

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : Zineb

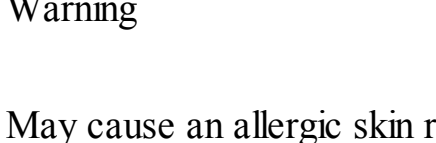
2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008
Specific target organ toxicity - single exposure (Category 3)
Skin sensitization (Category 1)

According to European Directive 67/548/EEC as amended.
Irritating to respiratory system. May cause sensitization by skin contact.

Label elements

Pictogram	
Signal word	Warning
Hazard statement(s) H317 H335	May cause an allergic skin reaction. May cause respiratory irritation.
Precautionary statement(s) P261 P280	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wear protective gloves.
Hazard symbol(s) Xi	Irritant
R-phrases(s) R37 R43	Irritating to respiratory system. May cause sensitization by skin contact.
S-phrases(s) S8 S24/25 S46	Keep container dry. Avoid contact with skin and eyes. If swallowed, seek medical advice immediately and show this container or label.

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C4H6N2S4Zn
Molecular Weight : 275,75 g/mol

CAS-No.	EC-No.		Classification	Concentration
Zineb 12122-67-7	235-180-1	-	STOT SE 3; Skin Sens. 1; H317, H335 Xi, R37 - R43	-

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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.

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.

7. HANDLING AND STORAGE

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. Normal measures for preventive fire protection.

Conditions for safe storage

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

Recommended storage temperature: 2 - 8 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

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).

Hand 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye 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 and body 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.

Hygiene measures

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	crystalline
Colour	yellow

Safety data

pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	no data available
Ignition temperature	149 °C -
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	< 0,001 hPa at 20 °C
Water solubility	insoluble

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

no data available

Materials to avoid

Strong oxidizing agentsStrong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Zinc/zinc oxides

Thermal decomposition

157 °C

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 1.850 mg/kg

Remarks: BehavioralExcitement. Diarrhoea Nutritional and Gross Metabolic:Weight loss or decreased weight gain.

LD50 Oral - rat - female - 8.900 mg/kg

LD50 Dermal - rat - > 2.500 mg/kg

LD50 Dermal - rat - > 2.500 mg/kg

Skin corrosion/irritation

Skin - rabbit - No skin irritation

Serious eye damage/eye irritation

Eyes - rabbit - No eye irritation

Respiratory or skin sensitization

May cause allergic skin reaction.

May cause allergic skin reaction.

Germ cell mutagenicity

Genotoxicity in vitro - Ames test - Not mutagenic in Ames Test.

Genotoxicity in vitro - rat - Other cell types

DNA inhibition

Genotoxicity in vitro - Human - lymphocyte

Sister chromatid exchange

Genotoxicity in vitro - Human - lymphocyte

DNA inhibition

Genotoxicity in vitro - Human - fibroblast

Other mutation test systems

Genotoxicity in vivo - mouse - Oral

Cytogenetic analysis

Genotoxicity in vivo - rat - Intraperitoneal

DNA damage

Genotoxicity in vivo - Human - Inhalation

Cytogenetic analysis

Carcinogenicity

Carcinogenicity - rat - Oral

Tumorigenic:Neoplastic by RTECS criteria. Endocrine:Thyroid tumors. Skin and Appendages: Other: Tumors.

Carcinogenicity - mouse - Intraperitoneal

Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Tumorigenic Effects: Uterine tumors. Lungs, Thorax, or Respiration:Tumors.

Carcinogenicity - mouse - Oral

Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration:Tumors.

Carcinogenicity - rat - Oral

Tumorigenic:Carcinogenic by RTECS criteria. Gastrointestinal:Tumors.

Carcinogenicity - rat - Implant

Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Gastrointestinal:Tumors. Liver:Tumors.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Reproductive toxicity - rat - Inhalation

Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Reproductive toxicity - rat - Oral

Maternal Effects: Ovaries, fallopian tubes.

Reproductive toxicity - rat - Oral

Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Embryo or Fetus: Fetal death.

Developmental Toxicity - rat - Oral

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Musculoskeletal system.

Developmental Toxicity - rat - Oral

Specific Developmental Abnormalities: Eye, ear.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure

Nausea, Dizziness, Headache, Weakness, Convulsions, Unconsciousness, Cough, Breathing difficulties, abdominal cramps, Diarrhoea, Eczema, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional information

RTECS: ZH3325000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	LC50 - Lepomis macrochirus (Bluegill) - > 180 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates.	EC50 - Daphnia magna (Water flea) - 0,6 - 1,8 mg/l - 48 h

Persistence and degradability

Bioaccumulative potential

Bioaccumulation	Oncorhynchus mykiss (rainbow trout) - 96 h
	Bioconcentration factor (BCF): 770

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

Very toxic to aquatic life with long lasting effects.
no data available

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases mentioned in Section 3

H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
Skin Sens.	Skin sensitization
STOT SE	Specific target organ toxicity - single exposure
Xi	Irritant
R37	Irritating to respiratory system.
R43	May cause sensitization by skin contact.

Further information

For R&D use only. Not for drug, household or other uses.

WARRANTY:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Lookchem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.



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