

**MATERIAL SAFETY DATA SHEET****Product Name:** Cyclohexanone**CAS No.:** 108-94-1**Version:** 0**1. Identification**

**Product Code** : 90149, 90385  
**Company Name** : Advent Chembio Private Limited  
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**2. Composition/Information on Ingredients**

Ingredient	CAS No	Percent
CYCLOHEXANONE	108-94-1	95 - 100%

**3. Hazards Identification****Hazard classification****Physical hazards**

Flammable liquids : Category 3

**Health hazards**

Acute toxicity (Oral) : Category 4

Acute toxicity (Dermal) : Category 3

Acute toxicity (Inhalation - gas) : Category 4

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 2

Specific target organ toxicity - single exposure : Category 3

Aspiration hazard : Category 1

**Labels elements****Hazard symbol****Signal word** : Danger**Hazard statement** : Flammable liquid and vapor.  
Harmful if swallowed.  
Toxic in contact with skin.  
Harmful if inhaled.  
Causes skin irritation.  
Causes serious eye irritation.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.

**MATERIAL SAFETY DATA SHEET****Product Name:** Cyclohexanone**CAS No.:** 108-94-1**Version:** 0**Precautionary statement****Prevention**

May be fatal if swallowed and enters airways.

- : Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

**Response**

- : In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. Rinse mouth. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Storage**

- : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

**Disposal**

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

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

- : None.

**4. First Aid Measures****General information**

- : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.

**Ingestion**

- : Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Inhalation**

- : Move to fresh air. Get medical attention if symptoms persist. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration.

**Skin contact**

- : Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention

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- immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
- Eye contact** : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
- Most important symptoms/effects, acute and delayed** : Toxic in contact with skin. May be fatal if swallowed. Irritating to eyes, respiratory system and skin. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea..
- Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed.

**5. Fire Fighting Measures**

- General fire hazards** : Flammable liquid and vapor.
- Suitable (and unsuitable) extinguishing media**
- Suitable extinguishing media** : Water spray, foam, dry powder or carbon dioxide.
- Unsuitable extinguishing media** : Avoid water in straight hose stream; will scatter and spread fire.
- Specific hazards arising from the chemical** : Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. Heat may cause the containers to explode.
- Special protective equipment and precautions for firefighters**
- Special fire fighting procedures** : Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out. Fight fire from a protected location.
- Special protective equipment for fire-fighters** : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental Release Measures**

- Personal precautions, protective equipment and emergency procedures** : Evacuate area. Keep unauthorized personnel away. Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods and material for containment and cleaning up** : Eliminate all ignition sources if safe to do so. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.
- Notification Procedures** : Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is

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**Environmental precautions** : without risk. Inform authorities if large amounts are involved.  
 : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and Storage

**Precautions for safe handling** : Keep away from heat/sparks/open flames/hot surfaces. No smoking. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Wash hands thoroughly after handling.

**Conditions for safe storage, including any incompatibilities** : Keep away from food, drink and animal feeding stuffs. Keep out of reach of children. Keep container tightly closed in a cool, well-ventilated place. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

## 8. Exposure Controls Personal Protection

### Control parameters

### Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
CYCLOHEXANONE	TWA	20 ppm	US. ACGIH Threshold Limit Values (2011)
	ST EL	50 ppm	US. ACGIH Threshold Limit Values (2011)
	REL	25 ppm 100 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010 ).
	PEL	50 ppm 200 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	25 ppm 100 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

**Appropriate engineering controls** : No data available.

### Individual protection measures, such as personal protective equipment

**General information** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be

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- available in the immediate work area. Use explosion-proof ventilation equipment.
- Eye/face protection** : Wear safety glasses with side shields (or goggles) and a face shield.  
**Hand protection** : Chemical resistant gloves.  
**Other** : Wear suitable protective clothing.  
**Respiratory protection** : If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Chemical respirator with organic vapor cartridge and full facepiece.
- Hygiene measures** : Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. .

