



MERCHEM LIMITED

SAFETY DATA SHEET

MERCURE ZDBC
MSDS No. 16/20.03.2015

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
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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

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
R36/37/38
R43
N
R50/53

EC Number: 205-232-8

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



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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:

Mercure 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.
- 304+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.

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



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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

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	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.

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

Inhalation

Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. Immediate medical attention is required

Ingestion

Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting. Treat symptomatically. If swallowed, seek medical advice immediately.



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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: CO₂, 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

Specific hazards Heating can release hazardous gases:
Sulphur dioxides (SO₂)
Nitrogen oxides (NO_x)
Hydrogen cyanide (HCN)

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 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



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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

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.



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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

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



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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/M ³ at 20°C
Bulk density	310 – 350 Kg/M ³
Solubility in water	Practically insoluble (0.001 g/L at 20°C)
Solubility in other solvents	Soluble in Benzene, Acetone & CS ₂ . 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

10.5 Incompatible materials to avoid

- Strong acids
- Oxidizing agents

10.6 Hazardous Decomposition Products

- Heating or fire can release toxic gas
 - Nitrogen oxides (NO_x)
 - Sulphur dioxide (SO₂)
 - Hydrogen cyanide (HCN)



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SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

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

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Component information:	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)

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



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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)

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. (Zinc di-n-butylidithiocarbamate)

14.2 Sea transport (IMDG/IMO)

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. (Zinc di-n-butylidithiocarbamate)

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. (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



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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

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