

## Chemical Safety Data Sheet MSDS / SDS

## Cyclopentanone

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

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

## Product identifier

Product name : Cyclopentanone  
CBnumber : CB8709022  
CAS : 120-92-3  
EINECS Number : 204-435-9  
Synonyms : CYCLOPENTANONE;Cyclopentanon

## 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

Warning

## Precautionary statements

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

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

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

## Hazard statements

H319 Causes serious eye irritation

H315 Causes skin irritation

H226 Flammable liquid and vapour

## SECTION 3: Composition/information on ingredients

## Substance

Product name	: Cyclopentanone
Synonyms	: CYCLOPENTANONE;Cyclopentanon
CAS	: 120-92-3
EC number	: 204-435-9
MF	: C5H8O
MW	: 84.12

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## SECTION 4: First aid measures

### General advice

Show this safety data sheet to the doctor in attendance.

### If inhaled

After inhalation: fresh air.

### In case of skin contact

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

### In case of eye contact

After eye contact: rinse out with plenty of water. 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 at elevated temperatures. Development of hazardous combustion gases or vapours possible in the event of fire.

## Hazardous combustion products

Carbon oxides

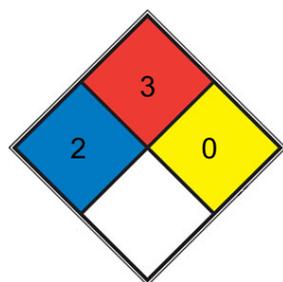
## Specific extinguishing methods

Remove container from danger zone and cool with water. 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	2	Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. <a href="#">diethyl ether</a> , ammonium phosphate, iodine)
■ FIRE	3	Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions. Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, <a href="#">acetone</a> )
■ REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, <a href="#">N<sub>2</sub></a> )
□ SPEC.		
□ HAZ.		

## 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. Risk of explosion.

### 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 with liquid-absorbent material (e.g. Chemizorb®). 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.

### Storage

#### Further information on storage conditions

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

#### Storage class

3, Flammable liquids

#### Recommended storage temperature

Recommended storage temperature see product label.

#### Packaging material

Suitable material: Amber Glass Bottle/Jar, Poly Drum

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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).

Safety glasses

#### Skin and body protection

Flame retardant antistatic protective clothing.

**Hand protection**

**Material**

butyl-rubber

**Break through time**

480 min

**Glove thickness**

0.7 mm

**Protective index**

Full contact

**Manufacturer**

Butoject® (KCL 898)

**Material**

Viton®

**Break through time**

120 min

**Glove thickness**

0.7 mm

**Protective index**

Splash contact

**Manufacturer**

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

**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**

clear, liquid

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**Color**

colourless

**Odor**

characteristic

**Odor Threshold**

No data available

**pH**

No data available

### **pH**

5.9 - 6

Method: OECD Test Guideline 105

GLP: yes

### **pH**

7

Method: OECD Test Guideline 117

GLP: yes Bioaccumulation is not expected.

### **Melting point/ range**

-51 °C

Method: lit.

### **Boiling point/boiling range**

130 - 131 °C

Method: lit.

### **Flash point**

27.5 °C

### **Evaporation rate**

No data available

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

No data available

### **Flammability (liquids)**

No data available

### **Burning rate**

No data available

### **Self-ignition**

430 °C 1,025 hPa

GLP: yes

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

Upper explosion limit

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

Lower explosion limit

### **Vapor pressure**

11.5 hPa (20 °C)

### **Relative vapor density**

2.97 (vs air)

### **Relative density**

0.951 g/mL at 25 °C (lit.)

### **Density**

0.951 g/cm<sup>3</sup> (25 °C)

Method: lit.

### **Water solubility**

301 g/l completely soluble (20 °C)

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

log Pow: 0.7 (25 °C)

### **Autoignition temperature**

445 °C

Decomposition temperature Viscosity: No data available

### **Viscosity, dynamic**

No data available

### **Viscosity, kinematic**

1.32 mm<sup>2</sup>/s ( 25 °C)

Method: OECD Test Guideline 114

### **Flow time**

No data available

### **Explosive properties**

Not classified as explosive.

### **Oxidizing properties**

none

### **Molecular weight**

84.12 g/mol

### **Particle characteristics Particle size**

No data available

### **Solubility**

9.18g/l slightly soluble

## Physical state

Liquid

## Dielectric constant

16.0 (-49°C)

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# SECTION 10: Stability and reactivity

## Reactivity

Vapour/air-mixtures are explosive at intense warming.

