ChemicalBook

# Chemical Safety Data Sheet MSDS / SDS

# COPPER(I) CYANIDE-15N

Revision Date:2026-05-31 Revision Number:1

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

### Product identifier

| | |
|---|---|
| Product name | : COPPER(I) CYANIDE-15N |
| CBnumber | : CB5485378 |
| CAS | : 204571-13-1 |
| Synonyms | : Cuprous Cyanide-15N;Copper(I) cyanide-1?N |

### 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**

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

P273 Avoid release to the environment.

P262 Do not get in eyes, on skin, or on clothing.

**Hazard statements**

H410 Very toxic to aquatic life with long lasting effects

## SECTION 3: Composition/information on ingredients

### Substance

| | |
|---|---|
| Product name | : COPPER(I) CYANIDE-15N |

| | |
|---|---|
| Synonyms | : Cuprous Cyanide-15N;Copper(I) cyanide-1?N |
| CAS | : 204571-13-1 |
| MF | : CCuN |
| MW | : 90.57 |

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

No data available

### 4.2 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

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

No data available

### 4.4 Notes to physician

No data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

No data available

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

Nitrogen oxides (NOx)

Copper oxides

Not combustible.

### 5.3 Advice for firefighters

No data available

## SECTION 6: Accidental release measures

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

For personal protection see section 8.

### 6.2 Environmental precautions

No data available

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

No data available

### 6.4 Reference to other sections

For disposal see section 13.

---

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

For precautions see section 2.2.

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

No data available

---

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Ingredients with workplace control parameters**

| ['Component', 'CAS-No.', 'Value', 'Control parameters', 'Basis'] | ['Copper(I) cyanide-15N', '204571- 13-1', 'MAC', '1 mg/m3', 'Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.'] | ['', 'Remarks', 'Skin', None, None] |
|---|---|---|

### 8.2 Exposure controls

**Personal protective equipment**

**Skin protection**

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).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 L

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).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 L

**Respiratory protection**

required when dusts 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.

**Control of environmental exposure**

Prevent product from entering drains.

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

| | |
|---|---|
| a) Physical state | solid |
| b) Color | No data available |
| c) Odor | No data available |
| d) Melting point/freezing point | Melting point/ range: 454 °C - lit. |
| e) Initial boiling point and boiling range | No data available |
| f) Flammability (solid, gas) | The product is not flammable. |
| g) Upper/lower flammability or explosive limits | No data available |
| h) Flash point | Not applicable |
| i) Autoignition temperature | No data available |
| j) Decomposition temperature | No data available |
| k) pH | No data available |
| l) Viscosity | Viscosity, kinematic: No data available<br>Viscosity, dynamic: No data available |
| m) Water solubility | No data available |
| n) Partition coefficient n-octanol/water | Not applicable for inorganic substances |
| o) Vapor pressure | No data available |
| p) Density | 2.92 g/cm3 at 25 °C |
| Relative density | 2.920 g/mL at 25 °C |
| q) Relative vapor density | No data available |
| r) Particle characteristics | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | none |

### 9.2 Other safety information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Chemical stability

Stable

### 10.2 Possibility of hazardous reactions

Violent reactions possible with: magnesium

Strong oxidizing agents nitrates

Bases

A risk of explosion and/or of toxic gas formation exists with the following substances:

Acids

Possible formation of:

Hydrogen cyanide (hydrocyanic acid)

### 10.3 Conditions to avoid

No data available

### 10.4 Incompatible materials

No data available

### 10.5 Hazardous decomposition products

In the event of fire: see section 5

---

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity**

Acute toxicity estimate Oral - 5.1 mg/kg (Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

The value is given in analogy to the following substances: Copper cyanide

Acute toxicity estimate Inhalation - 4 h - 0.051 mg/l - dust/mist (Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

The value is given in analogy to the following substances: Copper cyanide

Symptoms: mucosal irritations, Cough, Shortness of breath

Acute toxicity estimate Dermal - 5.1 mg/kg (Expert judgment)

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

The value is given in analogy to the following substances: Copper cyanide

**Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation - 4 h (OECD Test Guideline 404)

Remarks: The value is given in analogy to the following substances: Copper cyanide

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation - 1 s (OECD Test Guideline 405)

Remarks: The value is given in analogy to the following substances: Copper cyanide

