

Shanghai Aladdin Biochemical Technology Co., Ltd.  
No. 809, Chuhua Branch Road, Fengxian District, Shanghai

# SAFETY DATA SHEET

Version: v1  
Revision Date: 2025-09-20  
Print Date: 2025-09-26

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Nickel chloride hexahydrate  
Product Number : N112126  
Brand : aladdin  
CAS-No. : 7791-20-0

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

### 1.3 Details of the supplier of the safety data sheet

Company : Shanghai Aladdin Biochemical Tech Co., Ltd  
Address : 36 Xinjinqiao Road, Shanghai  
Telephone : 400-620-6333  
Fax : no data available

### 1.4 Emergency telephone number

Emergency Phone : 0532-83889090

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Skin irritation (Category 2), H315

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity, Inhalation (Category 1A), H350i

Reproductive toxicity (Category 1B), H360D


Specific target organ toxicity - repeated exposure, Inhalation (Category 1), Lungs, H372

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Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410

## 2.2 GHS Label elements, including precautionary statements

<b>Pictogram</b>	
<b>Signal word</b>	Danger
<b>Hazard statement(s)</b>	
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H341	Suspected of causing genetic defects
H350	May cause cancer
H360	May damage 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
H301+H311	Toxic if swallowed or in contact with skin
<b>Precautionary statement(s)</b>	
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/vapors/spray.
P264	Wash hands [and ...] 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.
P284	[In case of inadequate ventilation] Wear respiratory protection.
P391	Collect spillage.
P302+P352	IF ON SKIN: wash with plenty of water.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P333+P313	IF SKIN irritation or rash occurs: Get medical advice/attention.
P342+P311	IF experiencing respiratory symptoms: Call a POISON CENTER/doctor/...
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to an approved waste disposal plant.
P301+P310+P330	IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER/doctor/.
P304+P340+P311	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms	: Nickel dichloride hexahydrate
Formula	: $\text{Cl}_2\text{Ni} \cdot 6\text{H}_2\text{O}$
Molecular weight	: 237.69
CAS No.	: 7791-20-0
EC-NO.	: 231-743-0

Component	Classification	Concentration
<b>Nickel chloride hexahydrate</b>		
	Acute Tox. 3; Skin Irrit. 2; Resp. Sens. 1; Skin Sens. 1; Muta. 2; Carc. 1A; Repr. 1B; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H301, H331, H315, H334, H317, H341, H350i, H360D, H372, H400, H410 Concentration limits: $\geq 1\%$ : STOT RE 1, H372; $0,1 - < 1\%$ : STOT RE 2, H373; $\geq 20\%$ : Skin Irrit. 2, H315; $\geq 0,01\%$ : Skin Sens. 1, H317; M-Factor - Aquatic Acute: 1 - Aquatic Chronic: 1	Premium-Grade Reagents, $\geq 98\%$

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.

### 4.2 Most important symptoms and effects, both acute and delayed

no data available

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

no data available

Unsuitable extinguishing media

no data available

### 5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas Nickel/nickel oxides Not combustible. Ambient fire may liberate hazardous vapours

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

Use water spray to cool unopened containers.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions. Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep the container closed and store it in a dry, ventilated and cool place.

### 7.3 Specific end use(s)

no data available

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### Personal protective equipment

##### Eye/face 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 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. The selected protective gloves have to satisfy the specifications of Regulation (EU)2016/425 and the standard EN 374 derived from it.

##### Body Protection

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

##### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface 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).

##### Control of environmental exposure

If it is safe, prevent further leakage or spillage and do not allow the product to enter the sewer system.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	no data available
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	140°
f) Initial boiling point and boiling range	no data available
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available

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j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	1.92
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

## 9.2 Other safety information

no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Violent reactions possible with: Alkali metals

### 10.4 Conditions to avoid

Avoid moisture

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

no data available

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - female - 175 mg/kg (OECD Test Guideline 401) Remarks: (anhydrous substance) The value is given in analogy to the following substances: nickel(II) chloride

LC50 Inhalation - Rat - male - 4 h - 0.593 mg/l - dust/mist (OECD Test Guideline 403) Remarks: (anhydrous substance)

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The value is given in analogy to the following substances: nickel(II) chloride Dermal: No data available

**Skin corrosion/irritation**

Remarks: Causes skin irritation. (anhydrous substance) The value is given in analogy to the following substances: nickel(II) chloride

**Serious eye damage/eye irritation**

Eyes - Rabbit Result: No eye irritation - 168 h (OECD Test Guideline 405) Remarks: (anhydrous substance) The value is given in analogy to the following substances: nickel(II) chloride Remarks: slight irritation

**Respiratory or skin sensitisation**

May cause allergic respiratory and skin reactions (anhydrous substance)

**Germ cell mutagenicity**

Suspected of causing genetic defects. Test Type: gene mutation test Test system: mammalian cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: positive Test Type: Ames test Test system: Salmonella typhimurium Result: negative Remarks: (Lit.) Test Type: Chromosome aberration test Species: Mouse Application Route: Intraperitoneal Result: positive Remarks: (ECHA)

**Carcinogenicity**

Positive evidence from human epidemiological studies (inhalation)

**Reproductive toxicity**

May damage the unborn child.

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

Inhalation - Causes damage to organs through prolonged or repeated exposure. - Lungs The value is given in analogy to the following substances: nickel(II) chloride

**Aspiration hazard**

no data available

**Additional Information**

RTECS: QR6480000

Gastrointestinal disturbance To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. The following applies to soluble nickel compounds in general: inorganic nickel has an adstringent effect on mucous membranes. Sensitisation 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. Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - 15.3 mg/l - 96 h Remarks: (ECHA) (anhydrous substance) The value is given in analogy to the following substances: nickel(II) chloride

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Toxicity to daphnia and other aquatic invertebrates static test LC50 - Ceriodaphnia dubia (water flea) - 0.013 mg/l - 48 h Remarks: (ECHA) (anhydrous substance) The value is given in analogy to the following substances: nickel(II) chloride

Toxicity to algae static test ErC50 - green algae - 0.243 mg/l - 72 h (OECD Test Guideline 201) Remarks: (anhydrous substance) The value is given in analogy to the following substances: nickel(II) chloride

Toxicity to fish(Chronic toxicity) flow-through test LC50 - Cyprinodon variegatus (sheepshead minnow) - 27.8 mg/l - 28 d Remarks: (ECHA) (anhydrous substance)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) semi-static test NOEC - Hyalella azteca (Amphipod) - 0.029 mg/l - 14 d Remarks: (ECHA) (anhydrous substance) The value is given in analogy to the following substances: nickel(II) chloride

## 12.2 Persistence and degradability

no data available

## 12.3 Bioaccumulative potential

no data available

## 12.4 Mobility in soil

no data available

## 12.5 Results of PBT and vPvB assessment

no data available

## 12.6 Other adverse effects

no data available

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## SECTION 13:

### 13.1 Disposal considerations

#### Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur.

Observe all federal, state and local regulations when disposing of the substance.

#### Contaminated packaging

Dispose of as unused product.

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## SECTION 14: Transport information

### DOT (US)

UN number: 3288

Packing group: III

Class: 6.1



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Proper shipping name: Toxic solid,  
inorganic, n.o.s. (Nickel(II) chloride  
hexahydrate)

Reportable Quantity(RQ): no data  
available

Poison Inhalation Hazard: no data  
available

Environmental Hazards: yes

#### IMDG

UN number: 3288

Packing group: III

EMS-No: no data available

Proper shipping name: Toxic solid, inorganic, n.o.s. (Nickel(II) chloride hexahydrate)

#### IATA

UN number: 3288

Packing group: III

Class: 6.1

Proper shipping name: Toxic solid, inorganic, n.o.s. (Nickel(II) chloride hexahydrate)

## SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

## SECTION 16: Other information

### Further information

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