

SAFETY DATA SHEET

Version: v1

Revision Date: 2025-09-14

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

1.1 Product identifiers

Product name	: Trichlorphon solution
Product Number	: T108162
Brand	: aladdin
CAS-No.	: 52-68-6(T108162)

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

Identified uses	: Laboratory chemicals, Manufacture of substances.
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1.3 Company

Company	: ALADDIN SCIENTIFIC CORPORATION
Address	: 14078 Meridian Parkway, Riverside, CA. 92518
Telephone	: +1 (833) 552-7181
Fax	: no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA	: 1-800-424-9300
CHEMTREC®, Outside the USA	:

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H320	Causes eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H400	Very toxic to aquatic life
H302+H312	Harmful if swallowed or in contact with skin

Precautionary statement(s)

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P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P312	Call a POISON CENTER or doctor/... if you feel unwell.
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.
P332+P313	IF SKIN irritation occurs: Get medical advice/attention.
P337+P313	IF eye irritation persists: Get medical advice/attention.

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Synonyms	: O,O-Dimethyl-1-hydroxy-2,2,2-trichloroethylphosphonate Trichlorfon (2,2,2-Trichloro-1-hydroxyethyl)phosphonic acid dimethyl ester Metrifonate
Formula	: C ₄ H ₈ Cl ₃ O ₄ P
Molecular weight	: 257.44

Component	Classification	Concentration
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SECTION 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. Move out of dangerous area.

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

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products formed under fire conditions.- Carbon oxides, Oxides of phosphorus, Hydrogen chloride gas

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

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

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

no data available

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

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

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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

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.

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

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

no data available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	no data available
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

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k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	1.730 g/cm ³ at 20 °C (68 °F)
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	log Pow: 0.51
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

Stable under recommended storage conditions.

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Strong oxidizing agents

10.5 Incompatible materials

Hazardous decomposition products formed under fire conditions.- Carbon oxides, Oxides of phosphorus, Hydrogen chloride gas

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

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Eyes - rabbit - Mild eye irritation

Respiratory or skin sensitisation

Genotoxicity in vitro - mouse - S.typhimurium Host-mediated assay Genotoxicity in vitro - Hamster - Lungs
Cytogenetic analysis Genotoxicity in vitro - Hamster - Lungs Sister chromatid exchange Genotoxicity in vitro -
Hamster - ovary Sister chromatid exchange Genotoxicity in vitro - Ames test - positive Genotoxicity in vitro - mouse -
lymphocyte Mutation in mammalian somatic cells.Genotoxicity in vitro - mouse - Embryo Morphological
transformation.Genotoxicity in vitro - Human - leukocyte Cytogenetic analysis Genotoxicity in vitro - Human -
fibroblast Unscheduled DNA synthesis Genotoxicity in vitro - Human - lymphocyte Sister chromatid exchange
Genotoxicity in vivo - mouse - Oral Cytogenetic analysis Genotoxicity in vivo - mouse - Intraperitoneal Cytogenetic
analysis Genotoxicity in vivo - mouse - Intraperitoneal Dominant lethal test Genotoxicity in vivo - mouse -
Intraperitoneal Sister chromatid exchange Genotoxicity in vivo - mouse - Intraperitoneal DNA damage

Germ cell mutagenicity

3 - Group 3: Not classifiable as to its carcinogenicity to humans (Trichlorfon)

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

May be harmful if inhaled.May cause respiratory tract irritation.

Aspiration hazard

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 0.114 mg/l - 96.0 h LC50 - Oncorhynchus mykiss
(rainbow trout) - 0.7 mg/l - 96.0 h Toxicity to daphnia and other aquatic EC50 - Daphnia magna (Water flea) - 0.00005
mg/l - 48 h invertebrates

Additional Information

no data available

SECTION 12: Ecological information

12.1 Toxicity

no data available

12.2 Persistence and degradability

Bioaccumulation Cyprinodon variegatus (sheepshead minnow) - 96 h Bioconcentration factor (BCF): 0.11

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

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An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.Very toxic to aquatic life.

12.6 Other adverse effects

no data available

SECTION 13:

13.1 Disposal considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.Contact a licensed professional waste disposal service to dispose of this material.Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 3077	Packing group: III	Class: 9
Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Trichlorfon)	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
Environmental Hazards: No		

IMDG

UN number: 3077	Packing group: III	EMS-No: no data available
Proper shipping name: Environmentally hazardous substances, solid, n.o.s.(Trichlorfon)		

IATA

UN number: 3077	Packing group: III	Class: 9
Proper shipping name: Environmentally hazardous substances, solid, n.o.s.(Trichlorfon)		

SECTION 15: Regulatory information

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

SECTION 16: Other information

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