ChemicalBook

# Chemical Safety Data Sheet MSDS / SDS

# Ethyl ziram

Revision Date:2024-03-30 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### Product identifier

| | |
|---|---|
| Product name | : Ethyl ziram |
| CBnumber | : CB2176910 |
| CAS | : 14324-55-1 |
| EINECS Number | : 238-270-9 |
| Synonyms | : ETHAZATE,ZDC |

### Relevant identified uses of the substance or mixture and uses advised against

| | |
|---|---|
| Relevant identified uses | : For R&D use only. Not for medicinal, household or other use. |
| Uses advised against | : none |

### Company Identification

| | |
|---|---|
| Company | : Chemicalbook |
| Address | : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing |
| Telephone | : 400-158-6606 |

## SECTION 2: Hazards identification

### GHS Label elements, including precautionary statements

Symbol(GHS)

Signal word Warning

**Precautionary statements**

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

P262 Do not get in eyes, on skin, or on clothing.

P264 Wash hands thoroughly after handling.

P264 Wash skin thouroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P391 Collect spillage. Hazardous to the aquatic environment

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

P405 Store locked up.

P501 Dispose of contents/container to.....

**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

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

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## SECTION 3: Composition/information on ingredients

### Substance

| | |
|---|---|
| Product name | : Ethyl ziram |
| Synonyms | : ETHAZATE,ZDC |
| CAS | : 14324-55-1 |
| EC number | : 238-270-9 |
| MF | : C10H20N2S4Zn |
| MW | : 361.93 |

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## SECTION 4: First aid measures

### Description of first aid measures

**General advice**

Show this material safety data sheet to the doctor in attendance.

**If inhaled**

After inhalation: fresh air. Call in physician.

**In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

**In case of eye contact**

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

**If swallowed**

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

## SECTION 5: Firefighting measures

### Extinguishing media

**Suitable extinguishing media**

Water Foam Carbon dioxide (CO2) Dry powder

**Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

### Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NOx) Sulfur oxides Zinc/zinc oxides

Not combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

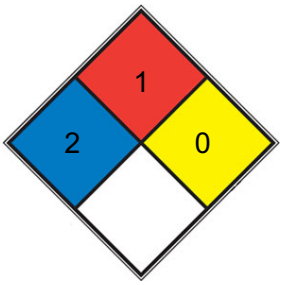
### Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

### NFPA 704




| | | | |
|---|---|---|---|
| ■ | HEALTH | 2 | Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. diethyl ether, ammonium phosphate, iodine) |
| ■ | FIRE | 1 | Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. mineral oil, ammonia) |
| ■ | REACT | 0 | Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,N2) |
| □ | SPEC. HAZ. | | |

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### Precautions for safe handling

For precautions see section 2.2.

### Conditions for safe storage, including any incompatibilities

### Storage conditions

Tightly closed. Dry.

### Specific end use(s)

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

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## SECTION 8: Exposure controls/personal protection

### control parameter

#### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

### Exposure controls

#### Personal protective equipment

**Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

**Skin protection**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested:KCL 741 Dermatril? L

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested:KCL 741 Dermatril? L

**Body Protection**

protective clothing

**Respiratory protection**

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P2

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

**Control of environmental exposure**

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

| | |
|---|---|
| Appearance | white powder |
| Odour | No data available |
| Odour Threshold | No data available |
| pH | No data available |
| Melting point/freezing point | Melting point/range: 178 - 181 °C - lit. |
| Initial boiling point and boiling range | 301 °C at 1.013 hPa - Regulation (EC) No. 440/2008, Annex, A.2 |
| Flash point | 204°(400°F) |
| Evaporation rate | No data available |
| Flammability (solid, gas) | The product is not flammable. - Flammability (solids) |
| Upper/lower flammability or explosive limits | No data available |
| Vapour pressure | No data available |
| Vapour density | No data available |
| Relative density | 1.48 |
| Water solubility | 0,00106 g/l at 20 °C - OECD Test Guideline 105 |
| Partition coefficient: n-octanol/water | No data available |
| Autoignition temperature | does not ignite |
| Decomposition temperature | No data available |
| Viscosity | Viscosity, kinematic: No data available Viscosity, dynamic: No data available |

| | |
|---|---|
| Explosive properties | No data available |
| Oxidizing properties | No data available |

