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

SAFETY DATA SHEET

Version: v1
Revision Date: 2024-02-13
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SECTION 1:Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	: 2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane
Product Number	: E156231
Brand	: aladdin
CAS-No.	: 3388-04-3

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)
Skin allergy (Category 1B), H317

Germ cell mutagenicity (class 2), H341

Carcinogenicity (Category 2), H351

Acute (short-term) aquatic hazard (Category 3), H402

Long term aquatic hazards (Category 3), H412

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word Warning

Hazard statement(s)

H317	May cause an allergic skin reaction
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H412	Harmful to aquatic life with long lasting effects
Precautionary statement(s)	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P302+P352	IF ON SKIN: wash with plenty of water.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P405	Store locked up.
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	: Trimethoxy[2-(7-oxabicyclo[4.1.0]heptan-3-yl)ethyl]silane;Trimethoxy[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]silane
Formula	: C11H22O4Si
Molecular weight	: 246.38
CAS No.	: 3388-04-3
EC-NO.	: no data available

Component	Classification	Concentration
2-(3,4-Epoxycyclohexyl)ethyltrimethoxysilane		
	no data available	>97.0%(GC)

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

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

In case of skin contact
Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.
In case of eye contact
Rinse with pure water for at least 15 minutes. Consult a doctor.
If swallowed
Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

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 dry chemical, carbon dioxide or alcohol-resistant foam.
Unsuitable extinguishing media
no data available

5.2 Special hazards arising from the substance or mixture

Oxocarbon silicon dioxide Flammable Vapor is heavier than air, so it can diffuse along the ground. Under rapid heating, it forms an explosive mixture with air When a fire occurs, it may cause the production of hazardous gases or vapors

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

Avoid dust formation. Avoid breathing mist, gas or vapours.Avoid contacting with skin and eye. Use personal protective equipment.Wear chemical impermeable gloves. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas.Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Operators should be specially trained and strictly abide by the operating procedures. Operation and disposal should be carried out in a place with local ventilation or general ventilation facilities. Avoid eye and skin contact and avoid breathing vapor. See Section 8 for personal protective measures. Keep away from fire and heat sources, and smoking is strictly prohibited in the workplace. Use explosion-proof ventilation systems and equipment. If canning is required, the flow rate should be controlled, and there should be a grounding device to prevent the accumulation of static electricity. Avoid contact with incompatible substances such as oxidizing agents (see section 10 for incompatible substances). When handling, it should be lightly loaded and unloaded to prevent damage to packaging and containers. Empty containers may be harmful residues. Wash hands after use and prohibit eating or drinking in the workplace. Equipped with the corresponding variety and quantity of fire fighting equipment and leakage emer

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool and ventilated warehouse. Argon filling

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

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 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 particle respirator type N100 (US) or type P3 (EN 143) 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

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

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	310 °C
g) Flash point	141°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	1.065
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

Moisture proof. Strong heating

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 oral - rats - males and females ->5000 mg/kg

(OECD Testing Guidelines 401)

Inhalation: No data available

LD50 transdermal rabbit male 6741 mg/kg

(OECD Testing Guidelines 402)

Skin corrosion/irritation
Skin Rabbit Results: No skin irritation -4 hours (OECD Test Guideline 404)
Serious eye damage/eye irritation
Eyes - Rabbit Result: No eye irritation (OECD Testing Guidelines 405)
Respiratory or skin sensitisation
Buehler Guinea Pig Trial - Guinea Pig Result: Positive (OECD Testing Guidelines 406)
Germ cell mutagenicity
Suspected of causing genetic defects. Test type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test Metabolic activation: with or without metabolic activation effect Method: OECD Testing Guidelines 476 Result: Positive Test type: Ames test Testing system: Salmonella Typhimurium Metabolic activation: with or without metabolic activation effect Method: OECD Testing Guidelines 471 Result: Positive

Carcinogenicity
no data available
Reproductive toxicity
Suspected of causing genetic defects. Test type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test Metabolic activation: with or without metabolic activation effect Method: OECD Testing Guidelines 476 Result: Positive Test type: Ames test Testing system: Salmonella Typhimurium Metabolic activation: with or without metabolic activation effect Method: OECD Testing Guidelines 471 Result: Positive
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
Registration of toxic effects of chemical substances: VV4000000

To our knowledge, this chemical, physical, and toxic property has not been fully studied.

After absorption:

System impact:

Acidosis

headache

dizziness

nausea

vomit

Excitement, spasms

Visual impairment

drunk

Decreased blood pressure

blindness

anaesthesia

coma

Symptoms may appear delayed.

May cause irreversible damage.

Other hazards cannot be ruled out.

This substance requires special caution in handling

SECTION 12: Ecological information

12.1 Toxicity

Static toxicity test for fish LC50- Oncorhynchus mykiss (rainbow trout) -180 mg/l -96 hours

(OECD Testing Guidelines 203)

Note: Corresponding values have been specified for the following substances: Diethoxymethyl [(3-epoxyethanylmethoxy) propyl]

silane

Toxicity to Daphnia magna and other aquatic Invertebrate

Static test EC50- Daphnia magna -20 mg/l -48 hours

(OECD Testing Guidelines 202)

Note: Corresponding values have been specified for the following substances: Diethoxymethyl [(3-epoxyethanylmethoxy) propyl] silane

Static toxicity test for bacteria EC50- Activated sludge ->100 mg/l -30 minutes

(OECD Testing Guidelines 209)

Note: Corresponding values have been specified for the following substances: 2- (3,4-epoxychloroxyl) ethyl triethoxysilane

12.2 Persistence and degradability

Aerobic - Exposure time 28 days Result: 28% - non biodegradable. (OECD Test Guide 301D) Note: Corresponding values have been specified for the following substances: 2- (3,4-epoxychloroxyl) ethyl triethoxysilane

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

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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: no data available	Packing group: no data available	Class: no data available
Proper shipping name: no data available	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
Environmental Hazards: no data available		

IMDG

UN number: no data available	Packing group: no data available	EMS-No: no data available
Proper shipping name: no data available		

IATA

UN number: no data available	Packing group: no data available	Class: no data available
Proper shipping name: no data available		

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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