Safety Data Sheet

According to the UN GHS revision 8

Creation Date: May 07, 2026
Revision Date: May 07, 2026

1. IDENTIFICATION

1.1 GHS Product identifier

Product name: Propoxur

Catalog Number: T0976

CAS Number: 114-26-1

1.2 Other means of identification

Other names: -

1.3 Recommended use of the chemical and restrictions on use

Identified uses: no data available

1.4 Supplier's details

Company: Targetmol Chemicals Inc.

Address: 34 Washington Street, Wellesley Hills, Massachusetts 02481 USA

Tel/Fax: (781) 999-4286

1.5 Emergency phone number

Emergency phone number: 781-999-4286

Service hours: Monday to Friday, 9am-5pm (Standard timezone: UTC/GMT -5 hours).

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Acute toxicity - Category 3, Oral
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

2.2 GHS label elements, including precautionary statements

Pictogram(s):

Signal word: Danger

Hazard statement(s):
H301 Toxic if swallowed
H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s):

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+P316 IF SWALLOWED: Get emergency medical help immediately.
P321 Specific treatment (see ... on this label).
P330 Rinse mouth.
P391 Collect spillage.

Storage: P405 Store l°Cked up.

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.

2.3 Other hazards which do not result in classification

no data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number
Propoxur	-	114-26-1	204-043-8

4. FIRST-AID MEASURES

4.1 Description of necessary first-aid measures

General advice

no data available

If inhaled

Fresh air, rest. Half-upright position. Refer for medical attention. See Notes.

Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention .

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

Give a slurry of activated charcoal in water to drink. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Rest. Refer for medical attention . See Notes.

4.2 Most important symptoms/effects, acute and delayed

Container identification is important to determine appropriate therapeutic measures, since the vehicle (eg, hydr°Carbon, methanol) may be as toxic as the insecticide. ...

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

Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact Symptoms: Miosis, blurred vision; sweating, salivation; abdominal cramps, nausea, diarrhea, vomiting; headache, lassitude (weakness, exhaustion), muscle twitching Target Organs: central nervous system, liver, kidneys, gastrointestinal tract, blood cholinesterase (NIOSH, 2016)

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Use dry chemical, carbon dioxide, water spray, or alcohol foam extinguishers ... If material or contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Notify l°Cal health and fire officials and pollution control agencies. From a secure, explosion-proof l°Cation, use water spray to cool exposed containers. If cooling streams are ineffective (venting sound increases in volume and pitch, tank discolors or shows any signs of deforming), withdraw immediately to a secure position ... The only respirators recommended for fire fighting are self-contained breathing apparatuses that have full facepieces and are operated in a pressure-demand or other positive-pressure mode.

5.2 Specific hazards arising from the chemical

Excerpt from ERG Guide 151 [Substances - Toxic (Non-combustible)]: Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Containers may explode when heated. Runoff may pollute waterways. (ERG, 2016)

5.3 Special protective actions for fire-fighters

Use water spray, foam, powder, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal protection: chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Sweep spilled substance into sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to l°Cal regulations.

6.2 Environmental precautions

Personal protection: complete protective clothing including self-contained breathing apparatus. Do NOT wash away into sewer. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to l°Cal regulations.

6.3 Methods and materials for containment and cleaning up

Evacuate persons not wearing protective equipment from area of spill or leak until cleanup is complete. Remove all ignition sources. Collect powdered material in the most convenient and safe manner and deposit in sealed containers. Ventilate area after cleanup is complete. It may be necessary to contain and dispose of this chemical as a hazardous waste. If material or contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Contact your Department of Environmental Protection or your regional office of the federal EPA for specific recommendations.

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. Keep in a well-ventilated room.Store in original container, preferably in l°Cked area, away from children, food, feed.
Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values

TLV: 0.5 mg/m3, as TWA; A3 (confirmed animal carcinogen with unknown relevance to humans); BEI issued.MAK: (inhalable fraction): 2 mg/m3; peak limitation category: II(8)

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 if powder.

Skin protection

Protective gloves. Protective clothing.

Respiratory protection

Use l°Cal exhaust or breathing protection.

Thermal hazards

no data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid
Color	no data available
Odour	Odorless
Melting point/freezing point	91°C

Boiling point or initial boiling point and boiling range	295.4°C at 760mmHg
Flammability	Class IIIB Combustible Liquid: Fl.P. at or above 200°F.
Lower and upper explosion limit/flammability limit	no data available
Flash point	132.5°C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	DMSO: 50 mg/mL (238.96 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
N-octanol-water partition coefficient	log Kow = 1.52
Vapour pressure	0.00153mmHg at 25°C
Density and/or relative density	1.082g/cm3
Relative vapour density	no data available
Particle characteristics	no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Decomposes on heating and on burning. This produces toxic fumes including methyl is°Cyanate and nitrogen oxides.

10.2 Chemical stability

Hydrolized by strong alkali; 50% loss @ 20 deg C in 40 min @ pH 10

10.3 Possibility of hazardous reactions

PROPOXUR is incompatible with the following: Strong oxidizers, alkalis [Note: Emits highly toxic methyl is°Cyanate fumes when heated to decomposition.] (NIOSH, 2016).

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Believed compatible with most insecticides, fungicides, except alkalines.

