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Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 09 Sep 2024

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

1.1. Product name:

Chlorthion

1.1. Catalog No.:

680635

1.2. Relevant identified uses of the substance or mixture

Identified uses: Laboratory chemical
R&D

1.3. Uses advised against:

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1.4. Emergency telephone number

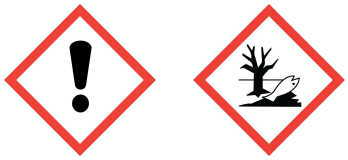
HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 4), H312
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
Labelling according Regulation (EC) No 1272/2008

Signal word Warning
Hazard statement(s)
H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled
H410 Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing.
P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P501 Dispose of contents/ container to an approved waste disposal plant.
Supplemental Hazard Statements none
2.3 Other hazards
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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Formula : C8H9ClNO5PS
Molecular weight : 297.65 g/mol
CAS-No. : 500-28-7
EC-No. : 207-902-5
Index-No. : 015-042-00-5
Hazardous ingredients according to Regulation (EC) No 1272/2008
Component Classification Concentration
O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate
CAS-No. 500-28-7
EC-No. 207-902-5
Index-No. 015-042-00-5
Acute Tox. 4; Aquatic Acute 1; Aquatic Chronic 1; H302, H332, H312, H400, H410
M-Factor - Aquatic Acute: 100
- Aquatic Chronic: 100
<= 100 %

3.1.1. Formula

C8H9ClNO5PS

3.1.2. Molecular Weight (g/mol)

297.65

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3.1.3. CAS-No.

500-28-7

4. FIRST AID MEASURES

4.1 Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact
Flush eyes with water as a precaution.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 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
4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2 Special hazards arising from the substance or mixture
Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides, Oxides of phosphorus, Hydrogen chloride gas
5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.
6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
6.4 Reference to other sections
For disposal see section 13.

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7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature 2 - 8 °C
Storage class (TRGS 510): Combustible Solids
7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
Personal protective equipment
Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
Wash and dry hands.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
a) Appearance Form: solid
Colour: yellow
b) Odour No data available
c) Odour Threshold No data available
d) pH No data available
e) Melting point/freezing point No data available
f) Initial boiling point and boiling range No data available
g) Flash point No data available
h) Evaporation rate No data available
i) Flammability (solid, gas) No data available
j) Upper/lower flammability or explosive limits No data available
k) Vapour pressure No data available
l) Vapour density No data available
m) Relative density 1.433 g/cm3 at 20 °C
n) Water solubility insoluble
o) Partition coefficient: noctanol/water No data available
p) Auto-ignition temperature No data available

q) Decomposition temperature No data available
r) Viscosity No data available
s) Explosive properties No data available
t) Oxidizing properties No data available
9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
No data available
10.5 Incompatible materials
No data available
10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides, Oxides of phosphorus, Hydrogen chloride gas
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - 285 mg/kg(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation.
Behavioral:Muscle contraction or spasticity. Biochemical:Enzyme inhibition, induction, or change in blood or tissue levelsTrue cholinesterase.
LD50 Dermal - Rat - 1,500 mg/kg(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
Skin corrosion/irritation
No data available(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
Serious eye damage/eye irritation
No data available(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
Respiratory or skin sensitisation
No data available(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
Germ cell mutagenicity
No data available(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity
No data available(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
Specific target organ toxicity - single exposure
No data available(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
Additional Information
RTECS: TE8050000
Abdominal pain, Nausea, Vomiting, Diarrhoea, Headache, fatigue, Anorexia., Vertigo, Cholinesterase inhibitors can cause heavy salivation and secretion in the defecation, diarrhea, tremor, ataxia, sweating, hypothermia, lowered hear their action at cholinergic nerve sites., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)

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12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish LC50 - Lepomis macrochirus (Bluegill) - 0.71 mg/l - 96.0 h(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia (water flea) - 4.2 mg/l - 48 h(O-(3-Chloro-4-nitrophenyl) O,Odimethyl phosphorothioate)
12.2 Persistence and degradability
12.3 Bioaccumulative potential
Bioaccumulation Poecilia reticulata (guppy) - 264 h
- 47.4 ug/l(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
Bioconcentration factor (BCF): 0.04
12.4 Mobility in soil
No data available(O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
12.5 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.
12.6 Other adverse effects
Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 2811 IMDG: 2811 IATA: 2811
14.2 UN proper shipping name
ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
IMDG: TOXIC SOLID, ORGANIC, N.O.S. (O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
IATA: Toxic solid, organic, n.o.s. (O-(3-Chloro-4-nitrophenyl) O,O-dimethyl phosphorothioate)
14.3 Transport hazard class(es)
ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1
14.4 Packaging group
ADR/RID: III IMDG: III IATA: III
14.5 Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no
14.6 Special precautions for user
No data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out

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!