

Version: v1
Revision Date: 2023-07-18
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SAFETY DATA SHEET

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

1.1 Product identifiers

Product name : Silicon tetrachloride
Product Number : S104667
Brand : aladdin
CAS-No. : 10026-04-7

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)

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Skin corrosion (Sub-category 1A), H314

Serious eye damage (Category 1), H318

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

2.2 GHS Label elements, including precautionary statements

Pictogram
Signal word
Hazard statement(s)



Danger

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H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H301+H331	Toxic if swallowed or if inhaled
Precautionary statement(s)	
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
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.
P311	Call a POISON CENTER or doctor/...
P330	Rinse mouth.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P302+P352	IF ON SKIN: wash with plenty of water.
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.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
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	: STC;Tetrachlorosilane	
Formula	: SiCl4	
Molecular weight	: 169.9	
CAS No.	: 10026-04-7	
EC-NO.	: 233-054-0	
Component	Classification	Concentration
Silicon tetrachloride	Acute Tox. 3; Skin Corr. 1A; Eye Dam. 1; STOT SE 3; H301, H331, H314, H318, H335	Analytical Reagent,99.50%

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.

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In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. 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

Do NOT induce vomiting. 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

no data available

Unsuitable extinguishing media

Water, Foam

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas, silicon oxides. Not combustible. May not get in touch with: Water. Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

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Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. Keep workplace dry. Do not allow product to come into contact with water.

7.2 Conditions for safe storage, including any incompatibilities

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Never allow product to get in contact with water during storage. Handle and store under inert gas.

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

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). 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 glove's 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 Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant 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

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combination (US) or type AXBEK (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
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	-70°C
f) Initial boiling point and boiling range	59°C
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	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

Violent reactions possible with:Water. Risk of explosion with:Alkali metals. Exothermic reaction with:dimethyl sulfoxide,bases.

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10.4 Conditions to avoid

Exposure to moisture.

10.5 Incompatible materials

Light metals

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 238 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

LC50 Inhalation - Rat - male and female - 1 h - 4,6 mg/l

(OECD Test Guideline 403)

LD50 Dermal - Rabbit - male and female - > 10.000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit Result: Corrosive(OECD Test Guideline 404)

Serious eye damage/eye irritation

Risk of blindness!

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

Ames test Salmonella typhimurium Result: negative Mutagenicity (mammal cell test): chromosome aberration. Mouse lymphoma test Result: negative In vitro mammalian cell gene mutation test Mouse lymphoma test Result: negative

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

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no data available

Aspiration hazard

no data available

Additional Information

RTECS: Not available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Decomposition of the substance with tissue moisture.

Good warning effect due to low odour threshold.

Systemic effects:

After a latency period:

Circulatory collapse

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish semi-static test LC50 - Danio rerio (zebra fish) - > 245 mg/l - 96 h

(OECD Test Guideline 203)

Remarks: The value is given in analogy to the following substances:

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - > 844 mg/l - 48 h

(OECD Test Guideline 202)

Remarks: The value is given in analogy to the following substances:

Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata (green algae) - >

100 mg/l - 72 h

(OECD Test Guideline 201)

Remarks: The value is given in analogy to the following substances:

static test NOEC - Pseudokirchneriella subcapitata (green algae) - >

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100 mg/l - 72 h

(OECD Test Guideline 201)

Remarks: The value is given in analogy to the following substances:

Toxicity to bacteria static test EC50 - activated sludge - > 100 mg/l - 3 h

(OECD Test Guideline 209)

12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

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

no data available

SECTION 13:

13.1 Disposal considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 1818

Packing group: II

Class: 8

Proper shipping name: SILICON
TETRACHLORIDE

Reportable Quantity(RQ): no data available Poison Inhalation Hazard: no data

Environmental Hazards: NO

IMDG

UN number: 1818

Packing group: II

EMS-No: no data available

Proper shipping name: SILICON TETRACHLORIDE

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IATA

UN number: 1818

Packing group: II

Class: 8

Proper shipping name: SILICON TETRACHLORIDE

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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