

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 05 Jun 2023

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

1.1. Product name:

Fenchlorphos

1.1. Catalog No.:

678223

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

HPC Standards GmbH
Am Wieseneck 7

04451 Cunnersdorf
Deutschland

Tel. +49 34291 3372-36
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contact@hpc-standards.com

1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
Regulation (EC) No 1272/2008
Acute toxicity - Oral Category 4 - (H302)
Acute toxicity - Dermal Category 3 - (H311)
Acute aquatic toxicity Category 1 - (H400)
Chronic aquatic toxicity Category 1 - (H410)

2.2. Label elements

2.2.1. Pictogram



2.2.2.

2.2. Label elements
Signal word
Danger

Hazard statements

H302 - Harmful if swallowed

H311 - Toxic in contact with skin

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P264 - Wash face, hands and any exposed skin thoroughly after handling

P273 - Avoid release to the environment

P280 - Wear protective gloves and protective clothing

P321 - Specific treatment (see supplemental first aid instructions on this label)

P391 - Collect spillage

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

No information available.

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

Chemical name: Fenchlorphos

EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation: -

EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances: -

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name: Fenchlorphos 299-84-3

Weight-%: 100

REACH registration number: -

EC No: 206-082-6

Classification according to Regulation (EC) No. 1272/2008 [CLP]: Acute Tox. 3 (H311) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

Specific concentration limit (SCL):

M-Factor

M-Factor (long-term)

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATE_{mix}) for classifying a mixture based on its components

Chemical name: Fenchlorphos 299-84-3

Oral LD50 mg/kg: 625

Dermal LD50 mg/kg: 1600

Inhalation LC50 - 4 hour - dust/mist - mg/L: No data available

Inhalation LC50 - 4 hour - vapour - mg/L: No data available

Inhalation LC50 - 4 hour - gas - ppm: No data available

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

3.1.1. Formula

C₈H₈Cl₃O₃PS

3.1.2. Molecular Weight (g/mol)

321.55

3.1.3. CAS-No.

299-84-3

4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation Remove to fresh air.

Eye contact Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.

Ingestion Get immediate medical advice/attention. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person.

Self-protection of the first aider Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8).

4.2. Most important symptoms and effects, both acute and delayed

Symptoms No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Take off contaminated clothing and wash it before reuse. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Please refer to the manufacturers certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA.

