.4 Bioaccumulative Potential**

No relevant information is available

#### **12.5 Results of PBT and vPvB assessment**

Not applicable

#### **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. Danger to drinking water if even small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Very toxic for aquatic organisms

### SECTION 13: DISPOSAL CONSIDERATIONS

#### **13.1 Waste Disposal Method**

##### **Product**

- Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- Dispose of in accordance with local regulations

##### **Packing**

- Dispose off in accordance with local regulations

### SECTION 14: TRANSPORT INFORMATION

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

<b>ADR/RID Class</b>	9
<b>UN-No</b>	3077
<b>Packing Group</b>	III
<b>"Hazard label"</b>	Hazardous for the environment
<b>Proper Shipping Name</b>	Environmentally hazardous substance, Solid N.O.S. (Zinc di-n-butylidithiocarbamate)



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDBC (Coated)  
MSDS No. 23/20.03.2015

#### **14.2 Sea transport (IMDG/IMO)**

<b>Class</b>	9
<b>UN-No</b>	3077
<b>Packing Group</b>	III
<b>Marine pollutant</b>	Yes
<b>"Hazard label"</b>	Hazardous for the environment
<b>Proper Shipping Name</b>	Environmentally hazardous substance, Solid N.O.S. (Zinc di-n-butylidithiocarbamate)

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

<b>Class</b>	9
<b>UN-No</b>	3077
<b>Packing Group</b>	III
<b>Proper Shipping Name</b>	Environmentally hazardous substance, Solid N.O.S. (Zinc di-n-butylidithiocarbamate)

#### **14.4 Other information**

No data available

#### **14.5 Environmental hazards**

Information on environmental hazards, if relevant, pls. see 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

### **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



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDBC (Coated)  
MSDS No. 23/20.03.2015

#### SECTION 16: OTHER INFORMATION

##### This data sheet contains changes from the previous version in section(s)

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)

- R36/37/38 - Irritating to eyes, respiratory system and skin
- R43 - May cause sensitization by skin contact
- R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

##### List of relevant S(afety) phrase(s)

S2 - Keep out of the reach of children  
S24 - Avoid contact with skin  
S37 - Wear suitable gloves  
S60 - This material and its container must be disposed of as hazardous waste  
S61 - Avoid release to the environment. Refer to special instructions/safety data sheets

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

- Xi - Irritants
- N - Substances or preparations those are dangerous for the 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**