

## SAFETY DATA SHEET

Preparation Date: 4/5/2017

Revision date 5/7/2019

Revision Number: G2

### 1. IDENTIFICATION

**Product identifier**

**Product code:** N1069  
**Product Name:** NICKEL SULFATE, HEXAHYDRATE, CRYSTAL, PURIFIED

**Other means of identification**

**Synonyms:** Nickel monosulfate hexahydrate  
 Nickel sulfate hexahydrate  
 Nickel sulphate hexahydrate  
 Nickel (2+) sulfate hexahydrate  
 Nickel (II) sulfate hexahydrate  
 Nickelous sulfate hexahydrate  
 Sulfuric acid, nickel (2+) salt, hexahydrate

**CAS #:** 10101-97-0  
**RTECS #** QR9600000  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** Mordant in textile and leather industries. Production of steel. Electroplating agent.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Tom Tyner (USA - West Coast)  
**Contact Person:** Ibad Tirmiz (USA - East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)


Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Gases)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2

Carcinogenicity	Category 1A
Reproductive toxicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

**Label elements**

**Danger**

**Hazard statements**  
 Toxic if swallowed  
 Harmful if inhaled  
 Causes skin irritation  
 Causes eye irritation  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 May cause an allergic skin reaction  
 Suspected of causing genetic defects  
 May cause cancer  
 May damage fertility or the unborn child  
 May cause damage to organs through prolonged or repeated exposure



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- In case of inadequate ventilation wear respiratory protection
- Contaminated work clothing must not be allowed out of the workplace
- Wear protective gloves/protective clothing/eye protection/face protection
- Do not breathe dust

**Precautionary Statements - Response**

- Immediately call a POISON CENTER or physician*
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- IF ON SKIN: Wash with plenty of water
- Take off contaminated clothing and wash it before reuse
- If skin irritation or rash occurs: Get medical attention
- IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a

POISON CENTER or doctor/physician.  
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
Rinse mouth

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS No	Weight-%
Nickel Sulfate, Hexahydrate	10101-97-0	100

**4. FIRST AID MEASURES**

**First aid measures**

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
- Skin Contact:** Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. Get medical attention immediately. Call a physician immediately.
- Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.
- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention. Call a physician immediately.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician immediately.

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

- Symptoms** May cause allergy or asthma symptoms or breathing difficulties if inhaled  
Causes skin irritation  
Causes eye irritation  
May cause an allergic skin reaction

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

- Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

- Suitable Extinguishing Media:** The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

**Unsuitable Extinguishing Media:** No information available.

**Specific hazards arising from the chemical**

**Hazardous combustion products** If it is involved in a fire the following can be released:  
Sulfur oxides. Nickel oxides.

**Specific hazards** No information available.

**Special Protective Actions for Firefighters**

**Specific Methods:** No information available

**Special Protective Equipment for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions:** Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and clothing. Avoid breathing dust.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers.

**Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

**Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

**Incompatible Materials:**

Oxidizing agents  
 Acids  
 Aniline  
 Hydrogen Sulfide  
 Hydrazine  
 Zinc  
 Aluminum  
 Magnesium

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### National occupational exposure limits

##### United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Nickel Sulfate, Hexahydrate	10101-97-0	1 mg/m <sup>3</sup> TWA (as Ni)	0.015 mg/m <sup>3</sup> TWA (as Ni except nickel carbonyl)	0.1 mg/m <sup>3</sup> TWA (as Ni)	None

##### Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Nickel Sulfate, Hexahydrate	10101-97-0	0.1 mg/m <sup>3</sup> TWA (as Ni)	0.05 mg/m <sup>3</sup> TWA (as Ni)	0.1 mg/m <sup>3</sup> TWA (as Ni)	0.1 mg/m <sup>3</sup> TWAEV (as Ni)

##### Australia and Mexico

Component	CAS No	Australia	Mexico
Nickel Sulfate, Hexahydrate	10101-97-0	0.1 mg/m <sup>3</sup> TWA (as Ni)	0.1 mg/m <sup>3</sup> TWA (as Ni)

