Shanghai Aladdin Biochemical Technology Co., Ltd.
No. 809, Chuhua Branch Road, Fengxian District, Shanghai

SAFETY DATA SHEET

Version: v1
Revision Date: 2025-09-30
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SECTION 1:Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	: Tert-butyldimethylchlorosilane (TBDMSCl)
Product Number	: B103644
Brand	: aladdin
CAS-No.	: 18162-48-6

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 solid (category 1), H228

Acute toxicity, oral (category 5), H303

Skin corrosion/irritation (category 1A), H314

Serious eye damage/eye irritation (Category 1), H318

Acute (short-term) aquatic hazard (category 2), H401

Long-term aquatic hazard (category 2), H411

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)	
H228	Flammable solid
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation
Precautionary statement(s)	
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/.../] equipment.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and ...] thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P321	Specific treatment (see ... on this label).
P363	Wash contaminated clothing before reuse.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P370+P378	In case of fire: Use ... to extinguish.
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.
P264+P265	Wash hands [and ...] thoroughly after handling. Do not touch eyes.
P305+P354+P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P317	Get emergency medical help.
P302+P361+P354	IF ON SKIN: Take off Immediately all contaminated clothing. Immediately rinse with water for several minutes.
P316	Get emergency medical help immediately.
P319	Get medical help if you feel unwell.

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

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: tert-Butylchlorodimethylsilane; TBDMCl; tert-Butyl(chloro)dimethylsilane; TBDMSCl TBDMSCl
Formula	: C6H15ClSi
Molecular weight	: 150.72
CAS No.	: 18162-48-6
EC-NO.	: 242-042-4

Component	Classification	Concentration
Tert-butyldimethylchlorosilane (TBDMSCl)		
	Flammable solid category 1; acute toxicity category No 5; Skin corrosion/irritation category 1A; Serious eye damage/eye irritation category 1; Acute (short-term) aquatic hazards No. 2; Long-term aquatic hazard category 2; H228, H303, H314, H318, H401, H411	≥97%

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air.

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

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

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water mist, alcohol-resistant foam, dry powder or carbon dioxide to extinguish fire

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Carbon oxide Hydrogen chloride gas Silica is combustible.

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 generation. Avoid breathing vapor, mist or gas. Ensure adequate ventilation. Evacuate people to a safe area. Avoid breathing dust. For personal protection, see section 8.

6.2 Environmental precautions

If safety can be ensured, measures can be taken to prevent further leakage or overflow. Do not let the product enter the drain. Avoid release to the surrounding environment.

6.3 Methods and materials for containment and cleaning up

Sweep and shovel away. Contain the spill, collect the spill with an electric anti-electric vacuum cleaner or a wet brush, and place it in a container, and dispose of it according to local regulations (see section 13). Place in a suitable closed container for disposal. Contain the overflow, put it away with an electric-proof vacuum cleaner or a wet brush, then put it in a container, and dispose of it in accordance with local regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid the formation of dust and aerosols. Where there is dust generation, provide suitable exhaust equipment. Keep away from fire sources. -No smoking. Take measures to prevent static electricity from accumulating. Operate in accordance with good industrial hygiene and safety regulations. Wash your hands before breaks and at the end of work. For preventive measures, see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep the container tightly closed and store in a dry and ventilated place. Easy to hydrolyze. Sensitive to humidity

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 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	no data available
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	89°C
f) Initial boiling point and boiling range	125°C
g) Flash point	22°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

Heat, flames and sparks.

10.5 Incompatible materials

Water, strong acids and bases, amines, aldehydes, ketones, oxidants

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Symptoms: Swallowing can cause severe burns to the mouth and throat, and there is a danger of perforation of the esophagus and stomach.

LD50 Oral-Rat-Male and Female-> 2,000 mg/kg

(OECD Test Guideline 423)

Skin corrosion/irritation

Skin-Rabbit Result: Corrosive-4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation
no data available
Germ cell mutagenicity
Test type: Ames test Test system: Salmonella typhimurium Metabolic activation: with or without metabolic activation Method: OECD Test Guideline 471 Result: Negative Test type: Mutagenicity (mammalian cell test): Negative chromosomal mutation. Test system: Chinese hamster Fibroblast metabolism activation: With or without metabolic activation Method: OECD Test Guideline 473 Result: Positive test type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma cell metabolism activation: With or without metabolic activation Method: OECD Test Guideline 490 Result: Negative Test Type: In Vitro Mammalian Cell Gene Mutation Test Test System: Chinese Hamster Fibroblast Metabolism Activation: With or Without Metabolic Activation Method: OECD Test Guideline 487 Result: Negative
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
Chemical substance toxicity registration: VV2000000 Burning sensation:, cough, wheezing, laryngitis, shortness of breath, spasm, inflammation, sore throat, spasm, inflammation, bronchitis, pneumonia, pulmonary edema, the substance affects mucosal tissues and upper respiratory tract, The damage to the eyes and skin is huge. , As far as we know, the chemical, physical and toxic properties have not been fully studied. It is currently not possible to provide a quantitative analysis of the toxicity of this product. Further information: other hazards cannot be ruled out. Operate in accordance with good industrial hygiene and safety regulations.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to water flea and other aquatic invertebrates

Static test EC50-Daphnia magna (Water flea)-6.49 mg/l-48 h

(OECD Test Guideline 202)

Toxicity to algae ErC50-Pseudokirchneriella subcapitata (green algae)-84 mg/l-72 h

(OECD Test Guideline 201)

NOEC-Pseudokirchneriella subcapitata (green algae)-12.5 mg/l-72 h

(OECD Test Guideline 201)

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

Toxic to aquatic life with long lasting effects. We have no data on the ecological impact of this product. Other ecological information Avoid release to the surrounding environment.

SECTION 13:

13.1 Disposal considerations

Product

ecycle 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: 2921	Packing group: I	Class: 8 (4.1)
Proper shipping name: Corrosive solid, flammable, n.o.s. (tert.-butylchlorodimethylsilane)	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
Environmental Hazards: no data available		

IMDG

UN number: 2921	Packing group: I	EMS-No: no data available
Proper shipping name: Corrosive solid, flammable, n.o.s. (tert.-butylchlorodimethylsilane)		

IATA

UN number: 2921	Packing group: I	Class: 8 (4.1)
Proper shipping name: Corrosive solid, flammable, n.o.s. (tert.-butylchlorodimethylsilane)		

SECTION 15: Regulatory information

Shanghai Aladdin Biochemical Technology Co., Ltd.
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This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

Further 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. 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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