

MATERIAL SAFETY DATA SHEET

Nickel Chloride

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product Product name: Nickel Chloride
Manufacturer/supplier identification Company: Zenith Chemical Corporation
Emergency telephone No.: Tel. 886-4-26811521

2. Hazards identification

Inhalation of nickel chloride dust or mist can cause irritation of the upper respiratory tract. Skin contact may be irritating and can cause allergic dermatitis (“nickel itch”) characterized by itching, erythematic, and skin eruption. Eye contact with dust or solutions may cause irritation. Ingestion of nickel salts can cause nausea, vomiting, and giddiness. The NTP and IARC list “nickel and certain nickel compounds” as suspected carcinogens. This is based in part on epidemiological evidence of excess incidences of nasal and lung cancer in populations of workers exposed to nickel or nickel compounds. The specific nickel compounds responsible have not been identified.

*****N.F.P.A.*****

Degree of hazard	Emergency hazard rating
4=extreme	Health < 3 >
3=High	Fire < 0 >
2=Moderate	Reactivity < 0 >
1=Slight	Specific hazard < >
0=insignificant	

Hazard Label





3. Composition/information on ingredients

CAS No.: 7718-54-9

Molar mass: 237.71

Molecular formula: $\text{NiCl}_2 \cdot 6\text{H}_2\text{O}$

Synonyms: Nickel salt; Nickel (II) Chloride hexahydrate .

Composition: $\text{NiCl}_2 \cdot 6\text{H}_2\text{O}$ 90~100%

4. First aid measures

After inhalation: fresh air. Summon doctor.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with plenty of water for at least 10 minutes with the eyelid held wide open

After swallowing: make victim drink plenty of water, induce vomiting. Immediately summon doctor. Raw eggs mixed into milk.

5. Fire-fighting measures

Nickel Chloride is nonflammable. Use extinguishing agents that are appropriate for the surrounding fire.

If water is use, minimize runoff to sewers and waterways. No unusual fire or explosion hazards are associated with this material.

Fire fighters should wear self-contained breathing apparatus and fully protective gear for protection against dust, mist, and fumes generated during fire-fighting activities.

Special risks: none

6. Accidental release measures

Procedures for cleaning / absorption: Take up dry. Forward for disposal. Clean up affected area. Avoid generation of dusts.

7. Handling and storage

Handling: No further requirements.

Storage: tightly closed. Dry. In a well-ventilated place. Accessible only for authorized person.

8. Exposure controls/personal protection

Personal protective equipment:

Respiratory protection: required when dusts are generated.

Eye protection: required

Hand protection: required

Industrial hygiene: Immediately change contaminated clothing. Apply skin-protective barrier cream.

Wash hands and face after working with substance.

9. Physical and chemical properties

Form: tetragonal crystals

Colour: green

Odour: odourless

PH value: 3.0-5.0 in 100g/l water solution

Melting temperature: (release of crystalline water)

Boiling temperature: NA

Ignition temperature :NA

flash point: NA

Explosion limits lower : NA

upper: NA

Relative vapour density: NA

Density: NA

Bulk density: near 640Kg/m³

Solubility in water (20 °C)---2540g/L; (100°C)---5990g/L

10. Stability and reactivity

Conditions to be avoided:

Substances to be avoided:

Hazardous decomposition products: decomposes evolution of oxides of Chlorine(toxic)

Nickel Chloride is stable in closed containers at room temperature. Nickel Chloride does not polymerize. It will absorb moisture from the air. Mixture of nickel chloride and potassium may explode on impact. Irritating fumes may be evolved at high temperature.

11. Toxicological information

Actual toxicity: LD50 (oral, rat): 105mg/kg (anhydrous substance)

Further toxicological information:

The following applies to soluble nickel compounds in general: inorganic nickel has an astringent effect on mucous membranes. Sensitization with allergic manifestations is possible in predisposed

persons. In some cases nickel dermatitis may manifest itself. Depending on the water-solubility, nickel and its compounds display a more or less distinct carcinogenicity, with the readily soluble nickel compounds obviously entailing the lesser risk.

12. Ecological information

Ecotoxic effects:

the following applies to nickel salts in general: Biological effects: dissolved Ni toxic for aquatic organisms.

Fish: *L. idus* L50: 570mg/l; lethal concentration for fish 1mg/l in soft water; in hard water *P. promelas* LD50 27mg/l; bacteria: *Ps. Putida* toxic from 0.0025 mg/l up; algae: *Sc. quadricauda* toxic from 1.3mg/l up; *M. aeruginosa* toxic from 0.005mg/l up; *E. sulcatum* toxic from 0.14mg/l up; *U. pardeczi* toxic from 0.042 mg/l up; arthropods: *D. magna* LC50: 11mg/l (all values referring to dissolved Ni)

Further ecologic data: Do not allow to enter waters, waste water, or soil.

13. Disposal considerations

Product:

Chemical residues generally count as special waste. The disposal of the latter is regulated in the country through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

Packaging:

Disposal **in compliance with** official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

14. Transport information

Transport over land ADR/RID and GGVS/GGVE (Germany)

River transport

Sea transport

Air transport

UN / ID NO. : UN3288



15. Regulatory information

Labeling according to directives

symbol: T Toxic

R-phrases: 25-43 Toxic if swallowed. May cause sensitization by skin contact.

S-phrases: 24-37-45 Avoid contact with skin. Wear suitable gloves. On case of accident or if you feel unwell, seek medical advice immediately.(show the label where possible)

16. Other information

Produced by: Zenith Chemical Corporation

Issued date: Oct., 29, 2010

Reference:

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.