### Appropriate engineering controls

#### Engineering measures to reduce exposure:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

- Eye protection:** Goggles or Safety glasses with side-shields.
- Skin and body protection:** Long sleeved clothing  
 Chemical resistant apron  
 Gloves
- Respiratory protection:** Effective dust mask. or. Wear respirator with dust filter.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Solid	<b>Appearance:</b> Crystalline solid.	<b>Color:</b> Blue. Blue green.
<b>Odor:</b> Odorless.	<b>Taste</b> No information available.	<b>Formula</b> NiSO4·6H2O
<b>Molecular/Formula weight (g/mole):</b> 262.85 g/mol	<b>Flammability (solid, gas)</b> no data available	<b>Flashpoint (°C/°F):</b> No information available
<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> 53°C/ 127.4°F	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 103°C/ 217.4°F	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> No information available
<b>Specific gravity:</b> 2.07	<b>pH</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> 9.1	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> 5	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> Soluble in cold water Soluble in hot water Solubility of water: 650 g/l @20°C, 3,407 g/l @ 100°C	

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents  
Reacts with acid, aniline, hydrogen sulfide, hydrazine zinc, aluminum, magnesium.

### Chemical stability

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Incompatible materials.

**Incompatible Materials:** Oxidizing agents  
Acids  
Aniline  
Hydrogen Sulfide  
Hydrazine  
Zinc  
Aluminum  
Magnesium

**Hazardous decomposition** Nickel oxides. Sulfur oxides.

**products:**

**Other Information**

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Principal Routes of Exposure:**

Inhalation. Ingestion.

**Acute Toxicity**

**Component Information**

Nickel Sulfate, Hexahydrate	
CAS No	10101-97-0

**LD50/oral/rat** = 264 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50 information** = No information available

**Product Information**

**LD50/oral/rat** =  
**Value - Acute Tox** = 264 mg/kg

**LD50/oral/mouse** =  
**Value - Acute Tox Oral** = No information available

**LD50/dermal/rabbit**  
**Value - Acute Tox** = No information available

**LD50/dermal/rat**  
**VALUE - Acute Tox Dermal** = No information available

**LC50/inhalation/rat**  
**VALUE-Vapor** = No information available  
**VALUE-Gas** = No information available  
**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor** = No information available  
**VALUE - Gas** = No information available  
**VALUE - Dust/Mist** = No information available

**Symptoms**

**Skin Contact:** May cause skin irritation. May cause sensitization by skin contact.

**Eye Contact:** May cause slight or mild eye irritation.

**Inhalation** Harmful by inhalation. May cause irritation of respiratory tract.

**Ingestion** Toxic if swallowed. May affect behavior/central nervous system (somnolence).

**Aspiration hazard** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** Repeated or prolonged skin contact may cause skin sensitization. Prolonged or repeated inhalation may cause rhinitis, bronchitis, sinusitis, allergies, respiratory sensitization. Ingestion: Prolonged or repeated ingestion may cause cancer. It may also affect the blood, kidney, liver, pancreas (hypoglycemia), and cause anorexia/weight loss.

**Sensitization:** May cause sensitization by inhalation and skin contact.

**Mutagenic Effects:** Suspected of causing genetic defects  
Mutagenic effects in mammalian somatic cells  
DNA Damage - human lymphocyte  
Cytogenic Analysis (Hamster embryo)

**Carcinogenic effects:** May cause cancer.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Nickel Sulfate, Hexahydrate	10101-97-0	Group 1 - Carcinogenic to humans - Monograph 49 [1990] Nickel and nickel compounds	Group A4- Not Classifiable as a human carcinogen (for Nickel soluble inorganic compounds)	Known Human Carcinogen Nickel compounds and metallic nickel	Present	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** May damage fertility or the unborn child

**Reproductive Effects:** No information available  
**Developmental Effects:** No information available  
**Teratogenic Effects:** May cause birth defects (teratogenic effects)  
 May cause harm to the unborn child

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Target Organs:** No information available.



## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity effects:** Aquatic environment.  
*Nickel Sulfate, Hexahydrate - 10101-97-0*  
**Crustacea** LC50 Daphnia magna 0.13 mg/l 3 weeks  
**Persistence and degradability:** No information available  
**Bioaccumulative potential:** No information available.  
**Mobility in soil** No information available  
**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

**Waste from residues / unused products:**  
Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**  
Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Nickel Sulfate, Hexahydrate	10101-97-0	None	None	None	None

## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** UN3288  
**Proper Shipping Name:** Toxic solid, inorganic, n.o.s. (nickel sulfate, hexahydrate)  
**Hazard Class** 6.1  
**Subsidiary Class** No information available  
**Packing group:** III  
**Emergency Response Guide Number** 151  
**Marine Pollutant** Severe Marine Pollutant  
**DOT RQ (lbs):** No information available  
**Special Provisions** IB8, IP3, T1, TP33  
**Symbol(s):** [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.  
**Description:** UN3288, Toxic solid, inorganic, n.o.s. (Nickel Sulfate, Hexahydrate), 6.1, III