**Respiratory or skin sensitization**

Buehler Test - Guinea pig

Result: negative (OECD Test Guideline 406)

Remarks: The value is given in analogy to the following substances: Copper cyanide

**Germ cell mutagenicity**

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Remarks: The value is given in analogy to the following substances: Copper cyanideTest

Type: Chromosome aberration test in vitro

Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Remarks: The value is given in analogy to the following substances: Copper cyanide

Test Type: Chromosome aberration test in vitro

Species: Rat

Application Route: Gavage

Method: OECD Test Guideline 475

Result: negative

Remarks: The value is given in analogy to the following substances: Copper cyanide

**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**

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

**Specific target organ toxicity - repeated exposure**

Oral - May cause damage to organs through prolonged or repeated exposure.

- Liver, spleen, Bone marrow

Remarks: The value is given in analogy to the following substances: Copper cyanide

**Aspiration hazard**

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

## 11.2 Additional Information

Repeated dose toxicity - Rat - male and female - Gavage - NOAEL (No observed adverse effect level) - 16 mg/kg

Remarks: The value is given in analogy to the following substances: Copper cyanide

Symptoms of systemic copper poisoning may include: capillary damage, headache, cold sweat, weak pulse, and kidney and liver damage, central nervous system excitation followed by depression, jaundice, convulsions, paralysis, and coma. Death may occur from shock or renal failure. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelination, kidney defects, and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has lead to hemolytic anemia and accelerates arteriosclerosis., Dermatitis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After absorption:

Headache

Dizziness

Impairment of vision

Shortness of breath

Unconsciousness

Convulsions death

The following applies to cyanogen compounds/ nitriles in general: utmost caution! Release of hydrocyanic acid is possible - blockade of cellular respiration. Cardiovascular disorders, dyspnoea, unconsciousness.

This substance should be handled with particular care.

---

# SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish static test LC50 - Oryzias latipes - 0.62 mg/l - 96 h (OECD Test Guideline 203)

Remarks: The value is given in analogy to the following substances:

Copper cyanide

Toxicity to daphnia static test EC50 - Daphnia magna (Water flea) - 0.21 mg/l - 48 h and other aquatic (OECD Test Guideline 202)

invertebrates Remarks: The value is given in analogy to the following substances:

Copper cyanide

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 0.089 mg/l - 72 h (OECD Test Guideline 201)

Remarks: The value is given in analogy to the following substances:

Copper cyanide

Toxicity to bacteria NOEC - Tetrahymena pyriformis - 3.6 - 3.8 mg/l - 48 h

Remarks: (ECHA)

The value is given in analogy to the following substances: Copper cyanide

Toxicity to flow-through test NOEC - Oncorhynchus mykiss (rainbow trout) - fish(Chronic toxicity) 0.002 mg/l - 60 d

Remarks: (ECHA)

The value is given in analogy to the following substances: Copper cyanide

Toxicity to daphnia flow-through test NOEC - Daphnia magna (Water flea) - 0.036 mg/l and other aquatic - 21 d invertebrates(Chronic

Remarks: (ECHA) toxicity) The value is given in analogy to the following substances: Copper cyanide

### 12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Endocrine disrupting properties

No data available

### 12.7 Other adverse effects

Discharge into the environment must be avoided.

---

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

No data available

---

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 1587

IMDG: 1587

IATA-DGR: 1587

### 14.2 UN proper shipping name

ADR/RID: COPPER CYANIDE

IMDG: COPPER CYANIDE

IATA-DGR: Copper cyanide

### 14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA-DGR: 6.1

### 14.4 Packaging group

ADR/RID: II

IMDG: II

IATA-DGR: II

### 14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA-DGR: no

### 14.6 Special precautions for user

Based on chemical properties, choose appropriate tools and conditions of transport.

Transporting tools shall be equipped with appropriate and sufficient firefighting equipment and emergency leaking installations. If transporting by road, please go along the specified route.

### 14.7 Incompatible materials

---

# SECTION 15: Regulatory information

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

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : Listed

Regulations on Occupational Labor Protection in the at workplaces where Toxic

Substances Are Used

Catalogue of Highly Toxic Chemicals : Listed

Measures on the Environmental Administration of New Chemical Substances Registration

Registration/Notification number : B1A222231983

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

Other regulations

Please pay attention on the waste treatment should also comply with local regulations requirement.

---

# SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

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

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration