



SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0
Creation Date: July 15, 2019
Revision Date: July 15, 2019

SECTION 1: Identification

1.1 GHS Product identifier

Product name EPTC

1.2 Other means of identification

Product number -
Other names S-Ethyl-N,N-dipropylthiocarbamate; EPTAM; S-ethyl dipropyl(thiocarbamate)

1.3 Recommended use of the chemical and restrictions on use

Identified uses Industrial and scientific research use.
Uses advised against no data available

1.4 Supplier's details

Company Shanghai Yien Chemical Technology Co., Ltd
Address Building 6, 28 Yingong Road, Fengxian District, Shanghai
Chemical Industry Zone, Shanghai, 201400, China
Telephone +86-400-133-2688

1.5 Emergency phone number

Emergency phone number +86-400-133-2688
Service hours Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral

2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word Warning
Hazard statement(s) H302 Harmful if swallowed
Precautionary statement(s)
Prevention P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
Response P301+P317 IF SWALLOWED: Get medical help.

Storage	P330 Rinse mouth.
Disposal	none 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.

2.3 Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
EPTC	EPTC	759-94-4	212-073-8	100%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth. Rest. Refer for medical attention .

4.2 Most important symptoms/effects, acute and delayed

SYMPTOMS: Symptoms of exposure to this compound may include headache, giddiness, nervousness, blurred vision, weakness, nausea, cramps, diarrhea, sweating, miosis, tearing, salivation, vomiting and cyanosis. (NTP, 1992)

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Absorption, Distribution and Excretion

Root absorption of eptc was reported ... in oat ... & in alfalfa. the absorbed eptc was readily moved upward to the foliage. this chemical is also absorbed by the coleoptiles & can be translocated downward to the roots. ... the radiosphulfur from labeled eptc accumulates in growing stem & root tips after the application to the leaves. when the application was made to the roots, the distribution was more uniform.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Fires involving this compound should be controlled with a dry chemical, carbon dioxide or Halon extinguisher. (NTP, 1992)

5.2 Specific hazards arising from the chemical

Flash point data are not available for this chemical, but it is probably combustible. (NTP, 1992)

5.3 Special protective actions for fire-fighters

Use water spray, foam, powder, carbon dioxide.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do NOT wash away into sewer. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

6.2 Environmental precautions

Do NOT wash away into sewer. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

6.3 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

7.1 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.

7.2 Conditions for safe storage, including any incompatibilities

Provision to contain effluent from fire extinguishing. Separated from food and feedstuffs. Ventilation along the floor.... Indefinite storage life under normal ambient conditions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2 Appropriate engineering controls

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

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

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

Skin protection

Protective gloves.

Respiratory protection

Use ventilation, local exhaust or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	PHYSICAL DESCRIPTION: Clear yellow or light yellow liquid. (NTP, 1992)
Colour	Colorless liquid
Odour	Aromatic odor
Melting point/freezing point	no data available
Boiling point or initial boiling point and boiling range	127°C (20 torr)
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	116°C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	less than 0.1 mg/mL at 72.5° F (NTP, 1992)
Partition coefficient n-octanol/water	log Kow = 3.21
Vapour pressure	0.034 mm Hg at 95° F (NTP, 1992)
Density and/or relative density	0.95
Relative vapour density	(air = 1): 6.5
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable under storage conditions.

10.3 Possibility of hazardous reactions

ETHYL DIPROPYLTHIOCARBAMATE may generate flammable gases with aldehydes, nitrides, and hydrides. Incompatible with acids, peroxides, and acid halides.

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

When heated to decomposition it emits very toxic fumes of /nitrogen oxides and sulfur oxides/.

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 Rat male albino oral 2550 mg/kg
- Inhalation: no data available
- 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

Cancer Classification: Not Likely to be Carcinogenic to Humans

Reproductive toxicity

no data available

STOT-single exposure

The substance may cause effects on the central nervous system.

STOT-repeated exposure

no data available

Aspiration hazard

A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C; on spraying or dispersing, however, much faster.

