

# Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: February 14, 2020

## 1 Identification

- **Product identifier**
- **Trade name: Zinc Nitrate, Hexahydrate**
- **Product code:** S25640A
- **CAS Number:**  
10196-18-6
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
AquaPhoenix Scientific, Inc.  
860 Gitts Run Road  
Hanover, PA 17331  
Phone: (717)632-1291  
Toll-Free: (866)632-1291  
info@aquaphoenixsci.com
- **Distributor:**  
Fisher Science Education  
6771 Silver Crest Road,  
Nazareth, PA 18064  
(800) 955-1177
- **Emergency telephone number:**  
ChemTel Inc.  
(800)255-3924 (North America)  
+1 (813)248-0585 (International)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**
- Ox. Liq. 2 H272 May intensify fire; oxidizer.
- Ox. Sol. 2 H272 May intensify fire; oxidizer.
- Acute Tox. 4 H302 Harmful if swallowed.
- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Irrit. 2A H319 Causes serious eye irritation.
- STOT SE 3 H335 May cause respiratory irritation.

### · Label elements

#### · GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

#### · Hazard pictograms:



GHS03 GHS07

- **Signal word:** Danger
- **Hazard statements:**  
H272 May intensify fire; oxidizer.

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H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

· **Precautionary statements:**

Not regulated.

P210 Keep away from heat.

P220 Keep/Store away from clothing/combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P261 Avoid breathing dust.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P302+P352 If on skin: Wash with plenty of water.

P321 Specific treatment (see on this label).

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.

P330 Rinse mouth.

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

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 for extinction: Water.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

## 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

10196-18-6 zinc(II) nitrate hexahydrate

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.

For the wording of the listed Hazard Statements, refer to section 16.

## 4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Take affected persons out into the fresh air.

· **After inhalation:**

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- Supply fresh air.
- Provide oxygen treatment if affected person has difficulty breathing.
- In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
  - Brush off loose particles from skin.
  - Immediately wash with water and soap and rinse thoroughly.
  - If skin irritation continues, consult a doctor.
- **After eye contact:**
  - Protect unharmed eye.
  - Remove contact lenses if worn.
  - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
  - Do not induce vomiting; immediately call for medical help.
  - A person vomiting while lying on their back should be turned onto their side.
- **Most important symptoms and effects, both acute and delayed:**
  - Irritating to eyes and skin.
  - Irritating to respiratory system and skin.
  - Gastric or intestinal disorders when ingested.
  - Nausea in case of ingestion.
- **Danger:**
  - Harmful if swallowed.
  - Causes serious eye irritation.
  - Causes skin irritation.
  - May cause respiratory irritation.
- **Indication of any immediate medical attention and special treatment needed:**
  - If swallowed or in case of vomiting, danger of entering the lungs.
  - Medical supervision for at least 48 hours.
  - If necessary oxygen respiration treatment.
  - If medical advice is needed, have product container or label at hand.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
  - Fire-extinguishing powder
  - Foam
  - Carbon dioxide
  - Water fog / haze
  - Gaseous extinguishing agents
- **For safety reasons unsuitable extinguishing agents:** Water stream.
- **Special hazards arising from the substance or mixture**
  - Flammable solid.
  - May intensify fire; oxidizer.
  - Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
  - Wear self-contained respiratory protective device.
  - Wear fully protective suit.
- **Additional information:**
  - Eliminate all ignition sources if safe to do so.

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Cool endangered containers with water fog.

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## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Ensure adequate ventilation.
  - Keep away from ignition sources.
  - Wear protective equipment. Keep unprotected persons away.
  - For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions**
  - Do not allow to enter sewers/ surface or ground water.
  - Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up**
  - Pick up mechanically.
  - Towel or mop up material and collect in a suitable container.
  - Dispose of the collected material according to regulations.
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

## 7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
  - Prevent formation of aerosols.
  - Avoid splashes or spray in enclosed areas.
  - Use only in well ventilated areas.
- **Information about protection against explosions and fires:**
  - Protect from heat.
  - Flammable solid.
  - May form combustible dust concentrations in air.
  - Protect against electrostatic charges.
  - Flammable gas-air mixtures may be formed in empty containers/receptacles.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
  - Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
  - Store away from foodstuffs.
  - Store away from oxidizing agents.
- **Further information about storage conditions:**
  - Keep containers tightly sealed.
  - Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No relevant information available.