## Chemical stability

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

## Possibility of hazardous reactions

Exothermic reaction with: Oxidizing agents polymerisation initiators Strong bases acids Risk of explosion with: Nitric acid hydrogen peroxide hydrazine and derivatives hydroxylamine Violent reactions possible with: Strong oxidizing agents

## Conditions to avoid

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 - male and female - > 2,000 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - Rat - male - 4 h - > 19.5 mg/l - vapour (OECD Test Guideline 403)

LD50 Dermal - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

### Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin. - 4 h (OECD Test Guideline 404)

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

### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Irritating to eyes.

(OECD Test Guideline 405)

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

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

Maximisation Test - Guinea pig

Result: negative (OECD Test Guideline 406)

#### **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

Test Type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

#### **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**

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

#### **Aspiration hazard**

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

### **11.2 Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - 25 Weeks - No observed adverse effect level - 723 mg/kg - Lowest observed adverse effect level - 1,000 mg/kg

Remarks: (ECHA)

RTECS: GY4725000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Systemic effects:

After absorption:

Dizziness

Drowsiness

Convulsions

Damage to:

Liver

Kidney

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12: Ecological information

### Ecotoxicity

#### Components:

#### Cyclopentanone:

##### Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l End point: mortality Exposure time: 96 h Test Type: semi-static test Analytical monitoring: yes Method: OECD Test Guideline 203 GLP: yes

##### Toxicity to daphnia and other aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes

##### Toxicity to algae/aquatic plants

ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes

##### Toxicity to microorganisms

EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h Test Type: static test Method: OECD Test Guideline 209 GLP: yes

### Persistence and degradability

#### Components:

#### Cyclopentanone:

##### Biodegradability

aerobic Inoculum: activated sludge, non-adapted Concentration: 100 mg/l Result: Readily biodegradable. Biodegradation: > 99 % Exposure time: 28 d Method: OECD Test Guideline 301F GLP: yes

##### Bioaccumulative potential

#### Components:

#### Cyclopentanone:

##### Partition coefficient: noctanol/water

log Pow: 0.7 (25 °C) pH: 7 Method: OECD Test Guideline 117 GLP: yes Remarks: Bioaccumulation is not expected.

##### Mobility in soil

No data available

##### Other adverse effects

## Components:

### Cyclopentanone:

#### Additional ecological information

When discharged properly, no impairments in the function of adapted biological wastewater treatment plants are to be expected. Discharge into the environment must be avoided.

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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 2245

Proper shipping name : Cyclopentanone

Class : 3

Packing group : III

Labels : Class 3 - Flammable liquids

Packing instruction (cargo aircraft) : 366

Packing instruction (passenger aircraft) : 355

#### IMDG-Code

UN number : UN 2245

Proper shipping name : CYCLOPENTANONE

Class : 3

Packing group : III

Labels : 3

EmS Code : F-E, S-D

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 2245

Proper shipping name : CYCLOPENTANONE

Class : 3

Packing group : III

Labels : 3

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**

Listed

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

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

**W5.4 Flammable liquids 5,000 t**

##### **Hazardous Chemicals for Priority Management**

Not listed under SAWS

##### **Catalogue of Specially Controlled Hazardous**

Not listed Chemicals

##### **List of Explosive Precursors**

Not listed

##### **Regulations on Labour Protection in Workplaces where Toxic Substances are Used**

##### **Catalogue of Highly Toxic Chemicals**

Not listed

##### **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 listed

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

### **Catalogue and Classification of Precursor Chemicals**

Not listed

## **Regulations on the Administration of Controlled Chemicals**

### **List of Controlled Chemicals**

Not listed

## **Regulations of Ozone Depleting Substances Management**

### **List of Controlled Ozone Depleting Substances**

Not listed

### **List of Controlled Ozone Depleting Substances Import and Export**

Not listed

## **Environmental Protection Law**

### **List of Priority Controlled Chemicals**

Not listed

### **List of Key Controlled New Pollutants**

Not listed

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## 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 Harmonized 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

IC50 - 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 Organization

ISHL - Industrial Safety and Health Law (Japan)

ISO - International Organisation for Standardization

KECI - Korea Existing Chemicals Inventory

LC50 - Lethal Concentration to 50 % of a test population

LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)

MARPOL - International Convention for the Prevention of Pollution from Ships

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 - Organization 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.

