

# Nickel(II) sulfate hexahydrate: sc-212369



The Power to Question

## MATERIAL SAFETY DATA SHEET

### 1 Identification of substance:

**Product Name:** Nickel(II) sulfate hexahydrate  
**Catalog Number:** sc-212369  
**Supplier:** Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800  
**Emergency:** ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

### 2 Hazards identification

**Classification of the substance or mixture**  
**Classification according to Regulation (EC) No 1272/2008**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Muta. 2 H341 Suspected of causing genetic defects.  
Carc. 1A H350 May cause cancer.  
Repr. 1B H360 May damage fertility or the unborn child.  
STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.  
Acute Tox. 4 H332 Harmful if inhaled.  
Skin Irrit. 2 H315 Causes skin irritation.  
Skin Sens. 1 H317 May cause an allergic skin reaction.

**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



T; Toxic

R49-61-48/23: May cause cancer by inhalation. May cause harm to the unborn child. Toxic: danger of serious damage to health by prolonged exposure through inhalation.



Xn; Harmful

R20/22-68: Harmful by inhalation and if swallowed. Possible risk of irreversible effects.



Xn; Sensitizing

R42/43: May cause sensitization by inhalation and skin contact.



Xi; Irritant

R38: Irritating to skin.



N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment: Not applicable

#### Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

#### Hazard pictograms



GHS07

GHS08

Signal word **Danger**

#### Hazard statements

H302+H332 Harmful if swallowed or if inhaled.

H315 Causes skin irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

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.

#### Precautionary statements

P273 Avoid release to the environment.

P201 Obtain special instructions before use.

P309+P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

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

#### Hazard description:

##### WHMIS classification

D1B - Toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects



#### Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	2	Health (acute effects) = 2
FIRE	0	Flammability = 0
REACTIVITY	1	Reactivity = 1

#### Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

### 3 Composition/information on ingredients

Chemical characterization: Substances

CAS# Description:

10101-97-0 Nickel(II) sulfate hexahydrate

Identification number(s):

EC number: 232-104-9

Index number: 028-009-00-5

### 4 First aid measures

Description of first aid measures

#### After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

#### After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

**After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing** Seek medical treatment.

**Information for doctor**

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

No further relevant information available.

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

No further relevant information available.

## 5 Firefighting measures

**Extinguishing media****Suitable extinguishing agents**

Product is not flammable. Use fire fighting measures that suit the surrounding fire.

**Special hazards arising from the substance or mixture**

If this product is involved in a fire, the following can be released:

Sulfur oxides (SOx)

Toxic metal oxide fume

**Advice for firefighters****Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

## 6 Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

**Environmental precautions:**

Do not allow material to be released to the environment without proper governmental permits.

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**Prevention of secondary hazards:** No special measures required.

**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**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

**Information about protection against explosions and fires:** The product is not flammable

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

**Storage** Store at room temperature.

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Store away from oxidizing agents.

**Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

**Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**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.

**Additional information:** No data

#### Exposure controls

##### Personal protective equipment

##### General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

**Breathing equipment:** Use suitable respirator when high concentrations are present.

##### Protection of hands:

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality.

Quality will vary from manufacturer to manufacturer.

**Eye protection:** Safety glasses

**Body protection:** Protective work clothing.

## 9 Physical and chemical properties

#### Information on basic physical and chemical properties

##### General Information

##### Appearance:

**Form:** Crystalline

**Formula:** NiSO<sub>4</sub> 6H<sub>2</sub>O

**Weight:** 262.85

**pH-value (100 g/l) at 20°C (68 °F):** 4.3-4.7

##### Change in condition

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

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

**Sublimation temperature / start:** Not determined

**Flammability (solid, gaseous)** Not determined.

**Ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Auto igniting:** Not determined.

##### Explosion limits:

**Lower:** Not determined

**Upper:** Not determined

**Vapor pressure:** Not applicable.

**Density at 20°C (68 °F):** 2.07 g/cm<sup>3</sup> (17.274 lbs/gal)

**Relative density** Not determined.

**Vapor density** Not applicable.

**Evaporation rate** Not applicable.

##### Solubility in / Miscibility with

**Water at 20°C (68 °F):** 650 g/l

**Partition coefficient (n-octanol/water):** Not determined.

##### Viscosity:

**dynamic:** Not applicable.

**kinematic:** Not applicable.

**Other information** No further relevant information available.

## 10 Stability and reactivity

**Reactivity** No information known.

**Chemical stability** Stable under recommended storage conditions.

##### Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

**Possibility of hazardous reactions** Reacts with strong oxidizing agents

**Incompatible materials:** Oxidizing agents

##### Hazardous decomposition products:

Sulfur oxides (SO<sub>x</sub>)

Toxic metal oxide fume

## 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity:

Harmful if inhaled.

