

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

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 : Zirconium dioxide
Product Number : Z104399
Brand : aladdin
CAS-No. : 1314-23-4

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)

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

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

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: Zirconium(IV) oxide;Zirconia
Formula	: ZrO ₂
Molecular weight	: 123.22
CAS No.	: 1314-23-4
EC-NO.	: 215-227-2

Component	Classification	Concentration
Zirconium dioxide	no data available	nanopowder,99.99% metals basis excluding Hf or HfO ₂ ,0.2 ~ 0.4um

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice
no data available

If inhaled
no data available

In case of skin contact
no data available

In case of eye contact
no data available

If swallowed
no data available

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

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Water, Foam, Carbon dioxide (CO₂), Dry powder

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

no data available

5.3 Advice for firefighters

no data available

5.4 Further information

no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

It is recommended that emergency responders wear air-carrying respirators, anti-static clothing, and rubber oil-resistant gloves. Do not touch or step over spillage. All equipment used during work should be grounded. Cut off sources of leaks as much as possible. Eliminate all ignition sources. The warning area is delineated according to the influence area of liquid flow, vapor or dust diffusion, and unrelated personnel are evacuated to the safe area from the crosswind and upwind directions.

6.2 Environmental precautions

no data available

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

No data available

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep the container tightly closed and store in a dry and ventilated place.

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

no data available

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

no data available

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

no data available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	form: powder color: White
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	2,700 °C (4,892 °F) - lit.
f) Initial boiling point and boiling range	5,000 °C (9,032 °F) - lit.
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	5.89 g/mL at 25 °C (77 °F)

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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

no data available

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

no data available

Skin corrosion/irritation

May be harmful if absorbed through skin. Causes skin irritation.

Serious eye damage/eye irritation

Eyes - Rabbits - Mild Eye Irritation - OECD Testing Guidelines 405

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

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no data available

Carcinogenicity

There are no components in this product at levels greater than or equal to 0.1% that have been identified by IARC as possible or definite human carcinogens.

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

May be harmful if inhaled. May cause respiratory irritation.

Additional Information

no data available

SECTION 12: Ecological information

12.1 Toxicity

Mortality in fish LC50 - Brachydanio rerio (zebrafish) - > 100 mg/l - 96 h Method: OECD Test Guideline 203 Static test on Daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) -> 100 mg/l- 48 h

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

no data available

Contaminated packaging

Dispose of as unused product.

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SECTION 14: Transport information

DOT (US)

UN number: no data available	Packing group: -	Class: -
Proper shipping name: Not dangerous goods	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: No
Environmental Hazards: No		

IMDG

UN number: no data available	Packing group: -	EMS-No: No
Proper shipping name: Not dangerous goods		

IATA

UN number: no data available	Packing group: -	Class: -
Proper shipping name: Not dangerous goods		

SECTION 15: Regulatory information

no data available

SECTION 16: Other information

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