## 8 Exposure controls/personal protection

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- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Exposure controls**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.  
Keep away from foodstuffs, beverages and feed.  
Wash hands and face after working with the substance.  
Do not inhale dust / smoke / mist.  
Avoid contact with the eyes and skin.
- **Engineering controls:** No relevant information available.
- **Breathing equipment:**  
Not required under normal conditions of use.  
Use suitable respiratory protective device when high concentrations are present.  
NIOSH or EN approved organic vapor respirator equipped with a dust/mist prefilter should be used.
- **Protection of hands:**



Protective gloves

- **Material of gloves**  
Butyl rubber, BR  
Fluorocarbon rubber (Viton)  
Natural rubber, NR  
Neoprene gloves  
Nitrile rubber, NBR  
Sensibilization by the components in the glove materials is possible.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Safety glasses

- Follow relevant national guidelines concerning the use of protective eyewear.
- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment** No special requirements.
- **Risk management measures** No special requirements.

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **Appearance:**

<b>Form:</b>	Solid
<b>Color:</b>	Whitish

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· <b>Odor:</b>	Odorless
· <b>Odor threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Melting point/Melting range:</b>	Not determined.
· <b>Boiling point/Boiling range:</b>	Not determined.
· <b>Flash point:</b>	The product is not flammable.
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Auto-ignition temperature:</b>	Not determined.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Oxidizing properties:</b>	Not determined.
· <b>Vapor pressure:</b>	Not determined.
· <b>Density:</b>	
· <b>Relative density:</b>	Not determined.
· <b>Vapor density:</b>	Not determined.
· <b>Evaporation rate:</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity</b>	
· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>Other information</b>	No relevant information available.

## 10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**  
Flammable solid.  
Used empty containers may contain product gases which form explosive mixtures with air.  
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.  
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid**  
Keep ignition sources away - Do not smoke.  
Keep away from oxidising agents.
- **Incompatible materials**

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- Oxidizing agents.
- Oxidizers
- Oxidizers, strong bases, strong acids
- **Hazardous decomposition products**
- Under fire conditions only:
- Carbon monoxide and carbon dioxide
- Nitrogen oxides (NOx)

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- Harmful if swallowed.
- Causes skin and eye irritation.
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Causes serious eye irritation.
- **Sensitization:** May cause sensitization by skin contact.

· **IARC (International Agency for Research on Cancer):**

Substance is not listed.

· **NTP (National Toxicology Program):**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

Substance is not listed.

· **Probable route(s) of exposure:**

- Ingestion.
- Inhalation.
- Eye contact.
- Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):**

- Harmful if swallowed.
- Irritating to eyes and respiratory system.
- May be fatal if swallowed and enters airways.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity** Toxic to aquatic life.
- **Persistence and degradability** No relevant information available.

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- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **Other adverse effects** No relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |                                       |   |
|---------------------------------------|---|
| · <b>UN-Number</b>                    |   |
| · <b>DOT, ADR/RID/ADN, IMDG, IATA</b> | UN1514                                  |
| · <b>UN proper shipping name</b>      |   |
| · <b>DOT</b>                          | Zinc nitrate                            |
| · <b>ADR/RID/ADN</b>                  | ZINC NITRATE, ENVIRONMENTALLY HAZARDOUS |
| · <b>IMDG</b>                         | ZINC NITRATE, MARINE POLLUTANT          |
| · <b>IATA</b>                         | ZINC NITRATE                            |
| · <b>Transport hazard class(es)</b>   |   |
| · <b>DOT</b>                          |   |
|                                       |   |
| · <b>Class</b>                        | 5.1                                     |
| · <b>Label</b>                        | 5.1                                     |
| -----                                 |   |
| · <b>ADR/RID/ADN</b>                  |   |
|                                       |   |
| · <b>Class</b>                        | 5.1 (O2)                                |
| · <b>Label</b>                        | 5.1                                     |

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· **IMDG**



· **Class** 5.1  
 · **Label** 5.1

· **IATA**



· **Class** 5.1  
 · **Label** 5.1

· **Packing group**

· **DOT, ADR/RID/ADN, IMDG, IATA** II

· **Environmental hazards**

· **Marine pollutant:** Symbol (fish and tree)

· **Special precautions for user**

Warning: Oxidizing substances

· **Hazard identification number (Kemler code):** 50

· **EMS Number:** F-H,S-Q

· **Segregation groups** Heavy metals and their salts (including their organometallic compounds)

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act)**

Substance is not listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity for females:**

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Substance is not listed.

· **Chemicals known to cause developmental toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **EPA (Environmental Protection Agency):**

Substance is not listed.

· **IARC (International Agency for Research on Cancer):**

Substance is not listed.

· **Canadian Domestic Substances List (DSL):**

Substance is not listed.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Ox. Liq. 2: Oxidizing liquids – Category 2

Ox. Sol. 2: Oxidizing solids – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**

Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))

Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sor-internet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sor-internet/registry/substreg/home/overview/home.do))

Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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