



# Fisher Scientific

Part of Thermo Fisher Scientific

## Material Safety Data Sheet

Revision Date 25-Jul-2011

Revision Number 1

### 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product Name</b>	<b>Nickel(II) chloride hexahydrate</b>
<b>Cat No.</b>	<b>N54-10; N54-250; N54-3; N54-500</b>
<b>Synonyms</b>	Nickel dichloride.; Nickelous chloride
<b>Recommended Use</b>	Laboratory chemicals
<b>Company</b> Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	<b>Emergency Telephone Number</b> CHEMTREC®, Inside the USA: 800-424-9300 CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. HAZARDS IDENTIFICATION

#### WARNING!

#### Emergency Overview

Cancer hazard. Toxic by inhalation and if swallowed. May cause harm to the unborn child. May cause allergic respiratory and skin reaction. Irritating to skin. Danger of serious damage to health by prolonged exposure. Possible risks of irreversible effects. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Appearance** Green

**Physical State** Solid

**odor** odorless

**Target Organs**

Skin, Respiratory system

#### Potential Health Effects

#### **Acute Effects**

#### **Principle Routes of Exposure**

**Eyes**  
**Skin**

May cause irritation.

Causes skin irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May be harmful in contact with skin.

**Inhalation**

May cause severe allergic respiratory reaction. Exposure through inhalation may result in delayed pulmonary edema, which may be fatal.

**Ingestion**

Toxic if swallowed. Causes gastrointestinal tract irritation.

**Chronic Effects**

Repeated skin contact may lead to irritation and to sensitization, possible with cross-sensitization to other epoxys. Cancer hazard.. May cause cancer by inhalation..

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions**

No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Haz/Non-haz**

Component	CAS-No	Weight %
Nickel(II) chloride hexahydrate (1:2:6)	7791-20-0	>95
Nickel(II) chloride	7718-54-9	-

### 4. FIRST AID MEASURES

**Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub affected area..

**Skin Contact**

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. In the case of skin irritation or allergic reactions see a physician.

**Inhalation**

Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention.

**Ingestion**

Never give anything by mouth to an unconscious person. Drink plenty of water. Call a physician or Poison Control Center immediately.

**Notes to Physician**

Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Flash Point  
Method**

No information available.  
No information available.

**Autoignition Temperature  
Explosion Limits**

No information available.

**Upper  
Lower**

No data available  
No data available

**Suitable Extinguishing Media**

Dike fire-control water for later disposal. Use water spray to cool unopened containers. Substance is nonflammable; use agent most appropriate to extinguish surrounding fire..

**Unsuitable Extinguishing Media**

No information available.

**Hazardous Combustion Products**

No information available.

**Sensitivity to mechanical impact  
Sensitivity to static discharge**

No information available.  
No information available.

**Specific Hazards Arising from the Chemical**

Keep product and empty container away from heat and sources of ignition

**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.

**NFPA****Health 2****Flammability 0****Instability 0****Physical hazards N/A****6. ACCIDENTAL RELEASE MEASURES****Personal Precautions**

Ensure adequate ventilation

**Environmental Precautions**

Should not be released into the environment

**Methods for Containment and Clean Up**

Avoid dust formation. Prevent product from entering drains. Sweep up and shovel into suitable containers for disposal. Provide adequate ventilation. Do not flush into surface water or sanitary sewer system.

**7. HANDLING AND STORAGE****Handling**

Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or mists. Do not ingest. Use only in area provided with appropriate exhaust ventilation. Use only in well-ventilated areas. Minimize dust generation and accumulation.

**Storage**

Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nickel(II) chloride 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(II) chloride	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) chloride 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(II) chloride	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>

**NIOSH IDLH:** Immediately Dangerous to Life or Health

**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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Green
<b>odor</b>	odorless
<b>Odor Threshold</b>	No information available.
<b>pH</b>	4-6 5% aq.sol.
<b>Vapor Pressure</b>	1 mmHg @ 615.6 °C
<b>Vapor Density</b>	No information available.
<b>Viscosity</b>	No information available.
<b>Boiling Point/Range</b>	No information available.
<b>Melting Point/Range</b>	No information available.
<b>Decomposition temperature</b>	> 140°C
<b>Flash Point</b>	No information available.
<b>Evaporation Rate</b>	No information available.
<b>Specific Gravity</b>	3.55 (H <sub>2</sub> O=1)
<b>Solubility</b>	No information available.
<b>log Pow</b>	No data available
<b>Molecular Weight</b>	237.71
<b>Molecular Formula</b>	Cl <sub>2</sub> Ni . 6 H <sub>2</sub> O