### TDG (Canada)

**UN-No:** UN3288  
**Proper Shipping Name:** Toxic solid, inorganic, n.o.s. (nickel sulfate, hexahydrate)  
**Hazard Class** 6.1  
**Subsidiary Risk:** No information available

**Product code:** N1069

**Product name:** NICKEL SULFATE,  
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**Packing Group:** III  
**Marine Pollutant Description:** No Information available  
UN3288, Toxic solid, inorganic, n.o.s. (Nickel Sulfate, Hexahydrate), 6.1, III

**ADR**

**UN Number:** UN3288  
**Proper Shipping Name:** Toxic solid, inorganic, n.o.s. (nickel sulfate, hexahydrate)  
**Transport hazard class(es):** 6.1  
**Packing group:** III  
**Subsidiary Risk:** No information available  
**Special Provisions:** 274  
**Description:** UN3288, Toxic solid, inorganic, n.o.s. (Nickel Sulfate, Hexahydrate), 6.1, III, ENVIRONMENTALLY HAZARDOUS

**IMDG**

**UN-No:** UN3288  
**Proper Shipping Name:** Toxic solid, inorganic, n.o.s. (nickel sulfate, hexahydrate)  
**Hazard Class:** 6.1  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant:** No information available  
**EMS:** F-A  
**Special Provisions:** 223, 274  
**Description:** UN3288, Toxic solid, inorganic, n.o.s. (NICKEL SULFATE, HEXAHYDRATE), 6.1, III, Marine pollutant

**RID**

**UN Number:** UN3288  
**Proper Shipping Name:** Toxic solid, inorganic, n.o.s. (nickel sulfate, hexahydrate)  
**Transport hazard class(es):** 6.1  
**Subsidiary Risk:** No information available  
**Packing group:** III  
**Special Provisions:** 274  
**Description:** UN3288, Toxic solid, inorganic, n.o.s. (Nickel Sulfate, Hexahydrate), 6.1, III, ENVIRONMENTALLY HAZARDOUS

**ICAO (air)**

**UN-No:** UN3288  
**Proper Shipping Name:** Toxic solid, inorganic, n.o.s. (nickel sulfate, hexahydrate)  
**Hazard Class:** 6.1  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Description:** UN3288, Toxic solid, inorganic, n.o.s. (Nickel Sulfate, Hexahydrate), 6.1, III  
**Special Provisions:** A3, A5

**IATA**

**UN Number:** UN3288  
**Proper Shipping Name:** Toxic solid, inorganic, n.o.s. (nickel sulfate, hexahydrate)  
**Transport hazard class(es):** 6.1  
**Subsidiary Risk:** No information available  
**Packing group:** III  
**Precautionary Statements - Response:** 6L  
**Special Provisions:** No information available  
**Description:** UN3288, Toxic solid, inorganic, n.o.s. (Nickel Sulfate, Hexahydrate), 6.1, III

**15. REGULATORY INFORMATION**

## International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
Nickel Sulfate, Hexahydrate	10101-97-0	Not listed. It is exempt from listing on the TSCA 8(b) Inventory since it is a hydrate. However, the anhydrous form (CAS no. 7786-81-4) is listed as ACTIVE on the TSCA 8(b) Inventory	Not present	Present	Present (1)-813	Present	Not listed	Not present

## U.S. Regulations

Nickel Sulfate, Hexahydrate

**New Jersey RTK Hazardous Substance List:** 4058

**New Jersey (EHS) List:** Present (as nickel compounds) (sn 2366 500 lb. TPQ)


**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present (nickel compounds)

**Minnesota - Hazardous Substance List:** Present (carcinogen as Ni)

**California Directors List of Hazardous Substances:** Present (as nickel compounds)

### California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

#### Chemicals Known to the State of California to Cause Cancer:

 **WARNING:** This product can expose you to chemicals including (see table below) which is (are) known to the State of California to cause cancer. For more information go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

#### Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Nickel Sulfate, Hexahydrate	10101-97-0	carcinogen (nickel compounds)	Not Listed	Not Listed	Not Listed

## CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Nickel Sulfate, Hexahydrate	10101-97-0	None	None	None	None	None

## U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Nickel Sulfate, Hexahydrate	10101-97-0	Not Applicable	Not Applicable

## Canada

### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Nickel Sulfate, Hexahydrate  
10101-97-0 ( 100 )