**9. Physical and Chemical Properties**

- Appearance** : Colorless to slightly yellow ,Oily liquid  
**Odor** : Acetone-like odor.  
**pH** : No data available.  
**Melting point/freezing point** : -31 °C  
**Initial boiling point and boiling range** : 155.6 °C (101.3 kPa)  
**Flash Point** : 44 °C (Closed Cup)  
**Vapor pressure** : 0.6 kPa (25 °C)  
**Vapor density** : 3.4 AIR=1  
**Relative density** : 0.94 (25 °C)  
**Solubility in water** : 150 g/l  
**Solubility (other)** : No data available.  
**Formula** : C<sub>6</sub>H<sub>10</sub>O  
**Molecular Weight** : 98.15 g/mol

**10. Stability and Reactivity**

- Reactivity** : No dangerous reaction known under conditions of normal use.  
**Chemical stability** : Material is stable under normal conditions.  
**Possibility of hazardous reactions** : Hazardous polymerization does not occur.  
**Conditions to avoid** : Heat, sparks, flames. Contact with incompatible materials.  
**Incompatible materials** : Strong oxidizing agents.  
**Hazardous decomposition products** : Thermal decomposition may release oxides of carbon.

**11. Toxicological Information****Information on likely routes of exposure**

- Ingestion** : May be harmful if swallowed.  
**Inhalation** : Harmful if inhaled. Irritating to respiratory system. May cause drowsiness or dizziness .

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**Skin contact** : Toxic in contact with skin. Causes skin irritation.  
**Eye contact** : Causes serious eye irritation.

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

**Oral Product** : LD 50 (Rat): 1,800 mg/kg .  
**Dermal Product** : LD 50 (Rabbit): 1,000 mg/kg .  
**Inhalation Product** : LC 50 (Rat, 4 h): 8,000 mg/l .  
**Repeated dose toxicity Product** : No data available.  
**Skin corrosion/irritation Product** : Irritating to skin.  
**Serious eye damage/eye irritation Product** : Irritating to eyes.  
**Respiratory or skin sensitization Product** : Not a skin sensitizer.  
**Carcinogenicity Product** : Confirmed animal carcinogen with unknown relevance to humans .  
**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans** : No carcinogenic components identified.  
**US. National Toxicology Program (NTP) Report on Carcinogens** : No carcinogenic components identified  
**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)** : No carcinogenic components identified  
**Germ cell mutagenicity In vitro Product** : No mutagenic components identified.  
**In vivo Product** : No mutagenic components identified.  
**Reproductive toxicity Product** : No components toxic to reproduction .  
**Specific target organ toxicity - single exposure Product** : Narcotic effect. Respiratory tract irritation.  
**Specific target organ toxicity - repeated exposure Product** : None known.  
**Aspiration hazard Product** : May be fatal if swallowed and enters airways.  
**Other effects** : None known.

**12. Ecological Information****Ecotoxicity****Acute hazards to the aquatic environment :**

**Fish Product** : No data available.  
**Specified substance(s):** : LC 50 (Carp (*Leuciscus idus melanotus*), 48 h): 536 mg/l  
CYCLOHEXANONE Mortality  
LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 481 - 578 mg/l Mortality .  
**Aquatic invertebrates Product** : No data available.  
**Specified substance(s):** : LC 50 (Water flea (*Daphnia magna*), 24 h): 800 mg/l Mortality  
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**Chronic hazards to the aquatic environment :**

- Fish Product** : No data available.
- Aquatic invertebrates Product** : No data available.
- Toxicity to Aquatic Plants Product:** : No data available.
- Persistence and degradability**
- Biodegradation Product** : Expected to be readily biodegradable .
- BOD/COD ratio Product** : No data available.
- Bioaccumulative potential**
- Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.
- Partition coefficient n-octanol / water (log Kow) Product** : Log Kow: 0.81 .
- Mobility in soil** : No data available.

- Other adverse effects** : The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

### 13. Disposal consideration

- Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws.
- Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

### 14. Transport information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
<b>DOT</b>	UN 1915	CYCLOHEXANONE	3	III	No
<b>IMDG</b>	UN 1915	CYCLOHEXANONE	3	III	No
<b>IATA</b>	UN 1915	CYCLOHEXANONE	3	III	No

### 15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

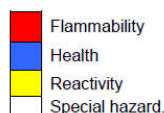
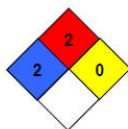
Safety, health and environmental regulations/legislation specific for the substance or mixture  
No Data Available.

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**16. Other Information****NFPA Hazard ID**

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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