

SAFETY DATA SHEET

Preparation Date: 4/5/2017

Revision date 5/7/2019

Revision Number: G2

1. IDENTIFICATION

Product identifier

Product code: N1070
Product Name: NICKEL SULFATE, HEXAHYDRATE, CRYSTAL, REAGENT, ACS

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 ³ TWA (as Ni)	0.015 mg/m ³ TWA (as Ni except nickel carbonyl)	0.1 mg/m ³ 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 ³ TWA (as Ni)	0.05 mg/m ³ TWA (as Ni)	0.1 mg/m ³ TWA (as Ni)	0.1 mg/m ³ TWAEV (as Ni)

Australia and Mexico

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

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

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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.

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

WHIMIS 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 >= 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 >= 20 %); Skin sensitizers - Skin Sens. 1: H317 May cause allergic skin reaction. (C >= 0.01 %); Specific target organ toxicity - Repeated exposure - STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure. (C >= 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 % <= C <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

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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: N1070

Product name: NICKEL SULFATE,
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