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits

Chemical name: Fenchlorphos 299-84-3

European Union: -

Austria: TWA: 5 mg/m3 STEL 10 mg/m3 H*

Belgium: TWA: 5 mg/m3 TWA: 0.4 ppm

Bulgaria: -

Croatia: -

Cyprus: -

Czech Republic: -

Denmark: TWA: 5 mg/m3

Estonia: -

Finland: -

France: TWA: 10 mg/m3

Germany: -

Germany MAK: -

Greece: TWA: 10 mg/m3

Hungary: -

Ireland: TWA: 5 mg/m3 STEL: 15 mg/m3

Italy: -

Italy REL: TWA: 5 mg/m3

Latvia: -

Lithuania: -

Luxembourg: -

Malta: -
Netherlands: -
Norway: TWA: 5 mg/m³ STEL: 10 mg/m³
Poland: -
Portugal: TWA: 5 mg/m³
Romania: -
Slovakia: -
Slovenia: -
Spain: TWA: 5 mg/m³
Sweden: -
Switzerland: TWA: 10 mg/m³
United Kingdom: -
Biological occupational exposure limits
Chemical name: Fenchlorphos 299-84-3
European Union: -
Austria: -
Bulgaria:
50 % of the reference value for the person - erythrocytes (Acetyl-cholinesterase) - at the end of exposure or end of work shift, for prolonged exposure
- after several work shifts 30 % on the average for the group of exposed persons - erythrocytes (Acetyl-cholinesterase) - at the end of exposure or end of work shift, for prolonged exposure - after several work shifts
Croatia:
30 % inhibition - blood (Acetyl cholinesterase activity) - at the end of the work shift 30 % inhibition - erythrocytes (Acetyl cholinesterase activity) - at the end of the work shift
Czech Republic: -
Denmark: -
Finland: -
France: 70 % of baseline - erythrocytes (Cholinesterase activity) - discretionary
Germany: 70 % (erythrocytes - Acetylcholinesterase end of shift) 70 % (erythrocytes - Acetylcholinesterase for long-term exposures: at the end of the shift after several shifts) 70 % - BAT (end of exposure or end of shift) erythrocytes 70 % - BAT (for long-term exposures: at the end of the shift after several shifts) erythrocytes
Germany: 70 % (erythrocytes - Acetylcholinesterase end of shift) 70 % (erythrocytes - Acetylcholinesterase for long-term exposures: at the end of the shift after several shifts)
Hungary: -
Ireland: 70 % of baseline (red blood cells - Cholinesterase activity discretionary)
Italy: -
Italy REL: 60 % of baseline - plasma (Butyrylcholinesterase activity) - end of shift 70 % of baseline - red blood cells (Cholinesterase activity) - discretionary
Slovenia: - erythrocyte fraction of whole blood (Acetylcholinesterase) - at the end of the work shift; for long-term exposure: at the end of the work shift after several consecutive workdays
Spain: 70 % of baseline (blood - Erythrocyte cholinesterase discretionary)
Switzerland: -
United Kingdom: -
Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC)
No information available.
8.2. Exposure controls
Personal protective equipment
Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles).
Hand protection Impervious gloves. Wear suitable gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear protective nitrile rubber or Viton(TM) gloves.
Skin and body protection Wear suitable protective clothing. Chemical resistant apron. Long sleeved clothing.
Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.
Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties
Physical state Solid
Appearance Crystalline
Colour off-white
Odour No information available.

Odour threshold No information available
Property Values Remarks o Method
Melting point / freezing point 41 °C None known
Initial boiling point and boiling range 97 °C None known
Flammability No data available None known
Flammability Limit in Air None known
Upper flammability or explosive limits
No data available
Lower flammability or explosive limits
No data available
Flash point No data available None known
Autoignition temperature No data available None known
Decomposition temperature None known
pH No data available None known
pH (as aqueous solution) No data available No information available
Kinematic viscosity No data available None known
Dynamic viscosity No data available None known
Water solubility No data available None known
Solubility(ies) Acetone, Chloroform, Toluene
Partition coefficient 4.88 None known
Vapour pressure No data available None known
Relative density 1.485 @ 25 °C
Bulk density No data available
Liquid Density No data available
Relative vapour density No data available None known
Particle characteristics
Particle Size No information available
Particle Size Distribution No information available
9.2. Other information
Molecular weight 321.54
Molecular formula C₈ H₈ Cl₃ O₃ P S
9.2.1. Information with regards to physical hazard classes
Not applicable
9.2.2. Other safety characteristics
No information available

10. STABILITY AND REACTIVITY

10.1. Reactivity
Reactivity No information available.
10.2. Chemical stability
Stability Stable under normal conditions.
Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.
10.3. Possibility of hazardous reactions
Possibility of hazardous reactions None under normal processing.
10.4. Conditions to avoid
Conditions to avoid None known based on information supplied.
10.5. Incompatible materials
Incompatible materials None known based on information supplied.
Hazardous decomposition products None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Information on likely routes of exposure
Product Information

Inhalation Specific test data for the substance or mixture is not available.
Eye contact Specific test data for the substance or mixture is not available.
Skin contact Specific test data for the substance or mixture is not available. Toxic in contact with skin.
(based on components).
Ingestion Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).
Symptoms related to the physical, chemical and toxicological characteristics
Symptoms No information available.
Numerical measures of toxicity
Acute toxicity
Component Information
Chemical name: Fenchlorphos
Oral LD50 = 625 mg/kg (Rat)
Dermal LD50 = 1 gm/kg (Rabbit)
Inhalation LC50
Delayed and immediate effects as well as chronic effects from short and long-term exposure
Skin corrosion/irritation Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation No information available.
Respiratory or skin sensitisation No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.
Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.
11.2. Information on other hazards
11.2.1. Endocrine disrupting properties
Endocrine disrupting properties
11.2.2. Other information
Other adverse effects No information available.

