

Safety Data Sheet: Cyclohexene

1. Identification

Product	Cyclohexene; CAS 110-83-8; EC 203-807-8
Use	Professional fine-chemical synthesis and specialty processing.
Company	Hainan Zhongxin Chemical Co., Ltd. (ZXCHEM)
Address	Room 1001, Building A, Caohejing Center, No. 1520 Gumei Road, Xuhui District, Shanghai, China
Telephone / email	+86-21-54265599 / sales@zxchem.com.cn
Emergency contact	ZXCHEM office number above, office hours, China time (UTC+8). For urgent medical assistance contact local emergency services.
Scope	Reference safety information for Cyclohexene. The reference composition, concentration and supply-grade differences are described in Section 3. This document does not certify the composition or transport status of a specific delivered batch or a different formulation.

2. Hazards Identification

Classification	Flammable liquid Category 2; acute oral toxicity Category 4; aspiration hazard Category 1; acute and chronic aquatic hazard Category 2.
Signal word / symbols	Danger; GHS02, GHS07, GHS08, GHS09
Hazard statements	H225: highly flammable liquid and vapour. H302: harmful if swallowed. H304: may be fatal if swallowed and enters airways. H411: toxic to aquatic life with long-lasting effects.
Prevention	Use explosion-protected ventilation and equipment, ground and bond transfer systems and use non-sparking tools. Wear compatible chemical-resistant gloves, splash goggles and antistatic protective clothing. Avoid vapour, aerosol and ingestion; do not induce vomiting after swallowing.
Response	After exposure, stop work and seek medical advice. For severe exposure obtain urgent medical care. Rinse contaminated skin or eyes with water; move an inhalation casualty to fresh air.
Environment	Prevent uncontrolled release to drains, soil or surface water. Collect spills for appropriate disposal.



3. Composition / Information on Ingredients

Reference ingredient	Cyclohexene, CAS 110-83-8, EC 203-807-8. The selected liquid substance reference discloses 90–100%; supply purity ≥98.5%. No inhibitor identity or concentration is asserted for the supplied lot.
Supply grade	Purity ≥98.5%
Applicability	The cited concentration or purity describes the reference material. It is not a certificate of analysis for the delivered batch; different solvents or dilutions require the matching supplier safety document.

4. First-Aid Measures

General	Protect the rescuer from exposure and show the product information to medical personnel. Obtain medical advice if symptoms occur or exposure is significant.
Inhalation	Move to fresh air and keep the person comfortable. Seek medical care for breathing difficulty or persistent symptoms. Avoid exposing rescuers to mist.
Skin	Remove contaminated clothing and rinse skin thoroughly with water. Seek medical advice for persistent irritation.
Eyes	Rinse gently with clean water for at least 15 minutes. Remove contact lenses when easy and continue rinsing. Seek medical advice if irritation persists.
Ingestion	Do not induce vomiting; aspiration can be fatal. Rinse mouth, keep airways clear and immediately call a poison centre or doctor. Never give anything orally to an unconscious person.
Effects / treatment	Swallowing and aspiration can be fatal. High vapour exposure can cause headache, dizziness, nausea and central nervous system depression. Treatment is symptomatic and directed by a clinician.

5. Fire-Fighting Measures

Extinguishing media	Use carbon dioxide, dry powder or suitable foam. Beware of vapour flashback; cool exposed containers when safe. Firefighters require protective clothing and breathing apparatus.
Hazards	Vapour can form explosive mixtures with air. Fire can release carbon oxides; air exposure can generate hazardous peroxides.
Protection	Firefighters require suitable protective clothing and self-contained breathing equipment. Prevent contaminated firefighting water entering drains.

6. Accidental Release Measures

Personal protection	Use explosion-protected ventilation and equipment, ground and bond transfer systems and use non-sparking tools. Wear compatible chemical-resistant gloves, splash goggles and antistatic protective clothing. Avoid vapour, aerosol and ingestion; do not induce vomiting after swallowing.
Containment	Eliminate ignition sources and stop leakage when safe. Contain liquid with compatible inert absorbent and collect in labelled closed containers.
Environment	Prevent drainage and uncontrolled release; use an approved disposal route.