SECTION 12: Ecological information**12.1 Toxicity**

- Toxicity to fish: LC50 *Salmo gairdneri* (Rainbow trout) 19 ppm/96 hr /Conditions of bioassay not specified/ /Technical eptam
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

12.2 Persistence and degradability

AEROBIC: Radio-labeled eptam (initial concn of 2 ppm) was incubated at 25 deg C and pH 5.3 in sludge- and manure-amended soils; after a 60 day test period, 65-66 and 62-65% ¹⁴C-carbon dioxide evolution was observed, respectively(1). In a heavy silt loam, heavy silt and fine sandy loam which all had 3-4 yrs previous exposure to eptam, about 100% (initial concn not given) degradation was observed after 12-15 days. In the same time period, about 10-20% loss of eptam was noted in sterile soil samples(2); this may have been due to volatilization. In a heavy silt loam, heavy silt and fine sandy loam which had no previous exposure to eptam, about 100%, 20% and 20% (initial concn not given) degradation was observed after 12, 15 and 15 days, respectively(2). In a sandy loam soil (pH 6) incubated at 28 deg C, 93% and 68% carbon dioxide production was observed after 30 days for concns of 150 and 1500 ppm eptam(3). Laboratory tests to measure the aerobic soil degradation rates of eptam indicated half-lives of 36 to 75 days(4). The rate of eptam degradation decreases with time(4).

12.3 Bioaccumulative potential

The bioaccumulation and elimination of ¹⁴C-EPTC by bluegill sunfish was investigated in a dynamic flow-through system, where the fish were exposed for 28 days to radiolabeled ¹⁴C-eptam at 22 deg C, followed by depuration in EPTC free water for 14 days(1). Bioconcentration factors were 37, 60, and 110, respectively, in the edible, whole fish, and non-edible fish tissues(1). According to a classification scheme(2), the whole-fish BCF value suggests the potential for bioconcentration in aquatic organisms is moderate(SRC).

12.4 Mobility in soil

The avg Koc of eptam is 200; and measured values of Koc range from 170-280(1). Experimentally-determined Kocs are: 283 in soil with 1.0-4.5% organic content and 109 in soil with 30% organic content(2). Koc values for eptam were measured for 4 soil series with various organic matter (OM%) levels(1): e.g., Atterberry (2.2%), Columbia (1.1%), Keeton (0.3%), and Sorrento (1.8%); the Koc values were 136, 146, 264, and 143, respectively(3). According to a classification scheme(4), these Koc values suggest that eptam is expected to have moderate to high mobility in soil(SRC). Eptam has low affinity for binding to soil suggesting a potential to leach to groundwater(3).

12.5 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 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

14.1 UN Number

ADR/RID: UN2902 (For reference only, please check.)

IMDG: UN2902 (For reference only, please check.)

IATA: UN2902 (For reference only, please check.)

14.2 UN Proper Shipping Name

ADR/RID: PESTICIDE, LIQUID, TOXIC, N.O.S. (For reference only, please check.)

IMDG: PESTICIDE, LIQUID, TOXIC, N.O.S. (For reference only, please check.)

IATA: PESTICIDE, LIQUID, TOXIC, N.O.S. (For reference only, please check.)

14.3 Transport hazard class(es)

ADR/RID: 6.1 (For reference only, please check.)

IMDG: 6.1 (For reference only, please check.)

IATA: 6.1 (For reference only, please check.)

14.4 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.)

14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

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

Chemical name	Common names and synonyms	CAS number	EC number
EPTC	EPTC	759-94-4	212-073-8
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Not Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Not Listed.
Korea Existing Chemicals List (KECL)			Not Listed.

SECTION 16: Other information

Information on revision

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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?pageID=0&request_locale=en
- 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

If the substance is formulated with solvents also consult the ICSCs of these materials. Carrier solvents used in commercial formulations may change physical and toxicological properties. The relation between odour and the occupational exposure limit cannot be indicated.

Any questions regarding this SDS, Please send your inquiry to sds@xixisys.com

Disclaimer: 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. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.