

# SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product identifier**

Product name : Cyclohexanone  
CAS No. : 108-94-1

**Manufacturer or supplier's details**

Company : Heynova (Shanghai) New Material Technology CO., Ltd  
Address : Building 3, No. 690 Bibo Road, Pudong New Area, Shanghai, China  
Telephone : +86-178-2110-2608  
E-mail address : info@heynovachem.com

## 2. HAZARDS IDENTIFICATION

**Emergency Overview**

**Appearance** : liquid  
**Color** : colorless - yellow

Flammable liquid and vapor. Harmful if swallowed. May be harmful if swallowed and enters airways. Toxic in contact with skin or if inhaled. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing genetic defects. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs (Liver, Central nervous system, spleen). May cause damage to organs (Lungs). Causes damage to organs (Liver, Kidney, Central nervous system) through prolonged or repeated exposure.

**GHS Classification**

Flammable liquids : Category 3  
Acute toxicity (Oral) : Category 4  
Acute toxicity (Inhalation) : Category 3  
Acute toxicity (Dermal) : Category 3  
Skin corrosion/irritation : Category 2  
Serious eye damage/eye irritation : Category 2A  
Germ cell mutagenicity : Category 2  
Carcinogenicity : Category 2  
Reproductive toxicity : Category 2  
Specific target organ toxicity - single exposure : Category 1 (Liver, Central nervous system, spleen)  
Specific target organ toxicity - single exposure : Category 2 (Lungs)  
Specific target organ toxicity - single exposure : Category 3 (respiratory tract irritation, Narcotic effects)  
Specific target organ toxicity - : Category 1 (Liver, Kidney, Central nervous system)

repeated exposure

Aspiration hazard : Category 2

**GHS label elements**

Hazard pictograms :



Signal Word : Danger

Hazard Statements :

- H226 Flammable liquid and vapor.
- H302 Harmful if swallowed.
- H305 May be harmful if swallowed and enters airways.
- H311 + H331 Toxic in contact with skin or if inhaled.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H361 Suspected of damaging fertility or the unborn child.
- H370 Causes damage to organs (Liver, Central nervous system, spleen).
- H371 May cause damage to organs (Lungs).
- H372 Causes damage to organs (Liver, Kidney, Central nervous system) through prolonged or repeated exposure.

Precautionary Statements :

**Prevention:**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
- P233 Keep container tightly closed.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
- P242 Use only non-sparking tools.
- P243 Take precautionary measures against static discharge.
- P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
- P331 Do NOT induce vomiting.
- P332 + P313 If skin irritation occurs: Get medical advice/ attention.
- P337 + P313 If eye irritation persists: Get medical advice/ attention.
- P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

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

closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

**Disposal:**

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

**Physical and chemical hazards**

Flammable liquid and vapor.

**Health hazards**

Harmful if swallowed. Toxic if inhaled. Toxic in contact with skin. Causes skin irritation. Causes serious eye irritation. Suspected of causing genetic defects. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs. May cause damage to organs. May cause respiratory irritation. May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure. May be harmful if swallowed and enters airways.

**Environmental hazards**

Not classified based on available information.

**Other hazards which do not result in classification**

None known.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

**Components**

Chemical name	CAS RN	Concentration (% w/w)
Cyclohexanone	108-94-1	99

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### 4. FIRST AID MEASURES

- If inhaled : Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER or doctor/ physician.
- In case of skin contact : Take off all contaminated clothing immediately.  
If on skin, rinse well with water.  
Call a POISON CENTER or doctor/ physician.
- In case of eye contact : Rinse with plenty of water.  
If easy to do, remove contact lens, if worn.  
Call a POISON CENTER or doctor/ physician.
- If swallowed : Immediately call a POISON CENTER or doctor/ physician.  
Rinse mouth.  
Do NOT induce vomiting.
- Most important symptoms and effects, both acute and delayed : None known.

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### 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Dry powder, Foam, Water spray, Carbon dioxide (CO<sub>2</sub>)
- Specific hazards during fire fighting : No information available.
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Immediately evacuate personnel to safe areas.  
Remove undamaged containers from fire area if it is safe to do so.