WHMIS 2015 Hazard Classification  
Acute toxicity - Oral - Category 3: H301 Toxic if swallowed.;  
Respiratory sensitizers - Category 1: H334 May cause allergic or  
asthmatic symptoms or breathing difficulties if inhaled.; Skin  
sensitizers - Category 1: H317 May cause allergic skin reaction.;  
Carcinogenicity - Category 1A: H350 May cause cancer.;  
Reproductive Toxicity - Category 1B: H360 May damage fertility or  
the unborn child.; Reproductive Toxicity - Category 2: H361  
Suspected of damaging fertility or the unborn child.; Specific  
target organ toxicity - Repeated exposure - Category 1: H372  
Causes damage to organs through prolonged or repeated  
exposure.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

### DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Nickel Sulfate, Hexahydrate	10101-97-0	Not Listed	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Nickel Sulfate, Hexahydrate	10101-97-0	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Nickel Sulfate, Hexahydrate	10101-97-0	Not listed

### EU Classification

#### EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Nickel Sulfate, Hexahydrate	10101-97-0	Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification); Acute toxicity - Inhalation - Acute Tox. 4: H332 Harmful if inhaled. (Minimum classification); Skin corrosion/irritation - Skin Irrit. 2: H315 Causes skin irritation. (C >= 20 %); Respiratory sensitizers - Resp. Sens. 1: H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.; Skin sensitizers - Skin Sens. 1: H317 May cause allergic skin reaction. (C >= 0.01 %); Germ cell mutagenicity - Muta. 2: H341 Suspected of causing genetic defects.; Carcinogenicity - Inhalation - Carc. 1A: H350 May cause cancer by inhalation.; Reproductive Toxicity - Repr. 1B: H360D May

		<p>damage the unborn child. (Hazard statements H360 and H361 indicate a general concern for effects on both fertility and development: May damage/Suspected of damaging fertility or the unborn child; According to the criteria, the general hazard statement can be replaced by the hazard statement indicating the specific effect of concern in accordance with section 1.1.2.1.2; When the other differentiation is not mentioned, this is due to evidence proving no such effect, inconclusive data or no data and the obligations in Article 4(3) shall apply for that differentiation); Specific target organ toxicity - Repeated exposure - STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure. (C &gt;= 1 %; No information to prove exclusion of certain routes of exposure); Hazardous to aquatic environment - acute hazard - Aquatic Acute 1: H400 Very toxic to aquatic life. (M Factor: 1); Hazardous to aquatic environment - chronic hazard - Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects. (M Factor: 1)028-009-00-5</p> <p>Skin corrosion/irritation - Skin Irrit. 2: H315 Causes skin irritation. (C &gt;= 20 %); Skin sensitizers - Skin Sens. 1: H317 May cause allergic skin reaction. (C &gt;= 0.01 %); Specific target organ toxicity - Repeated exposure - STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure. (C &gt;= 1 %; No information to prove exclusion of certain routes of exposure); Specific target organ toxicity - Repeated exposure - STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure. (0.1 % &lt;= C &lt;1 %)028-009-00-5</p>
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EU - CLP (1272/2008)

**R-phrase(s)**

- R38 - Irritating to skin
- R49 - May cause cancer by inhalation
- R50 - Very toxic to aquatic organisms
- R53 - May cause long-term adverse effects in the aquatic environment
- R61 - May cause harm to the unborn child
- R68 - Possible risk of irreversible effects
- R20/22 - Harmful by inhalation and if swallowed
- R42/43 - May cause sensitization by inhalation and skin contact
- R48/23 - Toxic: danger of serious damage to health by prolonged exposure through inhalation

**S -phrase(s)**

- S53 - Avoid exposure - obtain special instructions before use

Product code: N1069

Product name: NICKEL SULFATE,  
HEXAHYDRATE, CRYSTAL,  
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S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S60 - This material and its container must be disposed of as hazardous waste

S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Nickel Sulfate, Hexahydrate	10101-97-0		1%≤C T; R48/23 0.1%≤C<1% Xn; R48/20 20%≤C Xi; R38 0.01%≤C R43 25%≤C N; R50-53 2.5%≤C<25% N; R51-53 0.25%≤C<2.5% R52-53	S:53-45-60-61

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

T - Toxic

Xn - Harmful

Xi - Irritant

N - Dangerous for the environment

Xn



Xi



T



**16. OTHER INFORMATION**

Preparation Date:

4/5/2017

Revision date

5/7/2019

Prepared by:

Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**

**Product code:** N1069

**Product name:** NICKEL SULFATE,  
HEXAHYDRATE, CRYSTAL,  
PURIFIED

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