



# SAFETY DATA SHEET

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Revision Number 1

## 1. Identification

**Product Name** Nickel(II) nitrate hexahydrate

**Cat No. :** AC223150000; AC223150025; AC223150050; AC223150100;  
AC223155000

**Synonyms** Nickelous nitrate hexahydrate

**Recommended Use** Laboratory chemicals.

**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

Company	Entity / Business Name	Emergency Telephone Number
Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	Acros Organics One Reagent Lane Fair Lawn, NJ 07410	For information <b>US</b> call: 001-800-ACROS-01 / <b>Europe</b> call: +32 14 57 52 11 Emergency Number <b>US</b> :001-201-796-7100 / <b>Europe</b> : +32 14 57 52 99 <b>CHEMTREC</b> Tel. No. <b>US</b> :001-800-424-9300 / <b>Europe</b> :001-703-527-3887

## 2. Hazard(s) identification

### Classification

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

Oxidizing solids	Category 2
Acute oral toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 1A
Reproductive Toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	
Specific target organ toxicity - (repeated exposure)	Category 1

### Label Elements

**Signal Word**  
Danger

**Hazard Statements**  
May intensify fire; oxidizer

Harmful if swallowed  
Harmful if inhaled  
Causes skin irritation  
Causes serious eye damage  
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 by inhalation  
May damage the unborn child  
May cause respiratory irritation  
Causes damage to organs through prolonged or repeated exposure



### Precautionary Statements

#### Prevention

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
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 should not be allowed out of the workplace  
Wear protective gloves  
Do not breathe dust/fume/gas/mist/vapors/spray  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Keep/Store away from clothing/ other combustible materials  
Take any precaution to avoid mixing with combustibles

#### Response

IF exposed or concerned: Get medical attention/advice

#### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

#### Skin

IF ON SKIN: Wash with plenty of soap and water  
Take off contaminated clothing and wash before reuse  
If skin irritation or rash occurs: Get medical advice/attention

#### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
Immediately call a POISON CENTER or doctor/physician

#### Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

#### Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

#### Storage

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects

#### Other hazards

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

Component	CAS-No	Weight %
Nickel(II) nitrate, hexahydrate (1:2:6)	13478-00-7	>95
Nickel nitrate (2+ salt)	13138-45-9	-

#### 4. First-aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.
<b>Ingestion</b>	Do not induce vomiting. Call a physician or Poison Control Center immediately.
<b>Most important symptoms/effects</b>	Causes eye burns. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
<b>Notes to Physician</b>	Treat symptomatically

#### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	No information available
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	No information available
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

#### Specific Hazards Arising from the Chemical

Oxidizer: Contact with combustible/organic material may cause fire. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

#### Hazardous Combustion Products

nitric acid

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

#### NFPA

Health  
2

Flammability  
1

Instability  
2

Physical hazards  
OX

#### 6. Accidental release measures

<b>Personal Precautions</b>	Use personal protective equipment. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.
<b>Environmental Precautions</b>	Should not be released into the environment.
<b>Methods for Containment and Clean Up</b>	Keep combustibles (wood, paper, oil, etc) away from spilled material. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

#### 7. Handling and storage

**Handling** Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Keep away from clothing and other combustible materials. Avoid dust formation. Do not breathe vapors/dust. Do not ingest.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials.

## 8. Exposure controls / personal protection

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nickel(II) nitrate, hexahydrate (1:2:6)	TWA: 0.1 mg/m <sup>3</sup>	(Vacated) TWA: 0.1 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> TWA: 0.015 mg/m <sup>3</sup>
Nickel nitrate (2+ salt)	TWA: 0.1 mg/m <sup>3</sup>	(Vacated) TWA: 0.1 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> TWA: 0.015 mg/m <sup>3</sup>

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Nickel(II) nitrate, hexahydrate (1:2:6)	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>
Nickel nitrate (2+ salt)	TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> STEL: 0.3 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup>

#### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures** Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal Protective Equipment

#### Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Physical State</b>	Solid
<b>Appearance</b>	Blue green
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH</b>	5 50g/L (20°C)
<b>Melting Point/Range</b>	56.7 °C / 134.1 °F
<b>Boiling Point/Range</b>	137 °C / 278.6 °F
<b>Flash Point</b>	No information available
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid,gas)</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	negligible
<b>Vapor Density</b>	10.0
<b>Relative Density</b>	No information available
<b>Solubility</b>	Soluble in water
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No information available
<b>Decomposition temperature</b>	137 °C
<b>Viscosity</b>	No information available
<b>Molecular Formula</b>	N2 Ni O6 . 6 H2 O
<b>Molecular Weight</b>	290.8

