

## Chemical Safety Data Sheet MSDS / SDS

## Quinoline

Revision Date:2025-01-25 Revision Number:1

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

## Product identifier

Product name : Quinoline  
CBnumber : CB2331254  
CAS : 91-22-5  
EINECS Number : 202-051-6  
Synonyms : QUINOLINE,quinolin

## 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 : 400-158-6606

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

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/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

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

P405 Store locked up.

P501 Dispose of contents/container to.....

#### **Hazard statements**

H301 Toxic if swallowed

H302 Harmful if swallowed

H311 Toxic in contact with skin

H412 Harmful to aquatic life with long lasting effects

H411 Toxic to aquatic life with long lasting effects

H401 Toxic to aquatic life

H373 May cause damage to organs through prolonged or repeated exposure

H371 May cause damage to organs

H351 Suspected of causing cancer

H350 May cause cancer

H341 Suspected of causing genetic defects

H319 Causes serious eye irritation

H315 Causes skin irritation

H312 Harmful in contact with skin

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: Quinoline
Synonyms	: QUINOLINE,quinolin
CAS	: 91-22-5
EC number	: 202-051-6
MF	: C9H7N
MW	: 129.16

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## SECTION 4: First aid measures

### **Description of first aid measures**

#### **General advice**

Consult a physician. Show this material 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. Take victim immediately to hospital. 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**

Never give anything by mouth to an unconscious person. Rinse mouth with water. 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 2.2) and/or in section 11

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

No data available

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## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media

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

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

Carbon oxides Nitrogen oxides (NO<sub>x</sub>) Combustible.

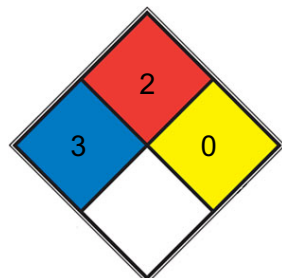
#### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### Further information

No data available

#### NFPA 704



HEALTH 3 Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium hypochlorite](#), hexafluorosilicic acid)

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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](#))

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

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SPEC.

HAZ.

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## SECTION 6: Accidental release measures

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

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

## **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

## **Reference to other sections**

For disposal see section 13.

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# SECTION 7: Handling and storage

## **Precautions for safe handling**

### **Advice on safe handling**

Avoid exposure - obtain special instructions before use. **Advice on safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

### **Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

For precautions see section 2.2.

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

### **Storage conditions**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

### **Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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# SECTION 8: Exposure controls/personal protection

## **control parameter**

### **Hazard composition and occupational exposure limits**

Does not contain substances with occupational exposure limits.

## **Exposure controls**

### **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.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0,3 mm Break through time: 480 min

Material tested: Butoject? (KCL 897 / Aldrich Z677647, Size M)

Splash contact Material: butyl-rubber

Minimum layer thickness: 0,3 mm Break through time: 480 min

Material tested: Butoject? (KCL 897 / Aldrich Z677647, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Body Protection

Complete suit protecting against chemicals, 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 full- face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance	light yellow clear, liquid
Odour	pungent
Odour Threshold	No data available
pH	7,3 at 5 g/l at 20 °C
Melting point/freezing point	Melting point/range: -17 - -13 °C - lit.
Initial boiling point and boiling range	113 - 114 °C at 15 hPa - lit. 237 °C - lit.
Flash point	101 °C - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive	Upper explosion limit: 7 %(V) Lower explosion limit: 1,2 %(V)

limits

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Vapour pressure	0,09 hPa at 20 °C
Vapour density	4,46 - (Air = 1.0)
Relative density	1,093 g/cm <sup>3</sup> at 25 °C - lit. No data available
Water solubility	6,11 g/l at 20 °C - soluble
Partition coefficient: n-octanol/water	log Pow: 2,03 - Bioaccumulation is not expected., (Lit.)
Autoignition temperature	480 °C
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Explosive properties	No data available
Oxidizing properties	No data available

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### Other safety information

Surface tension 45 mN/m at 20 °C

Dissociation constant 4,9

Relative vapor density

4,46 - (Air = 1.0)

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## SECTION 10: Stability and reactivity

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

No data available

### Incompatible materials

Strong oxidizing agents, Strong acids

### Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 262 mg/kg

(OECD Test Guideline 401)

