

# Material Safety Data Sheet

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifiers

Product name	Nickel (II) chloride
Product number	A63623
Brand	3ASenrise
CAS number	7718-54-9

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

Company: Anhui Senrise Technology Co., Ltd.

Address: No. 88 Weisan Road, High-Tech Industrial Development Zone, Anqing, Anhui

Post code: 246003

Tel: 400-005-6266

Fax: 0556-5555368

Email: service@3asenrise.com

### 1.3 Emergency telephone

Emergency telephone: 0556-5500208

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

Identified uses: For R&D use only. Not for pharmaceutical, household or other uses.

## 2 HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Skin corrosion/irritation (Category 2), H315

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 1A), H350

Reproductive toxicity (Category 1B), H360

Specific target organ toxicity – repeated exposure (Category 1), H372

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

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

### 2.2 GHS label elements, including precautionary statements

#### Pictogram



## **Signal word: Danger**

### **Hazard statement(s)**

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H410 Very toxic to aquatic life with long lasting effects.

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.

H301+H331 Toxic if swallowed or if inhaled.

### **Precautionary statement(s)**

#### **Prevention**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P270 Do not eat, drink or smoke when using this product.

P264 Wash hands thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P284 Wear respiratory protection.

P271 Use only outdoors or in a well-ventilated area.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

#### **Response**

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P333+P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P391 Collect spillage. Hazardous to the aquatic environment

P342+P311 IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P301+P310+P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.

P304+P340+P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/ doctor.

#### **Storage**

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

#### **Disposal**

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

### **2.3 Physical and chemical hazards**

No data available

### **2.4 Health hazards**

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.

H360 May damage fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H301 Toxic if swallowed.

## 2.5 Environmental hazards Code

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

## 2.6 Other hazards

No data available

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

### Substance / Mixture: Substance

#### 3.1 Substance

Name	Nickel(II) chloride
Formula	NiCl <sub>2</sub>
Molecular Weight	129. 60
CAS	7718-54-9
Concentration	ultra dry, 99. 9% (metals basis)

## 4 FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with

water. Consult a physician.

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

No data available.

## 5 FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 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.

## 6 ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

### 6.2 Environmental precautions

Do not let product enter drains.

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

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-

brushing and place in container for disposal according to local regulations.

## 6.4 Reference to other section

For disposal see section 13.

# 7 HANDLING AND STORAGE

## 7.1 Precautions for safe handling

### Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

### Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

### Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

## 7.2 Conditions for safe storage, including any incompatibilities

### Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Long term storage: RT

# 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 Control parameters

No data available.

## 8.2 Personal protective equipment

### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.

### 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.

### Body protection

Flame retardant antistatic protective clothing.

### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

### Control of environmental exposure

Do not let product enter drains. Risk of explosion.

# 9 PHYSICAL AND CHEMICAL PROPERTIES

## 9.1 Information on basic physical and chemical properties

a) Appearance	Orange powder or chunks
b) Odor	No data available
c) pH	No data available
d) Melting point/freezing point	1,001 ° C
e) Initial boiling point and boiling range	No data available
f) Upper/lower flammability or explosive limits	No data available
g) Flash point	No data available
h) Evaporation rate	No data available
i) Vapor pressure	No data available
j) Vapor density	No data available

k) Density	3.55 g/cm <sup>3</sup> at 25 ° C
l) Water solubility	642 g/l at 20 ° C – completely soluble
m) Partition coefficient: n-octanol/water	No data available
n) Autoignition temperature	No data available
o) Decomposition temperature	No data available
p) Flammability	The product is not flammable.

## 10 STABILITY AND REACTIVITY

### 10.1 Chemical stability

No data available.

### 10.2 Conditions to avoid

No data available.

### 10.3 Incompatible materials

No data available

### 10.4 Hazardous decomposition products

In the event of fire: see section 5.

## 11 TOXICOLOGICAL INFORMATION

### 11.1 Acute toxicity

LD50 Oral

– Rat – female – 175 mg/kg

LC50 Inhalation

– Rat – male – 4 h – 0.593 mg/l – dust/mist

LD50 Dermal

No data available

### 11.2 Skin corrosion/irritation

No data available

### 11.3 Serious eye damage/eye irritation

Eyes – Rabbit Result: No eye irritation – 168 h

### 11.4 Respiratory or skin sensitization

No data available

### 11.5 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 Remarks: Test Type: Chromosome aberration test Sp

### 11.6 Carcinogenicity

No data available

### 11.7 Reproductive toxicity

May damage the unborn child.

### 11.8 Specific target organ toxicity - single exposure

No data available

### 11.9 Specific target organ toxicity - repeated exposure

Inhalation – Causes damage to organs through prolonged or repeated exposure. – Lungs

### 11.10 Aspiration hazard

No data available.

### 11.11 Additional Information

RTECS: QR6475000 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. This substance should be handled with particular care.

## 12 ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish:

semi-static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - 15.3 mg/l - 96 h

Toxicity to daphnia and other aquatic:

static test LC50 - *Ceriodaphnia dubia* (water flea) - 0.013 mg/l - 48 h

Toxicity to algae:

static test ErC50 - green algae - 0.243 mg/l - 72 h

Toxicity to bacteria:

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

Bioaccumulation *Oncorhynchus mykiss* (rainbow trout) - 180 d - 1000 µg/l (nickel(II) chloride)

Bioconcentration factor (BCF): 4

### 12.4 Mobility in soil

No data available

### 12.5 Other adverse effects

Very toxic to aquatic life with long lasting effects. Discharge into the environment must be avoided.

## 13 DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Observe all federal, state and local regulations when disposing of the substance.

#### Contaminated packaging

Disposal must be made according to official regulations.

## 14 TRANSPORT INFORMATION

### 14.1 UN number

ADR/RID: 3288 IMDG: 3288 IATA: 3288

### 14.2 UN proper shipping name

ADR/RID: NICKEL(II) CHLORIDE

IMDG: NICKEL(II) CHLORIDE

IATA-DGR: Nickel(II) chloride

### 14.3 Transport hazard class(es)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

### 14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

### 14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

## 14.6 Special precautions for user

No data available

## 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Applicable regulations

Regulations on the Control over Safety of Dangerous Chemicals.

This product is included in the list of dangerous chemicals.

Please pay attention to waste disposal and meet the requirements of local regulations.

## 16. OTHER INFORMATION

### Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Dangerous Goods

IATA: International Air Transport Association

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

CAS: Chemical Abstracts Service (division of the American Chemical Society)

### Further information

The above safety technical information is for reference only, because many physical and chemical properties are not entirely clear. Please consult information carefully before use and use after confirmation.

Anhui Senrise Technology Co., Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product. More terms of use, see invoice information for details.

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