### Other safety information

No data available

## SECTION 10: Stability and reactivity

### Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### Possibility of hazardous reactions

No data available

### Conditions to avoid

no information available

### Incompatible materials

Oxidizing agents

### Hazardous decomposition products

In the event of fire: see section 5

## SECTION 11: Toxicological information

### Information on toxicological effects

**Acute toxicity**

LD50 Oral - Rat - male - 1.960 mg/kg

Remarks: (ECHA)

LD50 Dermal - Rabbit - > 2.000 mg/kg Remarks: (ECHA)

**Skin corrosion/irritation**

Causes skin irritation. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Moderate eye irritation - 24 h

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Respiratory or skin sensitization**

May cause allergic skin reaction. Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

**Germ cell mutagenicity**

Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476

Result: negative

Test Type: Chromosome aberration test in vitro Test system: Human lymphocytes

Metabolic activation: with and without metabolic activation Method: US-EPA

Result: positive

Test Type: unscheduled DNA synthesis assay Species: Rat

Cell type: Liver cells Application Route: Oral

Result: Positive results were obtained in some in vivo tests. Remarks: (ECHA)

Test Type: Micronucleus test Species: Mouse

Cell type: Red blood cells (erythrocytes) Application Route: Oral

Method: OECD Test Guideline 475 Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

Inhalation - May cause respiratory irritation. - Lungs

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Oral - May cause damage to organs through prolonged or repeated exposure. - Liver, spleen

**Aspiration hazard**

No data available

**Toxicity**

LD50 orl-rat: 3340 mg/kg 28ZPAK -,11,72

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## SECTION 12: Ecological information

### Toxicity

**Toxicity to fish**

static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,23 mg/l

- 96 h (US-EPA)

**Toxicity to daphnia and other aquatic invertebrates**

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

(OECD Test Guideline 202)

**Toxicity to algae**

static test ErC50 - Pseudokirchneriella subcapitata - 0,047 mg/l - 72 h

(OECD Test Guideline 201)

**Toxicity to bacteria**

static test EC50 - activated sludge - 170 mg/l - 3 h (OECD Test Guideline 209)

### Persistence and degradability

No data available

### Bioaccumulative potential

No data available

### Mobility in soil

No data available

### Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### Waste treatment methods

### Product

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14: Transport information

### UN number

ADR/RID: 3077 IMDG: 3077 IATA: 3077

### UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc bis(diethyldithiocarbamate))

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc bis(diethyldithiocarbamate))

IATA: Environmentally hazardous substance, solid, n.o.s. (Zinc bis(diethyldithiocarbamate))

14.3 Transport hazard class(es)

ADR/RID: 9 IMDG: 9 IATA: 9

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: yes

### 14.6 Special precautions for user Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

## SECTION 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

**Regulations on the Safety Management of Hazardous Chemicals**

China Catalog of Hazardous chemicals 2015:Not Listed. website: https://www.mem.gov.cn/

**Measures for Environmental Management of New Chemical Substances**

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: https://emb.gov.ph/

Korea Existing Chemicals List (KECL):Listed. website: http://ncis.nier.go.kr

EC Inventory:Listed.

New Zealand Inventory of Chemicals (NZIoC):Listed. website: https://www.epa.govt.nz/

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: https://echa.europa.eu/

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: https://www.epa.gov/

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: https://www.mee.gov.cn/

Vietnam National Chemical Inventory:Listed. website: https://chemicaldata.gov.vn/

## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

【1】CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

【2】ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

【3】ECHA - European Chemicals Agency, website: https://echa.europa.eu/

【4】eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

【5】ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg

【6】Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp

【7】HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

【8】IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/

【9】IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home

【10】Sigma-Aldrich, website: https://www.sigmaaldrich.com/

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