Special protective equipment for fire-fighters : Use personal protective equipment.

## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Wear suitable protective equipment.  
 Keep people away from and upwind of spill/leak.  
 Ensure adequate ventilation.  
 Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

Environmental precautions : Prevent product from entering drains.

Methods and materials for containment and cleaning up : Collect as much of the spill as possible with a suitable absorbent material.

## 7. HANDLING AND STORAGE

### Handling

Technical measures : Prevent generation of vapor or mist.  
 Take precautionary measures against static discharge.  
 Use explosion-proof equipment.

Local/Total ventilation : Ensure adequate ventilation.  
 Handle product only in closed system or provide appropriate exhaust ventilation at machinery.  
 Use a local exhaust ventilation.

Advice on safe handling : Avoid contact with skin, eyes and clothing.  
 Wear personal protective equipment.  
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 Do not subject to grinding, shock or friction.  
 Wash hands and face thoroughly after handling.

Avoidance of contact : Oxidizing agents, Reducing agents

### Storage

Conditions for safe storage : Keep container tightly closed.  
 Store in a cool and shaded area.  
 Keep in a well-ventilated place.  
 Use explosion-proof equipment.  
 Store locked up.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Components	CAS RN	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Cyclohexanone	108-94-1	PC-TWA	50 mg/m <sup>3</sup>	CN OEL
Further information: Skin				
		TWA	20 ppm	ACGIH
		STEL	50 ppm	ACGIH

Engineering measures : Install a closed system or local exhaust.  
 Also install safety shower and eye bath.

**Personal protective equipment**

Respiratory protection	:	Gas mask Self-contained breathing apparatus
Eye/face protection	:	Safety glasses Safety goggles Face-shield
Skin and body protection	:	Impervious protective clothing
Hand protection	:	Impervious gloves

\*Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	:	liquid
Color	:	colorless - yellow
Odor	:	No data available
Odor Threshold	:	0.88 ppm
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	157 °C
Flash point	:	44 °C
Evaporation rate	:	No data available
Flammability	:	No data available
Upper explosion limit / Upper flammability limit	:	9.4 %(V)
Lower explosion limit / Lower flammability limit	:	1.1 %(V)
Vapor pressure	:	500 Pa (20 °C)
Relative vapor density	:	3.4
Relative density	:	0.95
Solubility(ies)		
Water solubility	:	87 g/l soluble (20 °C)
Solubility in other solvents	:	soluble Solvent: Ether
		soluble Solvent: Alcohol
		soluble Solvent: Acetone
Partition coefficient: n-octanol/water	:	0.81
Autoignition temperature	:	420 °C
Decomposition temperature	:	No data available

Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Molecular weight	: 98.15 g/mol

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## 10. STABILITY AND REACTIVITY

Reactivity	: No data available
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: None under normal processing.
Conditions to avoid	: Electrical spark Open flame Electrostatic discharge
Incompatible materials	: Oxidizing agents, Reducing agents
Hazardous decomposition products	: Carbon monoxide, Carbon dioxide (CO <sub>2</sub> )

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Product:

Acute oral toxicity	: Assessment: The component/mixture is moderately toxic after single ingestion.
Acute inhalation toxicity	: Assessment: The component/mixture is toxic after short term inhalation.
Acute dermal toxicity	: Assessment: The component/mixture is toxic after single contact with skin.

#### Components:

##### **Cyclohexanone:**

Acute oral toxicity	: LD50 (Mouse): 1,400 mg/kg Assessment: The component/mixture is moderately toxic after single ingestion.  LD50 (Rat): 1,539 mg/kg
Acute inhalation toxicity	: LC50 (Rat): 8000 ppm Exposure time: 4 h Test atmosphere: gas Assessment: The component/mixture is toxic after short term inhalation.
Acute dermal toxicity	: Assessment: The component/mixture is toxic after single contact with skin.

