

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

SAFETY DATA SHEET

Version: v1
Revision Date: 2023-08-18
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Zinc nitrate hexahydrate
Product Number : Z111706
Brand : aladdin
CAS-No. : 10196-18-6

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 : 800-424-9300
CHEMTREC®, Outside the USA : 001-703-527-3887

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Oxidizing liquids (category 2), H272

Acute toxicity, oral (category 4), H302

Skin corrosion/abrasion (category 2), H315

Serious eye damage/eye irritation (category 2B), H320

Infected target organ system toxicity (single exposure) (category 3), H335

Acute (short-term) aquatic hazard (category 1), H400

Long-term aquatic hazard (category 1), H410

2.2 GHS Label elements, including precautionary statements

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Pictogram



Danger

Signal word

Hazard statement(s)

H272

May intensify fire; oxidizer

H302

Harmful if swallowed

H335

May cause respiratory irritation

H410

Very toxic to aquatic life with long lasting effects

H315+H320

Cause skin and eye irritation

Precautionary statement(s)

P210

Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.

P220

Keep away from clothing and other combustible materials.

P221

Take any precaution to avoid mixing with combustibles/...

P261

Avoid breathing dust/fume/gas/mist/vapors/spray.

P264

Wash hands [and ...] thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

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.

P391

Collect spillage.

P302+P352

IF ON SKIN: wash with plenty of water.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P332+P313

IF SKIN irritation occurs: Get medical advice/attention.

P337+P313

IF eye irritation persists: Get medical advice/attention.

P370+P378

In case of fire: Use ... to extinguish.

P402

Store in a dry place.

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.

P301+P312+P330

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P304+P340+P312

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. 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

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Synonyms	: Zinc Nitrate Hexahydrate; Zinc Nitrate Hexahydrate
Formula	: Zn(NO ₃) ₂ ·6H ₂ O
Molecular weight	: 297.49
CAS No.	: 10196-18-6
EC-NO.	: 231-943-8

Component	Classification	Concentration
Zinc nitrate hexahydrate	Ox. Sol. 2; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 2; H272, H302, H315, H319, H335, H400, H411	99.99% metals basis

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

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Zinc/zinc oxide is non-flammable. Helps natural effects by releasing enzymes. The fire source may cause hazardous surrounding environment.

5.3 Advice for firefighters

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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

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

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

Keep away from open flames, hot surfaces and ignition sources. Change contaminated clothing immediately. Use skin protection lotion. Wash hands and face after using this substance. For preventive measures, see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Tightly closed. Do not store near combustible materials. Hygroscopic, Under Inert Atmosphere

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.

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Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(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

Impervious 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

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	form: Powder or Granular Powder and/or Chunks color: White
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	36.4°C
f) Initial boiling point and boiling range	105~ 131°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

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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

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Exothermic reaction with:sulfur Sulfides phosphorus Copper Risk of explosion with: organic combustible substances carbon

10.4 Conditions to avoid

hygroscopic

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 spoken - Rat - Female - 2,000 mg/kg

(OECD Test Guideline 423)

Symptoms: mucous membrane irritation, cough, shortness of breath, possible damage: , damage to the respiratory tract, after incubation period:, pulmonary edema

Skin corrosion/irritation

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Skin - EPISKIN Human Skin Model Test (OECD Test Guideline 439)

Serious eye damage/eye irritation

Causes serious eye irritation.

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

Register of toxic effects of chemical substances: ZH4775000

Fever, cough, nausea, vomiting, weakness

System impact:

pain

fever

Shortness of breath

loss of consciousness

The following data apply to general zinc: only trace absorption in the digestive tract. For mucous membranes there is a convergence effect. Heavy inhalation can cause metal fumigation.

The following data apply to nitrates and nitrites: A large amount of intake leads to degenerative hemoglobinemia.

Other dangers cannot be ruled out.

Operate in accordance with good industrial hygiene and safety regulations.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to algae IC50-Selenastrum capricornutum (green algae)-0.395 mg/l

Remarks: (ECHA)

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(Zinc Nitrate Hexahydrate)

NOEC-Selenastrum capricornutum (green algae)-0.0552 mg/l

Remarks: (ECHA)

(Zinc Nitrate Hexahydrate)

12.2 Persistence and degradability

Biodegradability Result: - rapidly biodegradable Remarks: (ECHA)

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Biological effects: Bactericidal effect. Hazard for drinking water supplies. Further information on ecology Discharge into the environment must be avoided.

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: 1514

Proper shipping name: Zinc nitrate

Environmental Hazards: No

Packing group: II

Reportable Quantity(RQ): no data available

Class: 5.1

Poison Inhalation Hazard: no data available

IMDG

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UN number: 1514	Packing group: II	EMS-No: no data available
Proper shipping name: Zinc nitrate		
IATA		
UN number: 1514	Packing group: II	Class: 5.1
Proper shipping name: Zinc nitrate		

SECTION 15: Regulatory information

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

SECTION 16: Other information

Prepared By	Regulatory Affairs ALADDIN SCIENTIFIC CORPORATION Email: QualityAssurance@aladdinsci.com
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