## 10. Stability and reactivity

<b>Reactive Hazard</b>	Yes
<b>Stability</b>	Oxidizer: Contact with combustible/organic material may cause fire.
<b>Conditions to Avoid</b>	Avoid dust formation. Incompatible products. Excess heat. Combustible material.
<b>Incompatible Materials</b>	Strong oxidizing agents, Organic materials, Powdered metals, Acids, Strong reducing agents
<b>Hazardous Decomposition Products</b>	nitric acid
<b>Hazardous Polymerization</b>	No information available.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

### Acute Toxicity

**Product Information** No acute toxicity information is available for this product

**Component Information**  
**Toxicologically Synergistic Products** No information available

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

**Irritation** Severe eye irritant; Irritating to skin

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

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Nickel(II) nitrate, hexahydrate (1:2:6)	13478-00-7	Group 1	Not listed	Not listed	X	Not listed
Nickel nitrate (2+ salt)	13138-45-9	Not listed	Not listed	Not listed	Not listed	Not listed

*IARC: (International Agency for Research on Cancer)*

*IARC: (International Agency for Research on Cancer)*

*Group 1 - Carcinogenic to Humans*

*Group 2A - Probably Carcinogenic to Humans*

*Group 2B - Possibly Carcinogenic to Humans*

**Mutagenic Effects** Possible risk of irreversible effects

**Reproductive Effects** May cause harm to the unborn child.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not empty into drains.

<b>Persistence and Degradability</b>	No information available
<b>Bioaccumulation/ Accumulation</b>	No information available.
<b>Mobility</b>	No information available.

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

<b>UN-No</b>	UN2725
<b>Proper Shipping Name</b>	NICKEL NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

#### TDG

<b>UN-No</b>	UN2725
<b>Proper Shipping Name</b>	NICKEL NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

#### IATA

<b>UN-No</b>	UN2725
<b>Proper Shipping Name</b>	NICKEL NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

#### IMDG/IMO

<b>UN-No</b>	UN2725
<b>Proper Shipping Name</b>	NICKEL NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

### 15. Regulatory information

#### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Nickel(II) nitrate, hexahydrate (1:2:6)	-	-	-	-	-		X	-	X	X	-
Nickel nitrate (2+ salt)	X	X	-	236-068-5	-		X	X	X	X	X

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

#### U.S. Federal Regulations

**TSCA 12(b)** Not applicable

**SARA 313**

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Nickel(II) nitrate, hexahydrate (1:2:6)	13478-00-7	>95	0.1 1.0
Nickel nitrate (2+ salt)	13138-45-9	-	0.1

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	Yes

**Clean Water Act**

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Nickel(II) nitrate, hexahydrate (1:2:6)	-	-	X	-
Nickel nitrate (2+ salt)	-	-	X	-

**Clean Air Act**

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Nickel(II) nitrate, hexahydrate (1:2:6)	X		-
Nickel nitrate (2+ salt)	X		-

OSHA Occupational Safety and Health Administration

Not applicable

**CERCLA**

Not applicable

**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Component	CAS-No	California Prop. 65	Prop 65 NSRL	Category
Nickel(II) nitrate, hexahydrate (1:2:6)	13478-00-7	Carcinogen	-	Carcinogen
Nickel nitrate (2+ salt)	13138-45-9	Carcinogen	-	Carcinogen

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Nickel(II) nitrate, hexahydrate (1:2:6)	-	X	X	X	X
Nickel nitrate (2+ salt)	X	X	X	X	X

**U.S. Department of Transportation**

Reportable Quantity (RQ):	Y
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

**U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

**Other International Regulations****Mexico - Grade** No information available**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

**WHMIS Hazard Class**

C Oxidizing materials  
 D1B Toxic materials  
 D2A Very toxic materials  
 D2B Toxic materials



## 16. Other information

<b>Prepared By</b>	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
<b>Creation Date</b>	23-Dec-2009
<b>Revision Date</b>	13-Aug-2014
<b>Print Date</b>	13-Aug-2014
<b>Revision Summary</b>	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

### Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of SDS**