### Skin corrosion/irritation

#### Product:

Result	: Skin irritation
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**Components:**
**Cyclohexanone:**

Result : Skin irritation

**Serious eye damage/eye irritation**
**Product:**

Result : Eye irritation

**Components:**
**Cyclohexanone:**

Result : Eye irritation

**Respiratory or skin sensitization** : No information available.

**Germ cell mutagenicity**
**Product:**

Germ cell mutagenicity - Assessment : Suspected of inducing heritable mutations in the germ cells of humans.

**Components:**
**Cyclohexanone:**

Germ cell mutagenicity - Assessment : Suspected of inducing heritable mutations in the germ cells of humans.

**Carcinogenicity**
**Product:**

Carcinogenicity - Assessment : Suspected human carcinogens

**Components:**
**Cyclohexanone:**

Carcinogenicity - Assessment : Suspected human carcinogens

**Reproductive toxicity**
**Product:**

Reproductive toxicity - Assessment : Suspected human reproductive toxicant

**Components:**
**Cyclohexanone:**

Reproductive toxicity - Assessment : Suspected human reproductive toxicant

**STOT-single exposure**
**Product:**

Assessment : May cause respiratory irritation.  
May cause drowsiness or dizziness.

Target Organs : Liver, Central nervous system, spleen  
Assessment : Causes damage to organs.

Target Organs : Lungs

Assessment : May cause damage to organs.

**Components:**

**Cyclohexanone:**

Assessment : May cause respiratory irritation.  
May cause drowsiness or dizziness.

Target Organs : Liver, Central nervous system, spleen  
Assessment : Causes damage to organs.

Target Organs : Lungs  
Assessment : May cause damage to organs.

**STOT-repeated exposure**

**Product:**

Target Organs : Liver, Kidney, Central nervous system  
Assessment : Causes damage to organs through prolonged or repeated exposure.

**Components:**

**Cyclohexanone:**

Target Organs : Liver, Kidney, Central nervous system  
Assessment : Causes damage to organs through prolonged or repeated exposure.

**Repeated dose toxicity** : No information available.

**Aspiration toxicity**

**Product:**

May be harmful if swallowed and enters airways.

**Components:**

**Cyclohexanone:**

May be harmful if swallowed and enters airways.

**RTECS No.** : GW1050000 (Cyclohexanone)

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## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

**Components:**

**Cyclohexanone:**

Partition coefficient: n-octanol/water : 0.81

**Mobility in soil**

No data available

**Other adverse effects**

No data available



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**13. DISPOSAL CONSIDERATIONS****Disposal methods**

- Waste from residues : Disposal in accordance with local and national regulations.  
Take precautions against ignition or explode.  
Entrust disposal to a licensed waste disposal company.
- Contaminated packaging : Disposal in accordance with local and national regulations.  
Before disposal of used container, remove contents completely.

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**14. TRANSPORT INFORMATION****International Regulations****IATA-DGR**

- UN/ID No. : UN 1915
- Proper shipping name : Cyclohexanone
- Class : 3
- Packing group : III

**IMDG-Code**

- UN number : UN 1915
- Proper shipping name : CYCLOHEXANONE
- Class : 3
- Packing group : III
- EmS Code : F-E, S-D

**Domestic regulation****GB 6944/12268**

- UN number : UN 1915
- Proper shipping name : CYCLOHEXANONE
- Class : 3
- Packing group : III

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**15. REGULATORY INFORMATION****Regulations on Safety Management of Hazardous Chemicals**

- Catalogue of Hazardous Chemicals : Listed

**The ingredients of this product are reported in the following inventories:**

- CH BAGREG : On the inventory, or in compliance with the inventory
- TSCA : All substances listed as active on the TSCA inventory
- AICS : On the inventory, or in compliance with the inventory
- DSL : All components of this product are on the Canadian DSL
- ENCS : On the inventory, or in compliance with the inventory
- ISHL : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

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## 16. OTHER INFORMATION

Revision Date : 2024/11/09  
Date format : yyyy/mm/dd

### Disclaimer

This SDS was prepared sincerely based on the information obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling operations, sufficient care should be taken, in addition to the safety measures suitable for the given situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.