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

SAFETY DATA SHEET

Version: v1
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SECTION 1:Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	: tert-Butyldimethylsilyl chloride solution
Product Number	: B103645
Brand	: aladdin
CAS-No.	: 18162-48-6(Toluene)

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 liquid (category 2), H225

Acute toxicity, oral (category 5), H303

Skin corrosion/irritation (category 1A), H314

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

Reproductive toxicity (category 2), H361

Specific target organ toxicity (single exposure) (category 3), narcotic effects, H336

Specific target organ toxicity (repeated exposure) (category 2), H373

Aspiration hazard (category 1), H304

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)

H225	Highly Flammable liquid and vapor
H303	May be harmful if swallowed
H304	May be fatal if swallowed and enters airways
H314	Causes severe skin burns and eye damage
H336	May cause drowsiness or dizziness
H361	Suspected of damaging fertility or the unborn child
H373	Causes damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

Precautionary statement(s)

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P202	Do not handle until all safety precautions have been read and understood.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/.../] equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and …] thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P310	Immediately call a POISON CENTER or doctor/physician.
P312	Call a POISON CENTER or doctor/... if you feel unwell.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
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.
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.
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

3.2 Mixtures

Synonyms : tert-Butylchlorodimethylsilane; TBDMCl; tert-Butyl(chloro)dimethylsilane; TBDMSCl TBDMSCl
Formula : no data available
Molecular weight : no data available

Component	Classification	Concentration
Toluene		
CAS-No.: 108-88-3 EC-No.: 203-625-9	Flammable liquids Category 2; Acute toxicity Category 5; Skin corrosion/irritation Category 2; Reproductive toxicity Category 2; Specific target organ toxicity - single exposure Category 3; Specific target organ toxicity - repeated exposure Category 2; Aspiration hazard Category 1; Short-term (acute) aquatic hazard Category 2; Long-term (chronic) aquatic hazard Category 3; H225, H333, H315, H361, H336, H373, H304, H401, H412 Concentration limits: 20 %: STOT SE 3, H336;	
tert-Butyldimethylsilyl chloride		
CAS-No.: 18162-48-6 EC-No.: 242-042-4	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	

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

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.
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
Dry powder dry sand
Unsuitable extinguishing media
no data available

5.2 Special hazards arising from the substance or mixture

Carbon oxide Hydrogen chloride gas Silica is combustible. The vapor is heavier than air, so it can spread on the ground. Forms explosive mixtures with air at high temperatures. Hazardous gases or vapors may be generated in the event of a fire.

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

Contain the spill, absorb the spill with non-combustible materials (such as sand, soil, diatomaceous earth, vermiculite), collect it in a container, and dispose of it in accordance with local or national 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 contact with skin and eyes. Avoid breathing vapor or mist. 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. Containers that have been opened must be carefully resealed and kept in an upright position to prevent leakage. 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	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	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

Alkali, oxidizer, strong oxidizer, metal, alcohol

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
mixture

Acute toxicity

Acute toxicity estimate Oral-4,546 mg/kg

(Calculation method)

Acute toxicity estimate Inhalation-4 h-> 40 mg/l

(Calculation method)

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
Toluene inhalation studies have shown animal penile, foreskin, and scrotal hypersensitivity and ulcers. , As far as we know, the chemical, physical and toxic properties have not yet been completed

Whole research. , This substance can cause great damage to mucosal tissues and upper respiratory tract, eyes and skin. , Cramps, inflammation, sore throat, cramps, hair

Inflammation, bronchitis, pneumonia, pulmonary edema, burning sensation:, cough, wheezing, laryngitis, shortness of breath

SECTION 12: Ecological information

12.1 Toxicity

Methylbenzene

Toxicity to fish flow test LC50-Oncorhynchus kisutch (coho salmon)-5.5 mg/l-96h

Remarks: (ECHA)

No ridge to water flea and other aquatic species

Toxicity of Vertebral Animals

EC50-Ceriodaphnia dubia (Ceriodaphnia dubia)-3.78 mg/l-48 h

(US-EPA)

Toxicity to bacteria static test EC50-bacteria-84 mg/l-24 h

Remarks: (ECHA)

Tert-Butyldimethylchlorosilane

No ridge to water flea and other aquatic species

Toxicity of Vertebral Animals

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

no data available

SECTION 13:

13.1 Disposal considerations

Product

Hand over the remaining and non-recyclable solution to a licensed company for disposal. Burn in a chemical incinerator equipped with an afterburner and scrubbing equipment, especially when it is ignited, because this substance is a highly flammable substance

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

DOT (US)

UN number: 2924	Packing group: II	Class: 3 (8)
Proper shipping name: Flammable liquid, corrosive, n.o.s. (Toluene, tert.-butylchlorodimethylsilane)	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
Environmental Hazards: No		

IMDG

UN number: 2924	Packing group: II	EMS-No: no data available
Proper shipping name: Flammable liquid, corrosive, n.o.s. (Toluene, tert.-butylchlorodimethylsilane)		

IATA

UN number: 2924	Packing group: II	Class: 3 (8)
Proper shipping name: Flammable liquid, corrosive, n.o.s. (Toluene, tert.-butylchlorodimethylsilane)		

SECTION 15: Regulatory information

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

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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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