

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 01.16.2018

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## Nickel Sulfate

### SECTION 1: Identification

#### Product identifier

**Product name:** Nickel Sulfate

**Product code:** S25445

#### Recommended use of the product and restriction on use

**Relevant identified uses:** Not determined or not applicable.

**Uses advised against:** Not determined or not applicable.

**Reasons why uses advised against:** Not determined or not applicable.

#### Manufacturer or supplier details

**Manufacturer:**

**Supplier:**

AquaPhoenix Scientific

860 Gitts Run Road

Hanover

PA 17331

(717) 632-1291

Fisher Science Education

6771 Silver Crest Road

Nazareth

PA 18064

800 955-1177

#### Emergency telephone number:

**United States**

Emergency Telephone No.: 800-255-3924

### SECTION 2: Hazard(s) identification

#### GHS classification:

Acute toxicity (oral), category 4

Acute toxicity (inhalation), category 4

Skin irritation, category 2

Skin sensitization, category 1

Respiratory sensitization, category 1

Germ cell mutagenicity, category 2

Carcinogenicity, category 1A

Reproductive toxicity, category 1B

Specific target organ toxicity - repeated exposure, category 1

Acute aquatic hazard, category 1

Chronic aquatic hazard, category 1

#### Label elements

##### Hazard pictograms:



**Signal word:** Danger

#### Hazard statements:

H302 Harmful if swallowed

H332 Harmful if inhaled

H315 Causes skin irritation

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- H317 May cause an allergic skin reaction
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H341 Suspected of causing genetic defects
- H350 May cause cancer
- H360 May damage fertility or the unborn child
- H372 Causes damage to organs through prolonged or repeated exposure
- H400 Very toxic to aquatic life
- H410 Very toxic to aquatic life with long lasting effects

### Precautionary statements:

- P264 Wash skin 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
- P272 Contaminated work clothing should not be allowed out of the workplace
- P285 In case of inadequate ventilation wear respiratory protection
- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- P260 Do not breathe dust/fume/gas/mist/vapors/spray
- P273 Avoid release to the environment
- P301+P330+P312 IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
- P304+P340+P312 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell
- P321 Specific treatment (see supplemental first aid instructions on this label).
- P362 Take off contaminated clothing and wash before reuse
- P302+P352 If on skin: Wash with soap and water
- P333+P313 If skin irritation or a rash occurs: Get medical advice/attention
- P308+P313 If exposed or concerned: Get medical advice/attention
- P391 Collect spillage
- P405 Store locked up
- P501 Dispose of contents and container as instructed in Section 13

**Hazards not otherwise classified:** None

## SECTION 3: Composition/information on ingredients

| Identification            | Name           | Weight % |
|---------------------------|----------------|----------|
| CAS number:<br>10101-97-0 | Nickel sulfate | 100      |

**Additional Information:** None

## SECTION 4: First aid measures

### Description of first aid measures

#### General notes:

Not determined or not applicable.

#### After inhalation:

- Loosen clothing as necessary and position individual in a comfortable position
- Maintain an unobstructed airway
- Move to fresh air
- Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

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### After skin contact:

Rinse affected area with soap and water  
If symptoms develop or persist, seek medical attention  
Wash affected area with soap and water  
Seek medical attention if symptoms develop or persist

### After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes  
If symptoms develop or persist, seek medical attention

### After swallowing:

Rinse mouth thoroughly  
Seek medical attention if irritation, discomfort, or vomiting persists  
Call a POISON CONTROL CENTER or seek medical attention if you feel unwell  
Do not induce vomiting  
Rinse mouth and then drink plenty of water

### Most important symptoms and effects, both acute and delayed

#### Acute symptoms and effects:

Not determined or not applicable.

#### Delayed symptoms and effects:

Not determined or not applicable.

### Immediate medical attention and special treatment

#### Specific treatment:

Not determined or not applicable.

#### Notes for the doctor:

Not determined or not applicable.

## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

#### Unsuitable extinguishing media:

Not determined or not applicable.

### Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

### Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing  
Refer to Section 8

### Special precautions:

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols  
Avoid contact with skin, eyes and clothing

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation  
Ensure air handling systems are operational  
Wear protective eye wear, gloves and clothing

### Environmental precautions:

Should not be released into the environment

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Prevent from reaching drains, sewer or waterway

### Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing

### Reference to other sections:

Not determined or not applicable.

## SECTION 7: Handling and storage

### Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances.

Avoid breathing mist or vapor.

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

Store in a cool, well-ventilated area.

## SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

### Occupational Exposure limit values:

| Country (Legal Basis) | Substance      | Identifier | Permissible concentration                                   |
|-----------------------|----------------|------------|---|
| ACGIH                 | Nickel sulfate | 10101-97-0 | ACGIH TLV 0.1 mg/m <sup>3</sup> , inhalable fraction, as Ni |
| United States (OSHA)  | Nickel sulfate | 10101-97-0 | OSHA PEL 1 mg/m <sup>3</sup> , as Ni                        |

### Biological limit values:

No biological exposure limits noted for the ingredient(s).

### Information on monitoring procedures:

Not determined or not applicable.

### Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

### Personal protection equipment

#### Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

#### Skin and body protection:

Select glove material impermeable and resistant to the substance.

#### Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

### General hygienic measures:

Wash hands before breaks and at the end of work.

Avoid contact with skin, eyes and clothing.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

|                |                                  |
|----------------|----------------------------------|
| Appearance     | Blue - green solid               |
| Odor           | Odorless                         |
| Odor threshold | Not determined or not available. |
| pH             | 4 - 5                            |

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|  |                                  |
|--|----------------------------------|
| <b>Melting point/freezing point</b>            | 53°C (124°F)                     |
| <b>Initial boiling point/range</b>             | Not determined or not available. |
| <b>Flash point (closed cup)</b>                | Not determined or not available. |
| <b>Evaporation rate</b>                        | Not determined or not available. |
| <b>Flammability (solid, gas)</b>               | Not determined or not available. |
| <b>Upper flammability/explosive limit</b>      | Not determined or not available. |
| <b>Lower flammability/explosive limit</b>      | Not determined or not available. |
| <b>Vapor pressure</b>                          | Negligible                       |
| <b>Vapor density</b>                           | Not determined or not available. |
| <b>Density</b>                                 | Not determined or not available. |
| <b>Relative density</b>                        | 1.30 g/cm <sup>3</sup>           |
| <b>Solubilities</b>                            | Soluble in water.                |
| <b>Partition coefficient (n-octanol/water)</b> | Not determined or not available. |
| <b>Auto/Self-ignition temperature</b>          | Not determined or not available. |
| <b>Decomposition temperature</b>               | 280°C                            |
| <b>Dynamic viscosity</b>                       | Not determined or not available. |
| <b>Kinematic viscosity</b>                     | Not determined or not available. |
| <b>Explosive properties</b>                    | Not determined or not available. |
| <b>Oxidizing properties</b>                    | Not determined or not available. |

### Other information

#### SECTION 10: Stability and reactivity

**Reactivity:**

Does not react under normal conditions of use and storage.

**Chemical stability:**

Stable under normal conditions of use and storage.

**Possibility of hazardous reactions:**

None under normal conditions of use and storage.

**Conditions to avoid:**

Dust generation.

**Incompatible materials:**

Strong acids.

**Hazardous decomposition products:**

Sulphur oxides. Nickel oxide.

#### SECTION 11: Toxicological information

**Acute toxicity**

**Assessment:** Harmful if swallowed Harmful if inhaled

**Product data:** No data available.

**Substance data:**

| Name           | Route | Result                 |
|----------------|-------|------------------------|
| Nickel sulfate | oral  | LD50 - Rat - 264 mg/kg |

**Skin corrosion/irritation**

**Assessment:** Causes skin irritation

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**Product data:** No data available.

**Substance data:**

| Name           | Result                  |
|----------------|-------------------------|
| Nickel sulfate | Causes skin irritation. |

### Serious eye damage/irritation

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Respiratory or skin sensitization

**Assessment:** May cause an allergic skin reaction May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Product data:** No data available.

**Substance data:**

| Name           | Result   |
|----------------|--|
| Nickel sulfate | May cause an allergic skin reaction.                                       |
|                | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |

### Carcinogenicity

**Assessment:** May cause cancer

**Product data:** No data available.

**Substance data:**

| Name           | Species                         | Result            |
|----------------|---------------------------------|-------------------|
| Nickel sulfate | Nickel (II) sulfate hexahydrate | May cause cancer. |

**International Agency for Research on Cancer (IARC):** None of the ingredients are listed.

**National Toxicology Program (NTP):**

| Name           | Classification                |
|----------------|-------------------------------|
| Nickel sulfate | Known to be human carcinogens |

### Germ cell mutagenicity

**Assessment:** Suspected of causing genetic defects

**Product data:** No data available.

**Substance data:**

| Name           | Result                                |
|----------------|---------------------------------------|
| Nickel sulfate | Suspected of causing genetic defects. |

### Reproductive toxicity

**Assessment:** May damage fertility or the unborn child

**Product data:** No data available.

**Substance data:**

| Name           | Result                                    |
|----------------|---|
| Nickel sulfate | May damage fertility or the unborn child. |

### Specific target organ toxicity (single exposure)

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:**

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| Name           | Result  |
|----------------|---|
| Nickel sulfate | Specific Target Organ Toxicity, Repeated Exposure - Causes damage to organs through prolonged or repeated exposure. |