Symptoms: Nausea, Vomiting, Gastrointestinal disturbance Symptoms: Possible damages:, mucosal irritations

LD50 Dermal - Rat - male and female - 1.377 mg/kg (OECD Test Guideline 402)

#### **Skin corrosion/irritation**

Skin - Rabbit

Result: irritating - 24 h (Draize Test) Remarks: (ECHA)

#### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Severe irritations - 24 h Remarks: (ECHA)

#### **Respiratory or skin sensitization**

(OECD Test Guideline 429)

#### **Germ cell mutagenicity**

Suspected of causing genetic defects.

Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation Result: Positive results were obtained in some in vitro tests. Remarks: (ECHA)

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: Positive results were obtained in some in vitro tests.

Remarks: (ECHA)

Test Type: sister chromatid exchange assay Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation Result: Positive results were obtained in some in vitro tests. Remarks: (ECHA)

Test Type: In vitro mammalian cell gene mutation test Test system: Mouse lymphoma test

Metabolic activation: without metabolic activation Result: positive

Remarks: (ECHA)

Test Type: Micronucleus test Species: Mouse

Cell type: Bone marrow

Application Route: Intraperitoneal injection

Result: positive Remarks: (ECHA)

#### **Carcinogenicity**

No data available

#### **Reproductive toxicity**

No data available

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

No data available

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

No data available

#### **Aspiration hazard**

No data available

#### **Toxicity**

LD50 orally in rats: 460 mg/kg (Smyth)

## SECTION 12: Ecological information

### Toxicity

#### Toxicity to fish

semi-static test LC50 - *Poecilia reticulata* (guppy) - 29,9 mg/l - 96 h (OECD Test Guideline 203)

#### Toxicity to bacteria

### Persistence and degradability

Biodegradability Result: 100 % - Readily biodegradable.

(OECD Test Guideline 301D)

### Bioaccumulative potential

Bioaccumulation *Cyprinus carpio* (Carp) - 6 Weeks

at 25 °C - 0,8 mg/l(quinoline)

### Mobility in soil

No data available

Bioconcentration factor (BCF): 1,6 - 2,5 Elimination: yes

### Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### Toxics Screening Level

The Initial Risk Screening Level (IRSL) for quinoline is 0.001 µg/m<sup>3</sup> based on an annual averaging time.

### Other adverse effects

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

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## SECTION 13: Disposal considerations

### Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

#### Incompatibilities

Reacts, possibly violently, with strong oxidants, strong acids; perchromates, nitrogen tetroxide; and maleic anhydride. Keep away from moisture, steam, and light. Contact with hydrogen peroxide may cause explosion. Unpredictably violent, this substance has been the source of various plant accidents.



### **Waste Disposal**

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. All federal, state, and local environmental regulations must be observed.

### **Contaminated packaging**

Dispose of as unused product.

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## SECTION 14: Transport information

### **UN number**

ADR/RID: 2656 IMDG: 2656

### **UN proper shipping name**

ADR/RID: QUINOLINE IMDG: QUINOLINE IATA: Quinoline

### **Transport hazard class(es)**

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

### **Packaging group**

ADR/RID: III IMDG: III IATA: III

### **Environmental hazards**

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

### **Special precautions for user**

No data available

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## SECTION 15: Regulatory information

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

#### **Regulations on the Safety Management of Hazardous Chemicals**

China Catalog of Hazardous chemicals 2015:Listed. website: <https://www.mem.gov.cn/>

#### **Measures for Environmental Management of New Chemical Substances**

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

EC Inventory:Listed.

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

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## SECTION 16: Other information

### Abbreviations and acronyms

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

CAS: Chemical Abstracts Service

EC50: Effective Concentration 50%

IATA: International Air Transportation Association

IMDG: International Maritime Dangerous Goods

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

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

STEL: Short term exposure limit

TWA: Time Weighted Average

### References

【1】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

【2】 ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

【3】 ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

【4】 eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:

[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

【5】 ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

【6】 Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

【7】 HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

【8】 IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

【9】 IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

### Other Information

Health effects of exposure to the substance have not been investigated adequately. Depending on the degree of exposure, periodic medical examination is suggested.

#### 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.