

Chemical Safety Data Sheet MSDS / SDS

ETHIOFENCARB

Revision Date:2024-12-21 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking**Product identifier**

Product name : ETHIOFENCARB
CBnumber : CB0140940
CAS : 29973-13-5
EINECS Number : 249-981-9
Synonyms : Ethiofencarb

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**Classification of the substance or mixture**

Acute toxicity - Category 4, Oral
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

Label elements**Pictogram(s)**

☐

Signal word : Warning

Hazard statement(s)

H302 Harmful if swallowed
H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

P273 Avoid release to the environment.
P501 Dispose of contents/container to.....

Prevention

P264 Wash ... thoroughly after handling.

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

P273 Avoid release to the environment.

Response

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

P391 Collect spillage.

Storage

none

Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards

no data available

SECTION 3: Composition/information on ingredients

Substance

Product name	: ETHIOFENCARB
Synonyms	: Ethiofencarb
CAS	: 29973-13-5
EC number	: 249-981-9
MF	: C11H15NO2S
MW	: 225.31

SECTION 4: First aid measures

Description of first aid measures

If inhaled

Refer immediately for medical attention.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention .

Following eye contact

Rinse with plenty of water (remove contact lenses if easily possible).

Following ingestion

Rinse mouth. Refer immediately for medical attention.

Most important symptoms and effects, both acute and delayed

no data available

Indication of any immediate medical attention and special treatment needed

Artificial respiration (via a tracheal tube) should be started at the first sign of respiratory failure and maintained for as long as necessary. Cautious administration of fluids is advised as well as general supportive and symptomatic pharmacological treatment and absolute rest. Carbamate pesticides

SECTION 5: Firefighting measures

Extinguishing media

Use water spray, foam, powder, carbon dioxide.

Specific Hazards Arising from the Chemical

Combustible. Liquid formulations containing organic solvents may be flammable. Gives off irritating or toxic fumes (or gases) in a fire.

Advice for firefighters

Use water spray, foam, powder, carbon dioxide.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Store and dispose of according to local regulations.

Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Store and dispose of according to local regulations.

Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

SECTION 7: Handling and storage

Precautions for safe handling

NO open flames. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

Conditions for safe storage, including any incompatibilities

Provision to contain effluent from fire extinguishing. Separated from food and feedstuffs. Store in an area without drain or sewer access.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

Individual protection measures

Eye/face protection

Wear safety spectacles or eye protection in combination with breathing protection.

Skin protection

Protective gloves.

Respiratory protection

Use local exhaust or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

Physical state	neat
Colour	Colourless crystals.
Odour	Mercaptan-like odor.
Melting point/freezing point	33.4°C
Boiling point or initial boiling point and boiling range	327.3°C at 760mmHg
Flammability	Combustible. Liquid formulations containing organic solvents may be flammable. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit	no data available
Flash point	151.7°C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	In dichloromethane, isopropanol and toluene >200, hexane 5-10 (all in g/l, 20 deg C).
Partition coefficient n-octanol/water	log Kow = 2.04

Vapour pressure	4.5 x 10 ⁻⁴ Pa (20 °C)
Density and/or relative density	1.131g/cm ³
Relative vapour density	no data available
Particle characteristics	no data available

SECTION 10: Stability and reactivity

Reactivity

Decomposes on heating or on burning. This produces toxic and corrosive fumes including nitrogen oxides and sulfur oxides.

Chemical stability

Stable in neutral and acidic media, but hydrolysed in alkaline solution. ...In aqueous solution, photodegradation in sunlight is very rapid.

Possibility of hazardous reactions

Decomposes on heating or on burning. This produces toxic and corrosive fumes including nitrogen oxides and sulfur oxides.

Conditions to avoid

no data available

Incompatible materials

no data available

Hazardous decomposition products

Decomposes on distillation. ...In isopropanol/water (1:1), DT50 (37-40 deg C) 330 days (pH 2), 450 hr (pH 7), 5 min (pH 11.4).

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 Rat oral 200 mg/kg
- Inhalation: LC50 Rat (male and female) inhalation >0.2 mg/L air/4 hr (for aerosol)
- Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

Cholinesterase inhibition. The substance may cause effects on the nervous system. This may result in respiratory depression. The effects may be delayed. Medical observation is indicated.

STOT-repeated exposure

no data available

Aspiration hazard

A harmful concentration of airborne particles can be reached quickly on spraying or when dispersed, especially if powdered.

SECTION 12: Ecological information

Toxicity

Toxicity to fish: LC50 Rainbow trout 12.8 mg/L/96 hr /Conditions of bioassay not specified

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

Persistence and degradability

Five weeks after application of a 10% ¹⁴C-carbonyl-labeled ethiofencarb granular formulation to soil under greenhouse conditions, the metabolites (sulfoxide and sulfone) were found in the soil, and the parent compound was no longer detectable(1). Radiochemical determination of the degradation rate showed that ethiofencarb had a half-life of about 2 weeks under greenhouse conditions(1). Similar rates of degradation were determined under field conditions(1).

Bioaccumulative potential

An estimated BCF of 7.4 was calculated for ethiofencarb(SRC), using a log Kow of 2.04(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC). In addition, ethiofencarb undergoes hydrolysis(4,5) and photolysis(6) in aquatic environments, and bioconcentration is not expected to be a significant fate process(SRC).

Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc for ethiofencarb can be estimated to be 230(SRC). According to a classification scheme(2), this estimated Koc value suggests that ethiofencarb is expected to have moderate mobility in soil.

Other adverse effects

no data available

SECTION 13: Disposal considerations

Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

UN Number

ADR/RID: UN2758 (For reference only, please check.)

IMDG: UN2758 (For reference only, please check.)

IATA: UN2758 (For reference only, please check.)

UN Proper Shipping Name

ADR/RID: CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point less than 23 °C (For reference only, please check.)

IMDG: CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point less than 23 °C (For reference only, please check.)

IATA: CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point less than 23 °C (For reference only, please check.)

Transport hazard class(es)

ADR/RID: 3 (For reference only, please check.)

IMDG: 3 (For reference only, please check.)

IATA: 3 (For reference only, please check.)

Packing group, if applicable

ADR/RID: I (For reference only, please check.)

IMDG: I (For reference only, please check.)

IATA: I (For reference only, please check.)

Environmental hazards

ADR/RID: Yes

IMDG: Yes

IATA: Yes

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

EC Inventory

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Not Listed.

China Catalog of Hazardous chemicals 2015

Listed.

New Zealand Inventory of Chemicals (NZIoC)

Not Listed.

PICCS

Not Listed.

Vietnam National Chemical Inventory

Listed.

IECSC

Not Listed.

Korea Existing Chemicals List (KECL)

Listed.

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

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

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: <http://www.echemportal.org/echemportal/index?>

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CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

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

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

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Other Information

Depending on the degree of exposure, periodic medical examination is suggested. Specific treatment is necessary in case of poisoning with this substance; the appropriate means with instructions must be available. Carrier solvents used in commercial formulations may change physical and toxicological properties. If the substance is formulated with solvents also consult the ICSCs of these materials.

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.