### Specific target organ toxicity (repeated exposure)

**Assessment:** Causes damage to organs through prolonged or repeated exposure

**Product data:** No data available.

**Substance data:** No data available.

### Aspiration toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

**Information on likely routes of exposure:** No data available.

**Symptoms related to the physical, chemical and toxicological characteristics:** No data available.

**Other information:** No data available.

## SECTION 12: Ecological information

### Acute (short-term) toxicity

**Assessment:** Very toxic to aquatic life

**Product data:** No data available.

**Substance data:** No data available.

### Chronic (long-term) toxicity

**Product data:** No data available.

**Substance data:** No data available.

### Persistence and degradability

**Product data:** No data available.

**Substance data:** No data available.

### Bioaccumulative potential

**Product data:** No data available.

**Substance data:** No data available.

### Mobility in soil

**Product data:** No data available.

**Substance data:** No data available.

**Other adverse effects:** No data available.

## SECTION 13: Disposal considerations

### Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

## SECTION 14: Transport information

### United States Transportation of dangerous goods (49 CFR DOT)

|                               |  |
|-------------------------------|--|
| UN number                     | UN3288   |
| UN proper shipping name       | Toxic Solid, Inorganic, n.o.s. (Nickel (II) sulfate hexahydrate (1:1:6)) |
| UN transport hazard class(es) | 6.1  |



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**Nickel Sulfate**

|                                     |                  |
|-------------------------------------|------------------|
| <b>Packing group</b>                | III              |
| <b>Environmental hazards</b>        | Marine Pollutant |
| <b>Special precautions for user</b> | None             |

**International Maritime Dangerous Goods (IMDG)**

|                                      |   |
|--------------------------------------|---|
| <b>UN number</b>                     | UN3288  |
| <b>UN proper shipping name</b>       | Toxic Solid, Inorganic, n.o.s. (Nickel (II) sulfate hexahydrate (1:1:6))  |
| <b>UN transport hazard class(es)</b> | 6.1   |
| <b>Packing group</b>                 | III   |
| <b>Environmental hazards</b>         | Marine Pollutant  |
| <b>Special precautions for user</b>  | None  |

**International Air Transport Association Dangerous Goods Regulations (IATA-DGR)**

|                                      |   |
|--------------------------------------|---|
| <b>UN number</b>                     | UN3288  |
| <b>UN proper shipping name</b>       | Toxic Solid, Inorganic, n.o.s. (Nickel (II) sulfate hexahydrate (1:1:6))  |
| <b>UN transport hazard class(es)</b> | 6.1   |
| <b>Packing group</b>                 | III   |
| <b>Environmental hazards</b>         | Marine Pollutant  |
| <b>Special precautions for user</b>  | None  |

**SECTION 15: Regulatory information**

**United States regulations**

**Inventory listing (TSCA):**

|            |                |            |
|------------|----------------|------------|
| 10101-97-0 | Nickel sulfate | Not Listed |
|------------|----------------|------------|

**Significant New Use Rule (TSCA Section 5):** Not determined.

**Export notification under TSCA Section 12(b):** Not determined.

**SARA Section 311/312 hazards:**

|       |         |      |          |          |
|-------|---------|------|----------|----------|
| Acute | Chronic | Fire | Pressure | Reactive |
| No    | No      | No   | No       | No       |

**SARA Section 302 extremely hazardous substances:** Not determined.

**SARA Section 313 toxic chemicals:**

|            |                |            |
|------------|----------------|------------|
| 10101-97-0 | Nickel sulfate | Not Listed |
|------------|----------------|------------|

**CERCLA:** Not determined.

**RCRA:** Not determined.

**Section 112(r) of the Clean Air Act (CAA):** Not determined.



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### Massachusetts Right to Know:

|            |                |        |
|------------|----------------|--------|
| 10101-97-0 | Nickel sulfate | Listed |
|------------|----------------|--------|

### New Jersey Right to Know:

|            |                |        |
|------------|----------------|--------|
| 10101-97-0 | Nickel sulfate | Listed |
|------------|----------------|--------|

### New York Right to Know:

|            |                |        |
|------------|----------------|--------|
| 10101-97-0 | Nickel sulfate | Listed |
|------------|----------------|--------|

### Pennsylvania Right to Know:

|            |                |        |
|------------|----------------|--------|
| 10101-97-0 | Nickel sulfate | Listed |
|------------|----------------|--------|

### California Proposition 65:

WARNING: This product contains a chemical known to the State of California to cause cancer.

|            |                |
|------------|----------------|
| 10101-97-0 | Nickel sulfate |
|------------|----------------|

## SECTION 16: Other information

**Abbreviations and Acronyms:** None

### Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**NFPA:** 2-0-0

**HMIS:** 2-0-0-X

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**End of Safety Data Sheet**