



Infosafe No™	1CH4N	Issue Date : June 2019	RE-ISSUED by CHEMSUPP
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Product Name : **NICKEL CHLORIDE Hexahydrate**

Classified as hazardous

1. Identification

GHS Product Identifier NICKEL CHLORIDE Hexahydrate

Company Name CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

Address 38 - 50 Bedford Street GILLMAN
SA 5013 Australia

Telephone/Fax Number Tel: (08) 8440-2000
Fax: (08) 8440-2001

Emergency phone number CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

Recommended use of the chemical and restrictions on use Electroplated nickel coatings, batteries, magnets; manufacture of sympathetic ink, stainless steel, metal alloys such as metal coins, jewellery and other metal items; catalyst and laboratory reagent.

Other Names

<u>Name</u>	<u>Product Code</u>
NICKEL CHLORIDE Hexahydrate LR	NL008
NICKEL CHLORIDE Hexahydrate AR	NA008
Nickelous chloride	
Nickel dichloride	
Nickel dichloride hexahydrate	
Nickel (II) chloride hexahydrate	

Other Information

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture Hazardous to the Aquatic Environment - Acute Hazard: Category 1
Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1
Carcinogenicity: Category 1
Germ Cell Mutagenicity: Category 2
Acute Toxicity - Inhalation: Category 3
Acute Toxicity - Oral: Category 4
Specific Target Organ Toxicity - Repeated Exposure Category 1
Sensitization - Respiratory: Category 1A
Skin Corrosion/Irritation: Category 2
Sensitization - Skin: Category 1A
Toxic to Reproduction: Category 2

Signal Word (s) DANGER

Hazard Statement (s) H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341 Suspected of causing genetic defects.
H350 May cause cancer by inhalation.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Pictogram (s) Skull and crossbones, Health hazard, Environment



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**Precautionary statement – Prevention**

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P281 Use personal protective equipment as required.
 P285 In case of inadequate ventilation wear respiratory protection.

Precautionary statement – Response

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P330 Rinse mouth.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P362 Take off contaminated clothing and wash before reuse.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
 P308+P313 IF exposed or concerned: Get medical advice/attention.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.

**Precautionary statement – Storage
Precautionary statement – Disposal**

P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Chemical Characterization

Solid

Ingredients

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
Nickel chloride hexahydrate	7791-20-0	100 %		

4. First-aid measures

Inhalation If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Consult a physician.

Ingestion Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Skin Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. In severe cases or if irritation persists, seek medical attention.

Eye contact If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. If symptoms persist seek medical attention.

First Aid Facilities Maintain eyewash fountain and safety shower in work area.

Advice to Doctor Treat symptomatically based on judgement of doctor and individual reactions of the patient.

Other Information For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures**Hazards from Combustion** Emits toxic fumes under fire conditions (hydrogen chloride gas and nickel oxides).**Products****Specific Methods** Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media.



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Specific hazards arising from the chemical	Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases. Runoff may pollute waterways.
Hazchem Code	2X
Decomposition Temp.	140 °C (release of crystalline water)
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Fully encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials.

6. Accidental release measures

Personal Precautions	Evacuate the area of all non-essential personnel. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.
Clean-up Methods - Large Spillages	Seek expert advice on handling and disposal.
Environmental Precautions	Prevent further leakage or spillage and prevent from entering drains

7. Handling and storage

Precautions for Safe Handling	Avoid generation or accumulation of dusts. Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Wash hands and face thoroughly after working with material.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry place. Keep containers securely sealed and protected against physical damage.

8. Exposure controls/personal protection

Occupational exposure limit values	<u>Name</u>	STEL		TWA		<u>Footnote</u>
		<u>mg/m3</u>	<u>ppm</u>	<u>mg/m3</u>	<u>ppm</u>	
	Nickel chloride hexahydrate			0.1		Nickel, soluble compounds (as Ni)
Other Exposure Information	These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity. A time weighted average (TWA) has been established for Nickel, soluble compounds (Safe Work Australia) of 0.1 mg/m ³ . The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. NOTE: Sensitiser. The substance can cause a specific immune response in some people. An affected individual may subsequently react to minute levels of that substance.					
Appropriate engineering controls	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. These methods should be used in preference to personal protective equipment.					
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.					
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate.					
Hand Protection	Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336. Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves -					



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Personal Protective Equipment	Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments.
Footwear	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Body Protection	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Hygiene Measures	Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals. Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	Yellow to Green crystals or powder.
Odour	Odourless.
Decomposition Temperature	140 °C (release of crystalline water)
Solubility in Water	Soluble in water, 2.54kg/L at 20°C.
Solubility in Organic Solvents	Soluble in alcohol and ammonium hydroxide.
pH	~ 4.9 (100 g/L, H ₂ O, 20 °C)
Vapour Pressure	1.3 hPa (671 °C) (anhydrous substance)
Flammability	Non combustible material.
Molecular Weight	237.71

