

Safety Data Sheet


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

Revision: December 11, 2020

1 Identification

- **Product identifier**
- **Trade name:** Zinc Nitrate 2M
- **Product code:** ZN3419SS
- **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 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291
- **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. 3 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:** Warning
- **Hazard statements:**
H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

(Cont'd. on page 2)

Safety Data Sheet

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

Revision: December 11, 2020

Trade name: Zinc Nitrate 2M

(Cont'd. of page 1)

H335 May cause respiratory irritation.

· **Precautionary statements:**



- 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 mist, vapors, or spray.
- 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 Section 4 of this Safety Data Sheet.
- 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: Mixtures**

· **Components:**

10196-18-6	zinc(II) nitrate hexahydrate  Ox. Liq. 2, H272  Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	59.4%
7732-18-5	Water	40.6%

· **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.

· **After inhalation:**

Supply fresh air.

Provide oxygen treatment if affected person has difficulty breathing.

If experiencing respiratory symptoms: Call a doctor.

· **After skin contact:**

(Cont'd. on page 3)

Safety Data Sheet

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

Revision: December 11, 2020

Trade name: Zinc Nitrate 2M

(Cont'd. of page 2)

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Remove contact lenses if worn.

Rinse opened eye for 15 minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Irritating to eyes and skin.

Irritating to respiratory system and skin.

Nausea in case of ingestion.

Coughing

Irritant to skin and mucous membranes.

Causes eye irritation.

Causes skin irritation.

· **Danger:**

Causes serious eye irritation.

Causes skin irritation.

May cause respiratory irritation.

Danger of impaired breathing.

Harmful if swallowed.

· **Indication of any immediate medical attention and special treatment needed:**

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**

Contains oxidizing agent.

Substance/product is oxidizing when dry.

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.

Cool endangered containers with water fog.

(Cont'd. on page 4)

Safety Data Sheet

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

Revision: December 11, 2020

Trade name: Zinc Nitrate 2M

(Cont'd. of page 3)

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Take any precaution to avoid mixing with combustibles.
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.
- **Methods and material for containment and cleaning up**
Absorb liquid components with non-combustible liquid-binding material.
Substance/product is oxidizing when dry.
Send for recovery or disposal in suitable receptacles.
- **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.
Substance/product is oxidizing when dry.
- **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 flammable substances.
Store away from reducing agents.
- **Further information about storage conditions:** Keep containers tightly sealed.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **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.

(Cont'd. on page 5)

Safety Data Sheet

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

Revision: December 11, 2020

Trade name: Zinc Nitrate 2M

(Cont'd. of page 4)

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:**

Form: Liquid

Color: Colorless

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Melting point/Melting range:** Not determined.

· **Boiling point/Boiling range:** Not determined.

· **Flash point:** The product is not flammable.

· **Flammability (solid, gaseous):** Not applicable.

(Cont'd. on page 6)

Safety Data Sheet

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

Revision: December 11, 2020

Trade name: Zinc Nitrate 2M

(Cont'd. of page 5)

· Auto-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits	
Lower:	Not determined.
Upper:	Not determined.
· Oxidizing properties:	Not determined.
· Vapor pressure:	Not determined.
· Density:	
Relative density:	Not determined.
Vapor density:	Not determined.
Evaporation rate:	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	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**
Substance/product is oxidizing when dry.
Toxic fumes may be released if heated above the decomposition point.
Reacts with reducing agents.
- **Conditions to avoid**
Keep ignition sources away - Do not smoke.
Keep away from oxidising agents.
- **Incompatible materials**
Flammable materials.
Reducing agents.
- **Hazardous decomposition products**
Under fire conditions only:
Nitrogen oxides (NOx)
Toxic metal oxide smoke

11 Toxicological information

(Cont'd. on page 7)

Safety Data Sheet

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

Revision: December 11, 2020

Trade name: Zinc Nitrate 2M

(Cont'd. of page 6)

· **Information on toxicological effects**

· **Acute toxicity:**

Causes skin and eye irritation.
Harmful if swallowed.

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	LD50	842 mg/kg
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· **Primary irritant effect:**

- **On the skin:** Irritant to skin and mucous membranes.
- **On the eye:** Causes eye irritation.
- **Sensitization:** May cause sensitization by skin contact.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are 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:** May cause respiratory irritation.
- **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.
- **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.

(Cont'd. on page 8)

Safety Data Sheet

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

Revision: December 11, 2020

Trade name: Zinc Nitrate 2M

(Cont'd. of page 7)

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

· UN-Number

· DOT, ADR/RID/ADN, IMDG, IATA UN3218

· UN proper shipping name

· DOT Nitrates, inorganic, aqueous solution, n.o.s. (Zinc Nitrate solution)

· ADR/RID/ADN NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S., ENVIRONMENTALLY HAZARDOUS (ZINC NITRATE)

· IMDG NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S., MARINE POLLUTANT (ZINC NITRATE)

· IATA NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S. (ZINC NITRATE)

· Transport hazard class(es)

· DOT



· Class 5.1

· Label 5.1

· ADR/RID/ADN



· Class 5.1 (O1)

· Label 5.1

· IMDG



(Cont'd. on page 9)

Safety Data Sheet


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

Revision: December 11, 2020

Trade name: Zinc Nitrate 2M

(Cont'd. of page 8)

· 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):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

· TSCA (Toxic Substances Control Act)

All ingredients are listed or exempt.

· Proposition 65 (California)

· Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

(Cont'd. on page 10)

Safety Data Sheet

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

Revision: December 11, 2020

Trade name: Zinc Nitrate 2M

(Cont'd. of page 9)

None of the ingredients are listed.

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

None of the ingredients are listed.

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

None of the ingredients are listed.

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

All ingredients listed on DSL or NDSL.

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. Liq. 3: Oxidizing liquids – Category 3

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)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (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