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Avoid dust formation. Excess heat. Incompatible products.
<b>Incompatible Materials</b>	Strong acids, Peroxides, Metals
<b>Hazardous Decomposition Products</b>	Hydrogen chloride gas, Chlorine, Burning produces obnoxious and toxic fumes
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions .</b>	None under normal processing.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Nickel(II) chloride hexahydrate (1:2:6)	105 mg/kg ( Rat )	Not listed	Not listed
Nickel(II) chloride	105 mg/kg ( Rat )	Not listed	Not listed

**Irritation** Irritating to skin

**Toxicologically Synergistic Products** No information available.

**Chronic Toxicity****Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen. May cause cancer by inhalation.

Component	ACGIH	IARC	NTP	OSHA	Mexico
Nickel(II) chloride hexahydrate (1:2:6)	Not listed	Group 1	Not listed	X	Not listed
Nickel(II) chloride	Not listed	Group 1	Not listed	X	Not listed

**Sensitization**

May cause sensitization by inhalation and skin contact

**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.

**Other Adverse Effects**

The toxicological properties have not been fully investigated.. See actual entry in RTECS for complete information.

**Endocrine Disruptor Information**

No information available

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Nickel(II) chloride	0.66 mg/L EC50 = 72 h 0.0063 - 0.0125 mg/L EC50 96 h	9.65 mg/L LC50 96 h 100 mg/L LC50 96 h 1.9-4 mg/L LC50 96 h 18.1-25.5 mg/L LC50 96 h 2.02-6.88 mg/L LC50 96 h 2.83-5.99 mg/L LC50 96 h 29.76-43.57 mg/L LC50 96 h 6.63-9.15 mg/L LC50 96 h 6.7-9.7 mg/L LC50 96 h 6.9 mg/L LC50 96 h 25 mg/L LC50 96 h 1.3 mg/L LC50 96 h	Not listed	0.51 mg/L EC50 = 48 h 6.68 mg/L EC50 = 48 h

**Persistence and Degradability**

No information available

**Bioaccumulation/ Accumulation**

No information available

**Mobility**

No information available

## 13. DISPOSAL CONSIDERATIONS

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**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

**UN-No** UN3288  
**Proper Shipping Name** TOXIC SOLID, INORGANIC, N.O.S.  
**Proper technical name** (NICKEL(II) CHLORIDE HEXAHYDRATE)  
**Hazard Class** 6.1  
**Packing Group** III

#### TDG

**UN-No** UN3288  
**Proper Shipping Name** TOXIC SOLID, INORGANIC, N.O.S.  
**Hazard Class** 6.1  
**Packing Group** III

#### IATA

**UN-No** UN3288  
**Proper Shipping Name** TOXIC SOLID, INORGANIC, N.O.S.  
**Hazard Class** 6.1  
**Packing Group** III

#### IMDG/IMO

**UN-No** UN3288  
**Proper Shipping Name** TOXIC SOLID, INORGANIC, N.O.S.  
**Hazard Class** 6.1  
**Packing Group** III

### 15. REGULATORY INFORMATION

#### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Nickel(II) chloride hexahydrate (1:2:6)	-	-	-	-	-		X	X	X	X	-
Nickel(II) chloride	X	X	-	231-743-0	-		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**  
 Not applicable

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Nickel(II) chloride hexahydrate (1:2:6)	7791-20-0	>95	0.1
Nickel(II) chloride	7718-54-9	-	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 No

**Clean Water Act**  
 Not applicable

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

**Clean Air Act**  
 Not applicable

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Nickel(II) chloride hexahydrate (1:2:6)	X		-
Nickel(II) chloride	X		-

**OSHA**  
 Not applicable

**CERCLA**  
 Not Applicable

Component	Hazardous Substances RQs	CERCLA EHS RQs
Nickel(II) chloride	100 lb	-

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

Component	CAS-No	California Prop. 65	Prop 65 NSRL
Nickel(II) chloride hexahydrate (1:2:6)	7791-20-0	Carcinogen	-
Nickel(II) chloride	7718-54-9	Carcinogen	-

**State Right-to-Know**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Nickel(II) chloride hexahydrate (1:2:6)	-	X	X	X	X
Nickel(II) chloride	X	X	X	X	X

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 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**

D2A Very toxic materials  
 D1B Toxic materials  
 D2B Toxic materials



## 16. OTHER INFORMATION

**Prepared By** Regulatory Affairs  
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 Tel: (412) 490-8929

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**Revision Summary**

(M)SDS sections updated 2 3 11 16

**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 MSDS**