

SAFETY DATA SHEET

Version: v1
Revision Date: 2023-07-24
Print Date: 2023-07-27

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

1.1 Product identifiers

Product name : Diethyl Chlorothiophosphate
Product Number : D156020
Brand : aladdin
CAS-No. : 2524-04-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Shanghai Aladdin Biochemical Tech Co., Ltd
Address : 36 Xinjinqiao Road, Shanghai
Telephone : 400-620-6333
Fax : no data available

1.4 Emergency telephone number

Emergency Phone : 0532-83889090

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids Category 4

Corrosive to metals Category 1

Acute toxicity (Oral) Category 4

Acute toxicity (Dermal) Category 2

Acute toxicity (Inhalation) Category 2

Skin corrosion/irritation Category 1B

Serious eye damage/eye irritation Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

| | |
|-----------|---|
| H227 | Combustible liquid |
| H290 | May be corrosive to metals |
| H302 | Harmful if swallowed |
| H314 | Causes severe skin burns and eye damage |
| H411 | Toxic to aquatic life with long lasting effects |
| H310+H330 | Fatal in contact with skin or if inhaled |

Precautionary statement(s)

| | |
|------|---|
| P210 | Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking. |
| P234 | Keep only in original container. |
| P260 | Do not breathe dust/fume/gas/mist/vapors/spray. |
| P262 | Do not get in eyes, on skin, or on clothing. |
| P264 | Wash hands [and ...] thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P284 | [In case of inadequate ventilation] Wear respiratory protection. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P390 | Absorb spillage to prevent material damage. |

| | |
|----------------|--|
| P391 | Collect spillage. |
| P301+P312 | IF SWALLOWED: call a POISON CENTER/doctor/... IF you feel unwell. |
| P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower]. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. |
| P361+P364 | Take off immediately all contaminated clothing and wash it before reuse. |
| P370+P378 | In case of fire: Use ... to extinguish. |
| P405 | Store locked up. |
| P406 | Store in corrosive resistant/... container with a resistant inner liner. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P403+P235 | Store in a well-ventilated place. Keep cool. |
| P501 | Dispose of contents/container to an approved waste disposal plant. |

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.1 Substances

| | |
|------------------|--|
| Synonyms | : O,O'-Diethyl Phosphorochloridothioate;O,O'-Diethyl Phosphorothiochloridate;O,O'-Diethylthiophosphoryl Chloride |
| Formula | : C ₄ H ₁₀ ClO ₂ PS |
| Molecular weight | : 188.61 |
| CAS No. | : 2524-04-1 |
| EC-NO. | : no data available |

| Component | Classification | Concentration |
|-----------------------------|-------------------|---------------|
| Diethyl Chlorothiophosphate | no data available | >97.0%(GC) |

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this material 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. 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

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Dry chemical, foam, water spray, carbon dioxide.

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Take care as it may decompose upon combustion or in high temperature to generate poisonous fume.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

Do not let product enter drains.

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.

SECTION 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.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eyeface protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).

Skin protection

Gloves must be checked before use. Please use proper methods to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Please clean and blow dry the protective gloves selected for your hands must meet the specifications given in regulation (EU) 2016 / 425 and the en 374 standard derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., 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 a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|---|---|
| a) Appearance | form: Liquid color: Colorless to Yellow to Reddish 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 | 51°C/1mmHg |
| g) Flash point | 92°C |
| 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 | no data available |
| n) Water solubility | no data available |
| o) Partition coefficient: n-octanol/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 N | no data available |
| t) Oxidizing properties N | no data available |

9.2 Other safety information

no data available

SECTION 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

oxidizing agents

10.6 Hazardous decomposition products

Carbon dioxide, Carbon monoxide, Hydrogen chloride, Phosphorus oxides, Sulfuroxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

SECTION 12: Ecological information

12.1 Toxicity

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no data available

SECTION 13:

13.1 Disposal considerations

Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

| | | |
|--------------------------------|----------------------------------|-----------------------------------|
| UN number: 2751 | Packing group: II | Class: 8 |
| Proper shipping name: | Reportable Quantity(RQ): no data | Poison Inhalation Hazard: no data |
| Diethylthiophosphoryl chloride | available | available |
| Environmental Hazards: no | | |

IMDG

| | | |
|--|-------------------|---------------------------|
| UN number: 2751 | Packing group: II | EMS-No: no data available |
| Proper shipping name: Diethylthiophosphoryl chloride | | |

IATA

| | | |
|--|-------------------|----------|
| UN number: 2751 | Packing group: II | Class: 8 |
| Proper shipping name: Diethylthiophosphoryl chloride | | |

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

Further information

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regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Aladdin Co. Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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