

## Chemical Safety Data Sheet MSDS / SDS

## 2-Chloropyridine

Revision Date:2026-03-21 Revision Number:1

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

## Product identifier

Product name : 2-Chloropyridine  
CBnumber : CB9852776  
CAS : 109-09-1  
EINECS Number : 203-646-3  
Synonyms : 2-CHLOROPYRIDINE

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P262 Do not get in eyes, on skin, or on clothing.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

## Hazard statements

H302 Harmful if swallowed  
H315 Causes skin irritation  
H318 Causes serious eye damage  
H335 May cause respiratory irritation  
H373 May cause damage to organs through prolonged or repeated exposure  
H410 Very toxic to aquatic life with long lasting effects

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## SECTION 3: Composition/information on ingredients

### Substance

Product name	: 2-Chloropyridine
Synonyms	: 2-CHLOROPYRIDINE
CAS	: 109-09-1
EC number	: 203-646-3
MF	: C5H4ClN
MW	: 113.54

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## SECTION 4: First aid measures

### General advice

First aiders need to protect themselves. Show this 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. Call a physician immediately.

### In case of eye contact

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

### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### Protection of first-aiders

For personal protection see section 8.

### Notes to physician

No data available

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## SECTION 5: Firefighting measures

### Suitable extinguishing media

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### Specific hazards during fire fighting

Combustible. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

### Hazardous combustion products

Carbon oxides Nitrogen oxides (NO<sub>x</sub>) Hydrogen chloride gas

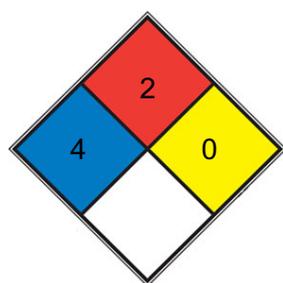
### Specific extinguishing methods

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

### Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### NFPA 704



HEALTH 4 Very short exposure could cause death or major residual injury (e.g. hydrogen cyanide, phosgene, methyl isocyanate, [hydrofluoric acid](#))

FIRE 2 Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, [sulfur](#))

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

SPEC.

HAZ.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

## Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.

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## SECTION 7: Handling and storage

### Handling

#### Advice on protection against fire and explosion

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

#### Advice on safe handling

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

### Storage

#### Further information on storage conditions

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

#### Storage class

6.1A, Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

#### Recommended storage temperature

Recommended storage temperature see product label.

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## SECTION 8: Exposure controls/personal protection

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### Engineering measures

No data available

### Personal protective equipment

#### Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### Recommended Filter

Filter A (acc. to DIN 3181) for vapours of organic

#### type

compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### Eye/face protection

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

Tightly fitting safety goggles

**Skin and body protection**

protective clothing

**Hand protection**

**Material**

Viton®

**Break through time**

480 min

**Glove thickness**

0.7 mm

**Protective index**

Full contact

**Manufacturer**

Vitoject® (KCL 890 / Aldrich Z677698, Size M)

**Material**

butyl-rubber

**Break through time**

240 min

**Glove thickness**

0.7 mm

**Protective index**

Splash contact

**Manufacturer**

Butoject® (KCL 898)

**Remarks**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D- 36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

liquid

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**Color**

colourless

**Odor**

No data available

**Odor Threshold**

No data available

## **pH**

6-7 (27g/l, H<sub>2</sub>O, 20 °C)

## **Melting point/ range**

-46 °C

## **Boiling point/boiling range**

166 °C (952 hPa)

Method: lit.

## **Flash point**

68 °C

Method: closed cup

## **Evaporation rate**

No data available

## **Flammability (solid, gas)**

No data available

## **Flammability (liquids)**

No data available

## **Burning rate**

No data available

## **Upper explosion limit / Upper flammability limit**

No data available

## **Lower explosion limit / Lower flammability limit**

No data available

## **Vapor pressure**

2.2 hPa (20 °C)

## **Relative vapor density**

No data available

## **Relative density**

1.2 g/mL at 25 °C (lit.)

## **Density**

1.2 g/cm<sup>3</sup> (25 °C)

Method: lit.

**Water solubility**

20 g/l (20 °C)

**Partition coefficient: n-octanol/water**

log Pow: 1.45

**Autoignition temperature**

585 °C

Method: DIN 51794

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

No data available

**Oxidizing properties**

none

**Molecular weight**

113.54 g/mol

**Particle characteristics Particle size**

No data available

**Solubility**

27g/l

**Physical state**

Liquid

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**SECTION 10: Stability and reactivity****Reactivity**

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.

## Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

## Possibility of hazardous reactions

Violent reactions possible with: Strong oxidizing agents Strong acids bases Peroxides

## Conditions to avoid

Strong heating.

## Incompatible materials

No data available

## Hazardous decomposition products

In the event of fire: see section 5

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# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Acute toxicity

LD50 Oral - Rat - 342 mg/kg (OECD Test Guideline 401)

LC100 Inhalation - 6 h - < 6.05 mg/l - vapour

LD50 Dermal - Rabbit - < 200 mg/kg (OECD Test Guideline 402)

LD50 Intraperitoneal - Rabbit - 48 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Antipsychotic.

Liver:Fatty liver degeneration.

LD50 Intraperitoneal - Mouse - 130 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity).

Behavioral:Antipsychotic.

Liver:Fatty liver degeneration.

### Skin corrosion/irritation

Remarks: No data available

### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Risk of serious damage to eyes.

(OECD Test Guideline 405)

### Respiratory or skin sensitization

Classified based on available data. For more details, see section 2

### Germ cell mutagenicity

Result: Positive results were obtained in some in vitro tests.

Test Type: in vivo assay

Species: Mouse

Method: OECD Test Guideline 474

Result: In vivo tests did not show any chromosomal changes.

#### **Carcinogenicity**

Classified based on available data. For more details, see section 2

#### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - single exposure**

Inhalation - May cause respiratory irritation.

#### **Specific target organ toxicity - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

- Liver, Kidney

#### **Aspiration hazard**

Classified based on available data. For more details, see section 2

### **11.2 Additional Information**

Inhalation of high concentrations may cause:, Local irritation, Nausea, Vomiting,

Prolonged or repeated exposure may cause:, Weakness, Fatigue, Central nervous system depression, Dizziness, Headache, Kidney injury may occur., Liver injury may occur.

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## **SECTION 12: Ecological information**

### **Ecotoxicity**

#### **Components:**

#### **2-Chloropyridine:**

##### **Toxicity to fish**

LC50 : 0.106 mg/l Exposure time: 96 h Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

##### **M-Factor (Acute aquatic toxicity)**

1

### **Persistence and degradability**

#### **Components:**

#### **2-Chloropyridine:**

##### **Biodegradability**

Result: According to the results of tests of biodegradability this product is not readily biodegradable. Method: OECD Test Guideline 301C

### **Bioaccumulative potential**

#### **Components:**

#### **2-Chloropyridine:**

##### **Bioaccumulation**

Remarks: No data available

**Partition coefficient: noctanol/water**

log Pow: 1.45

**Mobility in soil**

**Components:**

**2-Chloropyridine:**

**Stability in soil**

Remarks: No data available

**Other adverse effects**

No data available

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## SECTION 13: Disposal considerations

**Disposal methods**

**Waste from residues**

Offer surplus and non-recyclable solutions to a licensed disposal company.

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## SECTION 14: Transport information

**International Regulations**

**IATA-DGR**

UN/ID No. : UN 2822

Proper shipping name : 2-Chloropyridine

Class : 6.1

Packing group : II

Labels : Division 6.1 - Toxic substances

Packing instruction (cargo aircraft) : 662

Packing instruction (passenger aircraft) : 654

**IMDG-Code**

UN number : UN 2822

Proper shipping name : 2-CHLOROPYRIDINE

Class : 6.1

Packing group : II

Labels : 6.1

EmS Code : F-A, S-A

Marine pollutant : no

## Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### JT/T 617

UN number : UN 2822

Proper shipping name : 2-CHLOROPYRIDINE

Class : 6.1

Packing group : II

Labels : 6.1

Environmentally hazardous : no

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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## SECTION 15: Regulatory information

### National regulatory information

#### Regulations on Safety Management of Hazardous Chemicals

##### Catalogue of Hazardous Chemicals

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

##### No. / Code Chemical name / Category Threshold quantity

##### J5 Acute toxic 500 t

##### Hazardous Chemicals for Priority Management

Not applicable under SAWS

##### Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

##### China Severely Restricted Toxic Chemicals for Import and Export

Not applicable

##### Regulation on the Administration of Precursor Chemicals

##### Catalogue and Classification of Precursor Chemicals

Not listed

## SECTION 16: Other information

### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals

ANTT - National Agency for Transport by Land of Brazil

ASTM - American Society for the Testing of Materials

bw - Body weight

CMR - Carcinogen, Mutagen or Reproductive Toxicant

DIN - Standard of the German Institute for Standardisation

DSL - Domestic Substances List (Canada)

EC<sub>x</sub> - Concentration associated with x% response

EL<sub>x</sub> - Loading rate associated with x% response

EmS - Emergency Schedule

ENCS - Existing and New Chemical Substances (Japan)

ErC<sub>x</sub> - Concentration associated with x% growth rate response

ERG - Emergency Response Guide

GHS - Globally Harmonised System

GLP - Good Laboratory Practice

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

IC<sub>50</sub> - Half maximal inhibitory concentration

ICAO - International Civil Aviation Organization

IECSC - Inventory of Existing Chemical Substances in China

IMDG - International Maritime Dangerous Goods

IMO - International Maritime Organisation

ISHL - Industrial Safety and Health Law (Japan)

ISO - International Organisation for Standardisation

KECI - Korea Existing Chemicals Inventory

LC<sub>50</sub> - Lethal Concentration to 50 % of a test population

LD<sub>50</sub> - Lethal Dose to 50% of a test population (Median Lethal Dose)

MARPOL - International Convention for the Prevention of Pollution from Ships

MERCOSUR - The Agreement for the Facilitation of the Transport of Dangerous Goods

n.o.s. - Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC - No Observed (Adverse) Effect Concentration

NO(A)EL - No Observed (Adverse) Effect Level

NOELR - No Observable Effect Loading Rate

NOM - Official Mexican Norm

NTP - National Toxicology Program

NZIoC - New Zealand Inventory of Chemicals

OECD - Organisation for Economic Co-operation and Development

OPPTS - Office of Chemical Safety and Pollution Prevention

PBT - Persistent, Bioaccumulative and Toxic substance

PICCS - Philippines Inventory of Chemicals and Chemical Substances

(Q)SAR - (Quantitative) Structure Activity Relationship

REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

SADT - Self-Accelerating Decomposition Temperature

SDS - Safety Data Sheet

TCSI - Taiwan Chemical Substance Inventory

TDG - Transportation of Dangerous Goods

TECI - Thailand Existing Chemicals Inventory

TSCA - Toxic Substances Control Act (United States)

UN - United Nations

UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

vPvB - Very Persistent and Very Bioaccumulative

WHMIS - Workplace Hazardous Materials Information System

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.