10. Stability and reactivity

Chemical Stability	Stable under normal use conditons. Hygroscopic If containers are opened, substance will absorb moisture from the air and go into solution.
Conditions to Avoid	Exposure to moisture. Dust generation. Incompatibles.
Incompatible Materials	Strong oxidizing agents, peroxides, alkali metals, acids.
Hazardous Decomposition Products	Hydrogen chloride gas, nickel/nickel oxides.
Possibility of hazardous reactions	Violent reaction with potassium.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	Harmful if swallowed. Irritation of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Nickel salts act as emetics (induce nausea and vomiting) when swallowed. Symptoms include abdominal pain, nausea, vomiting, diarrhea, metallic taste. Ingestion of large doses of the substance may cause giddiness, capillary damage, myocardial weakness, central nervous system depression, intestinal disorders, convulsions and asphyxia and may lead to liver and kidney damage.
Inhalation	Toxic by inhalation. Causes irritation to the respiratory tract including nose and throat. May cause irritation of the soft mucous tissues, resulting in sneezing, coughing, sore throat, metallic taste in mouth, nausea, vomiting, abdominal pain, dizziness and dyspnoea. The the possibility of allergic reactions in certain sensitive individuals may cause sensitisation. Lung damage may result from a single high exposure or lower repeated exposures. Lung allergy occasionally occurs with asthma type symptoms.
Skin	May be harmful if absorbed through the skin. Causes skin irritation and may cause 'nickel itch', a form of dermatitis resulting from sensitization to nickel. This sensitization causes burning and itching sensations in the hands, abnormal redness of the skin and nodular eruption on the web of fingers, wrists and forearms. These skin eruptions may lead to ulcers or eczema.



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Eye	Substance is irritating to the eyes, causing irritation, redness and pain.
Respiratory sensitisation	H317 May cause an allergic skin reaction. H331 Toxic if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H341 Suspected of causing genetic defects. H350 May cause cancer by inhalation. H361 Suspected of damaging fertility or the unborn child. H372 Causes damage to organs through prolonged or repeated exposure.
Skin Sensitisation	H317 May cause an allergic skin reaction.
Germ cell mutagenicity	H341 Suspected of causing genetic defects.
Carcinogenicity	Nickel chloride hexahydrate is evaluated in the IARC Monographs as Group 1: Carcinogenic to humans. May cause cancer by inhalation.
Reproductive Toxicity	H361 Suspected of damaging fertility or the unborn child.
STOT-repeated exposure	H372 Causes damage to organs through prolonged or repeated exposure.
Chronic Effects	Inhalation of nickel dust at high levels may lead to asthma, pneumonitis, chronic bronchitis, reduced lung function leading to lung cancer, as well as nasal effects including rhinitis, nasal sinusitis, nasal mucosal injury and sinus cancer. Prolonged or repeated swallowing of the nickel compounds may lead to liver and kidney damage, CNS depression, intestinal disorders, capillary damage, and weight loss. Prolonged or repeated skin contact may cause sensitization dermatitis known as 'nickel itch'.
Mutagenicity	Evidence of mutagenic effects.

12. Ecological information

Ecotoxicity	Nickel compounds can have a high acute and chronic toxicity to aquatic life. Nickel toxicity to aquatic organisms is determined by water hardness; the softer the water, the higher the toxicity.
Environmental Protection	Do not allow product to enter drains, waterways or sewers. Highly toxic to aquatic organisms. May cause long-term adverse effects in the aquatic organisms.

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.
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14. Transport information

Transport Information	Dangerous Goods of Class 6 Toxic and Infectious Substances are incompatible in a placard load with any of the following: - Class 1, Class 3, if the Class 3 dangerous goods are nitromethane, Class 8, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids, and are incompatible with food packaging in any quantity.
U.N. Number	3288
UN proper shipping name	TOXIC SOLID, INORGANIC, N.O.S. - (Contains Nickel chloride hexahydrate)
Transport hazard class(es)	6.1
Hazchem Code	2X
Packaging Method	3.8.6.1
Packing Group	III
IERG Number	34

15. Regulatory information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	Not Scheduled

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons.', Commonwealth of Australia. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.
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chem-supply

Safety Data Sheet

infosafe
CS: 1.7.2

Page: 6 of 6

Infosafe No™	1CH4N	Issue Date : June 2019	RE-ISSUED by CHEMSUPP
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Product Name : **NICKEL CHLORIDE Hexahydrate**

Classified as hazardous

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.
 Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.
 Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.
 Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
 Safe Work Australia, 'Hazardous Chemical Information System, 2005'.
 Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.
 Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.

Contact Person/Point

Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**
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Empirical Formula & Structural Formula NiCl₂.6H₂O

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