Nickel(II) perchlorate hexahydrate: sc-250563

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Nickel(II) perchlorate hexahydrate
Product Number: sc-250563

Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, CA 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

Emergency Overview

OSHA Hazards

Oxidizer, Target Organ Effect, Respiratory sensitizer, Irritant, Carcinogen

Target Organs

Lungs

GHS Classification

Oxidizing solids (Category 2)
Skin irritation (Category 2)
Eye irritation (Category 2A)
Respiratory sensitization (Category 1)

GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)

H272	May intensify fire; oxidizer.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statement(s)

P220	Keep/Store away from clothing/ combustible materials.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	0
Physical hazards:	2

NFPA Rating

Health hazard:	2
Fire:	0
Reactivity Hazard:	2
Special hazard.:	OX

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: $Ni(ClO_4)_2 \cdot 6H_2O$
Molecular Weight: 365.69

CAS-No.	*EC-No.*	*Index-No.*	*Concentration*
Nickel(II) perchlorate hexahydrate			
13520-61-1	237-124-1	-	-

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
Hazardous combustion products
Hazardous decomposition products formed under fire conditions - Hydrogen chloride gas, Nickel/nickel oxides
Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
Environmental precautions
Do not let product enter drains.
Methods and materials for containment and cleaning up
Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Nickel diperchlorate hexahydrate	13520-61-1	TWA	1 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		TWA	0.1 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	0.015 mg/m3	USA. NIOSH Recommended Exposure Limits
Remarks	Potential Occupational Carcinogen See Appendix A			

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	crystalline	pH	no data available
Melting point/range	140 °C - lit	Boiling point	no data available
Flash point	not applicable	Ignition temperature	no data available
Autoignition temperature	no data available	Lower explosion limit	no data available
Upper explosion limit	no data available	Vapor pressure	no data available
Density	no data available	Water solubility	no data available
Relative vapor density	no data available	Odor	no data available
Odor Threshold	no data available	Evaporation rate	no data available
Partition coefficient n-octanol/water	no data available		

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.
Possibility of hazardous reactions
no data available
Conditions to avoid
no data available
Materials to avoid
Strong oxidizing agents, Ammonia, Organic materials, Amines, Strong acids, Reducing agents, Alcohols
Hazardous decomposition products
Hazardous decomposition products formed under fire conditions - Hydrogen chloride gas, Nickel/nickel oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity
- **Oral LD50** no data available
- **Inhalation LC50** no data available
- **Dermal LD50** no data available
- **Other information on acute toxicity** no data available

Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitization
May cause sensitization by inhalation.
Germ cell mutagenicity
no data available
Carcinogenicity
This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

IARC:	1 - Group 1: Carcinogenic to humans (Nickel diperchlorate hexahydrate)
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	Known to be human carcinogen (Nickel diperchlorate hexahydrate)
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available
Teratogenicity
no data available
Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available
Aspiration hazard
no data available
Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Synergistic effects
no data available

Additional Information
RTECS: SC9550000

12. ECOLOGICAL INFORMATION

Toxicity
no data available
Bioaccumulative potential
no data available
PBT and vPvB assessment
no data available
Persistence and degradability
no data available
Mobility in soil
no data available
Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1481 Class: 5.1 Packing group: II
Proper shipping name: Perchlorates, inorganic, n.o.s.
Reportable Quantity (RQ):
Marine pollutant: No
Poison Inhalation Hazard: No
IMDG
UN number: 1481 Class: 5.1 Packing group: II EMS-No: F-H, S-Q
Proper shipping name: PERCHLORATES, INORGANIC, N.O.S.
Marine pollutant: No
IATA
UN number: 1481 Class: 5.1 Packing group: II
Proper shipping name: Perchlorates, inorganic, n.o.s.

15. REGULATORY INFORMATION

OSHA Hazards
Oxidizer, Target Organ Effect, Respiratory sensitizer, Irritant, Carcinogen
SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:
Nickel(II) perchlorate hexahydrate CAS-No.: 13520-61-1
SARA 311/312 Hazards
Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard
Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components
Nickel(II) perchlorate hexahydrate CAS-No.: 13520-61-1
New Jersey Right To Know Components
Nickel(II) perchlorate hexahydrate CAS-No.: 13520-61-1
California Prop. 65 Components
WARNING! This product contains a chemical known to the State of California to cause cancer.
Nickel(II) perchlorate hexahydrate CAS-No.: 13520-61-1

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.

10/16/2012