

ALADDIN SCIENTIFIC CORPORATION  
14078 Meridian Parkway, Riverside, CA. 92518

# SAFETY DATA SHEET

Version: v1  
Revision Date: 2024-01-23  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Zirconium(IV) ethoxide  
Product Number : Z283415  
Brand : aladdin  
CAS-No. : 18267-08-8

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

Identified uses : Laboratory chemicals, Manufacture of substances.

### 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)  
Skin corrosion/irritation [Category 2]

Serious eye damage/eye irritation [Category 2A]

Specific target organ toxicity (single exposure) [Category 3]

FLAMMABLE SOLID [Category 1]

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

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H228	Flammable solid
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.
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.
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.
P362+P364	Take off contaminated clothing and wash it before reuse.
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.

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

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Synonyms	: Tetraethoxyzirconium ; Zirconium ethoxide (Zr(OEt) <sub>4</sub> ) ; Zirconium tetraethoxide
Formula	: Zr(OC <sub>2</sub> H <sub>5</sub> ) <sub>4</sub>
Molecular weight	: 271.47
CAS No.	: 18267-08-8
EC-NO.	: no data available

Component	Classification	Concentration
Zirconium(IV) ethoxide	no data available	99%

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

General advice

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Consult a physician if necessary. Remove to fresh air.

If inhaled

Transfer to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

In case of skin contact

Wash skin with soap and water.

In case of eye contact

Wash with plenty of water.

If swallowed

Never feed anything to an unconscious person. Rinse your mouth and drink more water.

#### **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

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### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

Suitable extinguishing media

CO2, dry chemical, or foam for extinction.

Unsuitable extinguishing media

no data available

#### **5.2 Special hazards arising from the substance or mixture**

Highly flammable

#### **5.3 Advice for firefighters**

Wear self-contained breathing and full protective equipment

#### **5.4 Further information**

no data available

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### **SECTION 6: Accidental release measures**

#### **6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation, especially in confined areas.

#### **6.2 Environmental precautions**

See Section 12 for additional Ecological Information. Prevent product from entering drains. Should not be released into the environment.

#### **6.3 Methods and materials for containment and cleaning up**

If safety requires, prevent further leakage or spillage. Use personal protective equipment as needed. Cover the

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powder spillage with plastic cloth or waterproof cloth to minimize diffusion and keep the powder dry. Use the machine to lift and place in a suitable container for disposal. Avoid dust generation. Thoroughly clean contaminated surfaces.

## 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

May cause damage to organs through prolonged or repeated exposure. Contact with water liberates toxic, highly flammable gas.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature.

### 7.3 Specific end use(s)

no data available

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## 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

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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	235°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.

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### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Extremes of temperature and direct sunlight.

### 10.5 Incompatible materials

Strong oxidizing agents.

### 10.6 Hazardous decomposition products

Carbon oxides.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity

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

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## SECTION 12: Ecological information

### 12.1 Toxicity

no data available

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## 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

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## SECTION 13:

### 13.1 Disposal considerations

Product

Should not be released into the environment. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Dispose of as unused product.

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## SECTION 14: Transport information

DOT (US)

UN number: UN3181

Packing group: II

Class: 4.1

Proper shipping name: Metal salts of organic compounds, flammable, n.o.s.

Reportable Quantity(RQ): no data available

Poison Inhalation Hazard: no data available

Environmental Hazards: no data available

IMDG

UN number: UN3181

Packing group: II

EMS-No: F-A,S-I

Proper shipping name: Metal salts of organic compounds, flammable, n.o.s.

IATA

UN number: UN3181

Packing group: II

Class: 4.1

Proper shipping name: Metal salts of organic compounds, flammable, n.o.s.

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## SECTION 15: Regulatory information

Please note that waste disposal should also meet local regulations. If applicable, the chemical meets the requirements of the Regulations on the Safety Management of Hazardous Chemicals (adopted by the State Council on December 4, 2013).

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## SECTION 16: Other information

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