Toxic if swallowed.

The following RTECS statement/statements refer to the anhydrous compound:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

**LD/LC50 values that are relevant for classification:** No data

**Skin irritation or corrosion:** Causes skin irritation.

**Eye irritation or corrosion:** May cause irritation

#### Sensitization:

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

#### Germ cell mutagenicity:

Suspected of causing genetic defects.

The following RTECS statement/statements refer to the anhydrous compound:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.

#### Carcinogenicity:

May cause cancer.

The following cancer warning/warnings refer to the anhydrous compound:

IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity.

NTP-K: Known to be carcinogenic: sufficient evidence from human studies.

The following RTECS statement/statements refer to the anhydrous compound:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for components in this product.

#### Reproductive toxicity:

May damage fertility or the unborn child.

The following RTECS statement/statements refer to the anhydrous compound:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.

#### Specific target organ system toxicity - repeated exposure:

Causes damage to organs through prolonged or repeated exposure.

**Specific target organ system toxicity - single exposure:** No effects known.

**Aspiration hazard:** No effects known.

#### Subacute to chronic toxicity:

The following RTECS statement/statements refer to the anhydrous compound:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for components in this product.

#### Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

## 12 Ecological information

### Toxicity

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability** No further relevant information available.

### Behavior in environmental systems:

**Bioaccumulative potential** No further relevant information available.

**Mobility in soil** No further relevant information available.

### Ecotoxicological effects:

**Remark:** Very toxic for aquatic organisms

### Additional ecological information:

#### General notes:

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Do not allow material to be released to the environment without proper governmental permits.

May cause long lasting harmful effects to aquatic life.

Very toxic for aquatic organisms

### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

### 13 Disposal considerations








**Waste treatment methods**

**Recommendation** Consult state, local or national regulations to ensure proper disposal.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

<b>UN-Number</b> <b>DOT, ADR, IMDG, IATA</b>	UN3288
<b>UN proper shipping name</b> <b>DOT, IATA</b>  <b>ADR</b>  <b>IMDG</b>	TOXIC SOLID, INORGANIC, N.O.S. (Nickel(II) sulfate hexahydrate) 3288 TOXIC SOLID, INORGANIC, N.O.S. (Nickel(II) sulfate hexahydrate), ENVIRONMENTALLY HAZARDOUS TOXIC SOLID, INORGANIC, N.O.S. (Nickel(II) sulfate hexahydrate), MARINE POLLUTANT
<b>Transport hazard class(es)</b> <b>DOT</b>     <b>Class</b> <b>Label</b> <b>ADR</b>     <b>Class</b> <b>Label</b> <b>IMDG</b>     <b>Class</b> <b>Label</b> <b>IATA</b>    <b>Class</b> <b>Label</b>	   6.1 Toxic substances. 6.1    6.1 (T5) Toxic substances 6.1    6.1 Toxic substances. 6.1    6.1 Toxic substances. 6.1
<b>Packing group</b> <b>DOT, ADR, IMDG, IATA</b>	III
<b>Environmental hazards:</b>  <b>Marine pollutant:</b>  <b>Special marking (ADR):</b>	Environmentally hazardous substance, solid; Marine Pollutant Yes (P) Symbol (fish and tree) Symbol (fish and tree)
<b>Special precautions for user</b> <b>Danger code (Kemler):</b>	Warning: Toxic substances 60
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.

<b>Transport/Additional information:</b>	
DOT	
<b>Remarks:</b>	Special marking with the symbol (fish and tree).
<b>UN "Model Regulation":</b>	UN3288, TOXIC SOLID, INORGANIC, N.O.S. (Nickel(II) sulfate hexahydrate), ENVIRONMENTALLY HAZARDOUS, 6.1, III

## 15 Regulatory information

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

### **National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

This product contains a chemical known to the state of California to cause cancer and/or reproductive toxicity.

### **Information about limitation of use:**

For use only by technically qualified individuals.

This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

### **Other regulations, limitations and prohibitive regulations**

**Substances of very high concern (SVHC) according to REACH, Article 57**

Substance is not listed.

**REACH - Pre-registered substances** Substance is not listed.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information:

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

10/22/2013