10.6 Hazardous decomposition products

When heated to decomposition it emits toxic fumes of /nitrogen oxide/.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral: LD50 Rat acute oral 95 to 104 mg/kg
Inhalation: LC50 Rat inhalation >0.5 mg/L/4 hr (aerosol); >0.654 mg/L air/4 hr (dust)
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: Group B2 Probable Human Carcinogen

Reproductive toxicity

No information is available on the reproductive or developmental effects of propoxur in humans. No adverse reproductive or developmental effects were observed in an oral study of rabbits exposed to propoxur. In a few studies of rats orally exposed to propoxur, fetotoxic effects, decreased numbers of pups, and depressed fetal weight have been reported.

STOT-single exposure

The substance may cause effects on the nervous system by a cholinesterase inhibiting effect. This may result in convulsions and respiratory depression. Exposure could cause death.

STOT-repeated exposure

Cholinesterase inhibition. Cumulative effects are possible. See Acute Hazards/Symptoms. Tumours have been detected in experimental animals but may not be relevant to humans.

Aspiration hazard

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

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish: LC50; Species: Pimephales promelas (Fathead minnow); Conditions: flow-through bioassay with measured concentrations, 22.5 deg C, dissolved oxygen 7.5 mg/L, hardness 45.4 mg/L CaCO3, alkalinity 40.0 mg/L CaCO3, pH 7.6; Concentration: 8.8 mg/L for 96 hr (confidence limit 7.4 - 10.5 mg/L)
Toxicity to daphnia and other aquatic invertebrates: EC50; Species: Daphnia magna (Water flea); Conditions: freshwater, static; Concentration: 11 ug/L for 48 hr (95% confidence interval: 9-12 ug/L); Effect: intoxication, immobilization /98.8% purity
Toxicity to algae: EC50; Species: Pseudokirchneriella subcapitata (Green algae); Conditions: freshwater, static, 24 deg C; Concentration: 2848.4 ug/L for 96 hr; Effect: decreased population biomass /95% purity
Toxicity to microorganisms: no data available

12.2 Persistence and degradability

AEROBIC: The primary mode of biodegradation for propoxur appears to be hydrolysis of the carbamate linkage(1). The biodegradation of propoxur under aerobic conditions in silt loam and sandy loam soils followed first order kinetics for the first 112 and 180 days, respectively(1). The half-life values were 80 days for the silt loam and 210 days for the sandy loam(1). Propoxur was the major extractable residue found in the studies(1). One day after propoxur was applied to a sandy loam soil with no history of insecticidal treatment, 94% remained(2). However, when soil was previously treated four times with carbofuran (a methylcarbamate), only 20% of the propoxur remained after 1 day; this shows that acclimation markedly affects the rate of biodegradation of propoxur in soil(2). In another laboratory study, the biodegradation half-life of propoxur in Montardon soil, not previously treated with carbofuran, was 146 days, while in previously treated soil, the half-life was 9.3 days(3). Propoxur is reported to biodegrade quite rapidly in water, particularly when the bacterial activity and temperature are high(4). In a biodegradation test which used a combination of activated sludge, silt loam soil, and sediment as an in°Culum, the half-life of propoxur was 44 days under aerobic conditions(5). When glucose and peptone was added as a source of carbon and energy, the half-life decreased to 19 days under aerobic conditions(5). Using a mixture of non-acclimated sludge, field soil, and river sediment as in°Culum, the aerobic biodegradation half-life was 0.6 day at an initial concentration of 2 ppm at 18-22 deg C(6).

12.3 Bioaccumulative potential

An estimated BCF of 5 was calculated in fish for propoxur(SRC), using log Kow of 1.52(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bi°Concentration in aquatic organisms is low(SRC).

12.4 Mobility in soil

The K°C of propoxur ranges from <1 to 103(1,2). In batch equilibrium studies, propoxur was very mobile, with K°C values of 3.4, 11.2, and 102.6 for sandy loam, silt loam, and silty clay soils, respectively(2). In other studies, K°C values ranged from 28-68, and for silt loam, sandy loam, sand, and clay loam soils, the K°C values were 39 (Kd = 0.597, 2.9 %OM, pH 5.9), 0.76 (Kd = 0.004, 1.1 %OM, pH 6.6), 34 (Kd = 0.181, 1.0 %OM, pH 4.3), and 28 (Kd = 0.329, 2.2 %OM, pH 6.4), respectively(1). According to a classification scheme(3), these K°C values suggest that propoxur has very high to high mobility in soil(SRC). In soil thin-layer mobility studies on six soils, propoxur was found to be mobile, with Rf values of 0.70 to 0.89(2).

12.5 Other adverse effects

no data available

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.

14. TRANSPORT INFORMATION

14.1 UN Number

no data available

14.2 UN Proper Shipping Name

no data available

14.3 Transport hazard class(es)

no data available

14.4 Packing group, if applicable

no data available

14.5 Environmental hazards

no data available

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

15. REGULATORY INFORMATION

15.1 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	Not Listed.
New Zealand Inventory of Chemicals (NZIoC)	Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed.
Vietnam National Chemical Inventory	Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Not Listed.
Korea Existing Chemicals List (KECL)	Listed.

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_l°Cale=en
CAMEO Chemicals, website: http://came°Chemicals.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

Decomposition of compound starts at 220°C.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.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.