12. ECOLOGICAL INFORMATION

12.1. Toxicity
Ecotoxicity Very toxic to aquatic life with long lasting effects.
Chemical name: Fenchlorphos
Algae/aquatic plants: -
Fish: LC50: 0.171 mg/l (Freshwater fish, 96h)
Toxicity to microorganisms: -
Crustacea: EC50: 0.0052 mg/l (Crustacean, 48h)
12.2. Persistence and degradability
Persistence and degradability No information available.
12.3. Bioaccumulative potential
Bioaccumulation There is no data for this product.
Component Information
Chemical name: Fenchlorphos
Partition coefficient: 4.88
12.4. Mobility in soil
Mobility in soil No information available.
12.5. Results of PBT and vPvB assessment
PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.
12.6. Endocrine disrupting properties
Endocrine disrupting properties No information available.
12.7. Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste from residues/unused

products

Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

IATA

14.1 UN number or ID number UN2783

14.2 UN proper shipping name Organophosphorus pesticide, solid, toxic (Fenchlorphos (ISO))

14.3 Transport hazard class(es) 6.1

14.4 Packing group III

Description UN2783, Organophosphorus pesticide, solid, toxic (Fenchlorphos (ISO)), 6.1, III

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions A3, A5

ERG Code 6L

IMDG

14.1 UN number or ID number UN2783

14.2 UN proper shipping name Organophosphorus pesticide, solid, toxic (Fenchlorphos (ISO))

14.3 Transport hazard class(es) 6.1

14.4 Packing group III

Description UN2783, Organophosphorus pesticide, solid, toxic (Fenchlorphos (ISO)), 6.1, III, Marine pollutant

14.5 Marine pollutant P

Environmental hazards Yes

14.6 Special precautions for user

Special Provisions 61, 223, 274

EmS-No F-A, S-A No information available

14.7 Maritime transport in bulk

according to IMO instruments

No information available

RID

14.1 UN number or ID number UN2783

14.2 UN proper shipping name Organophosphorus pesticide, solid, toxic (Fenchlorphos (ISO))

14.3 Transport hazard class(es) 6.1

14.4 Packing group III

Description UN2783, Organophosphorus pesticide, solid, toxic (Fenchlorphos (ISO)), 6.1, III,

Environmentally Hazardous

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions 61, 274, 648

Classification code T7

ADR

14.1 UN number or ID number UN2783

14.2 UN proper shipping name Organophosphorus pesticide, solid, toxic (Fenchlorphos (ISO))

14.3 Transport hazard class(es) 6.1

14.4 Packing group III

Description UN2783, Organophosphorus pesticide, solid, toxic (Fenchlorphos (ISO)), 6.1, III, (E),

Environmentally Hazardous

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions 61, 274, 648

Classification code T7

Tunnel restriction code (E)

15. REGULATORY INFORMATION

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name: Fenchlorphos 299-84-3

French RG number: RG 34

Title: -

Water hazard class (WGK) strongly hazardous to water (WGK 3)

Poland SDS created according to the following Polish regulation: Act of February 25, 2011 on chemical substances and their mixtures (Journal of Laws of 2018, item 143, as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency (EC) as amended. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, as amended. Regulation of the Minister of Health of 10 August 2012 on the criteria and method of classifying chemical substances and their mixtures (Journal of Laws of 2012, item 1018). Regulation of the Minister of Health of 20 April 2012 on labeling packaging of hazardous substances and mixtures and some mixtures (Journal of Laws of 2012, item 445). Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018 on the maximum allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286). Announcement of the Minister of Economy, Labor and Social Policy of August 28, 2003 on the publication of the unified text of the Ordinance of the Minister of Labor and Social Policy on general health and safety at work regulations (Journal of Laws of 2003, No. 169, item 1650). Regulation of the Minister of Health of 30 December 2004 on occupational safety and health related to the presence of chemical agents in the workplace (Journal of Laws of 2005, No. 11, item 86). Act of December 14, 2012 on waste (Journal of Laws of 2013, item 21) Regulation of the Minister of Health of December 30, 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal U. of 2005, No. 11, item 86). Waste Act of December 14, 2012 (Journal of Laws of 2013, item 21). Act of 13 June 2013 on the management of packaging and packaging waste, Journal of Laws 2013, item 888). Government statement of September 24, 2002 - European Agreement on the International Carriage of Dangerous Goods by Road (ADR) (Journal of Laws No. 194, item 1629 and Journal of Laws of 2003, No. 207, item 2013 and 2014).

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

This

product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors

Not applicable

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA Contact supplier for inventory compliance status

DSL/NDL Contact supplier for inventory compliance status

EINECS/ELINCS Contact supplier for inventory compliance status

ENCS Contact supplier for inventory compliance status

IECSC Contact supplier for inventory compliance status

KECL Contact supplier for inventory compliance status

PICCS Contact supplier for inventory compliance status

AIC Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment is not required for this substance

16. OTHER INFORMATION

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. For lab use only!