



**MERCHEM LIMITED**

**SAFETY DATA SHEET**

MERCURE ZDC  
MSDS No. 15/20.03.2015

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

**1.1 Product Identifier**

Product Name	Mercure ZDC
Synonym	Zinc diethyldithiocarbamate

**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**

- N
- Xn
- Xi
- R22
- R36/37/38
- R43
- R50/53

**EC Number:** 238-270-9

**Annex 1 Index Number:** 006-082-00-4



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDC  
MSDS No. 15/20.03.2015

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

**Classification of the substance or mixture** Acute tox: Cat. 4; Skin sensitization: Cat. 1; Skin corrosion/irritation Cat.2; Specific target organ toxicity, single exposure; Respiratory tract irritation Cat.3

#### 2.2 Label elements

**Product Name:** Mercure ZDC

**Hazard pictograms**



**Signal Word** Warning

#### Hazard Statements

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H410 Very toxic to aquatic life with long lasting effects.

#### Precautionary Statements - Prevention

- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P262 Avoid contact with skin ,eyes and clothing
- P264 Wash hands thoroughly after handling
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

#### Precautionary Statements - Response

- P301+ P312 If swallowed, seek advice of a medical practitioner
- P302+P352 If on skin, wash with plenty of soap and water
- P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.
- P304+P340 If inhaled, remove victim to fresh air
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P391 Collect spillage. Hazardous to the aquatic environment

#### Precautionary Statements - storage

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

#### Precautionary Statements - Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

**Supplemental Hazard Statements** : None

#### 2.3 Other hazards

None



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDC  
MSDS No. 15/20.03.2015

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Chemical description:

Zinc diethyl dithiocarbamate

Composition/Information on ingredients

Chemical Name	CAS No.	EC No.	Annex-1 IndexNo.	Weight %
Zinc diethyl dithiocarbamate	14324-55-1	238-270-9	006-082-00-4	98%

### 3.2 Mixtures

Not applicable. Substance is not a mixture

## 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. Dust must be irritating to the respiratory tract and cause symptoms of bronchitis.

#### Inhalation

: Move to fresh air, if symptoms persist, seek medical advice

#### Skin Contact

: Wash immediately with soap and water

#### Eyes Contact

: Rinse immediately as long as a possible with plenty of water. Seek medical advice if irritation persist

#### Ingestion

: Rinse mouth ,give water to drink

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

Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause respiratory irritation. Very toxic to aquatic life with long lasting effects

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

No data available



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDC  
MSDS No. 15/20.03.2015

#### SECTION 5: FIRE FIGHTING MEASURES

##### 5.1 Extinguishing media

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Zinc/zinc oxides

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

Wear self contained breathing apparatus for fire fighting if necessary

#### 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. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

##### 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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal

##### 6.4 Reference to other sections

See section 7, 8 and 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.

For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

##### 7.3 Specific end uses

A part from the uses mentioned in section 1.2 no other specific uses are stipulated



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDC  
MSDS No. 15/20.03.2015

## SECTION 8: EXPOSURE CONTROL/PERSONNEL PROTECTION

### 8.1 Control parameters

Components with workplace control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal Protective Equipment:

**Eye/face Protection** :Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin Protection** :Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands

**Hand Protection** :Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

**Respiratory Protection:** For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance Form	:	Solid powder
b) Colour	:	White
c) Odour	:	Characteristic
d) pH	:	NA
e) Melting point/range	:	178 - 181 °C
f) Initial boiling point and boiling range	:	Decomposes before boiling
g) Flash point	:	220°C(Cleveland open cup)
h) Evaporation rate	:	NA
i) Flammability (solid, gas)	:	NA
j) Upper/lower flammability or explosive limits	:	NA
k) Vapour pressure	:	Negligible at room temperature



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDC  
MSDS No. 15/20.03.2015

l) Vapour density	:	NA
m) Relative density	:	1.48g/cc
n) Solubility	:	Insoluble in water, soluble in benzene,CS <sub>2</sub> ,Chlorinated hydrocarbon
o) Partition coefficient (n octanol/water)	:	Low Pow=3.11
p) Auto-ignition temperature	:	NA
q) Decomposition temperature	:	NA
r) Viscosity	:	NA
s) Explosive properties	:	Explosion class: St2, Kst:224 bar.m/s, LEL:20g/m <sup>3</sup> ; MIE:1.3mj
t) Oxidizing properties	:	NA

#### **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**

- no data available

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

- no data available

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

- 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)



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDC  
MSDS No. 15/20.03.2015

#### 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

Toxicity to fish LC50 - other fish - 0,49 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 0,24 mg/l - 48 h

##### 12.2 Mobility in soil

No data available

##### 12.3 Persistence and degradability

No data available

##### 12.4 Bioaccumulative Potential

No data available

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

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

##### 12.6 Other adverse effects

Very toxic to aquatic life with long lasting effects.

##### 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



## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDC  
MSDS No. 15/20.03.2015

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste Disposal Method

#### Product

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

#### Packing

- Dispose off in accordance with local regulations

## SECTION 14: TRANSPORT INFORMATION

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

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

### 14.2 Sea transport (IMDG)

Class	9
UN-No	3077
Packing Group	III
Marine pollutant	Yes
"Hazard label"	Hazardous for the environment
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zincbis(diethyldithiocarbamate))

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

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

### 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





## MERCHEM LIMITED

### SAFETY DATA SHEET

MERCURE ZDC  
MSDS No. 15/20.03.2015

#### 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

For this product a chemical safety assessment was not carried out

#### 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)

R22 Harmful if swallowed.  
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)

S24 – Avoid contact with skin.  
S37 – Wear suitable gloves  
S60 –This material and its container must be disposed off as hazardous waste.  
S61 - Avoid release to the environment.

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

Xi - Irritants  
N - Substances or preparations those are dangerous for the environment  
Xn-Harmful

##### 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**