7. Handling and Storage

Handling	Use explosion-protected ventilation and equipment, ground and bond transfer systems and use non-sparking tools. Wear compatible chemical-resistant gloves, splash goggles and antistatic protective clothing. Avoid vapour, aerosol and ingestion; do not induce vomiting after swallowing.
Storage	Keep tightly closed and locked up below 30°C in a cool, dry, well-ventilated flammable-liquid storage area. Protect from heat, sparks, flames, sunlight and strong oxidizers; manage air exposure and peroxide formation.
Incompatibilities	Strong oxidizers and oxygen; air exposure can form peroxides. Rubber and some plastics are unsuitable contact materials.

8. Exposure Controls / Personal Protection

Exposure limits	Reference ACGIH TWA 20 ppm; NIOSH and OSHA TWA 300 ppm (1,015 mg/m ³). Apply the relevant local limit and control vapour at source.
Engineering controls	Use local extraction where mist can be generated. Maintain accessible eyewash and emergency washing facilities.
Personal protection	Wear chemical-resistant gloves selected for the task, suitable protective clothing and splash goggles. Add face protection for splash-prone tasks.
Respiratory protection	Use a properly selected respirator under a respiratory-protection program where engineering controls do not adequately limit airborne exposure.
Hygiene	Wash after handling, remove contaminated clothing promptly and do not eat, drink or smoke in the work area.

9. Physical and Chemical Properties

Appearance	Colourless, transparent liquid
Formula / molecular weight	C ₆ H ₁₀ / 82.14 g/mol
Physical state	Liquid
Boiling point, reference	83°C
Flash point, reference	-17°C
Melting point, reference	-104°C
Density, reference	0.811 g/mL at 25°C
Other properties	Product-specific values for odor threshold, vapor pressure, partition coefficient, autoignition temperature and viscosity are not supplied by the selected reference set. No values are inferred.

10. Stability and Reactivity

Stability	Handle and store under the recommended conditions. Prevent contamination and unnecessary heating.
Incompatibilities	Strong oxidizers and oxygen; air exposure can form peroxides. Rubber and some plastics are unsuitable contact materials.
Decomposition	Vapour can form explosive mixtures with air. Fire can release carbon oxides; air exposure can generate hazardous peroxides.

11. Toxicological Information

Exposure effects	Swallowing and aspiration can be fatal. High vapour exposure can cause headache, dizziness, nausea and central nervous system depression.
Reference classification	Flammable liquid Category 2; acute oral toxicity Category 4; aspiration hazard Category 1; acute and chronic aquatic hazard Category 2.
Data limits	Reference rat oral LD ₅₀ 1,300 mg/kg and inhalation rat LC ₅₀ >21.6 mg/L over four hours. Aspiration is the critical ingestion hazard. No supplied-lot chronic toxicity study is asserted.

12. Ecological Information

Environmental effects	Reference fish LC ₅₀ 7.1 mg/L over 96 hours and water-flea EC ₅₀ 5.3 mg/L over 48 hours. Toxic to aquatic life with persistent effects; prevent drainage and collect firewater.
Controls	Prevent uncontrolled release, collect spills and dispose of contaminated material through an authorized route.
Assessment	No product-specific PBT/vPvB assessment is claimed. Absence of data does not establish absence of environmental effects.

13. Disposal Considerations

Product	Collect surplus product and contaminated cleanup material for disposal by an authorized chemical-waste contractor in accordance with local requirements.
Packaging	Containers may retain product residues. Do not reuse contaminated packaging without an approved cleaning process; use an authorized disposal route.

14. Transport Information

Classification	Class 3 — Flammable liquid
UN number	UN 2256
Shipping name	CYCLOHEXENE
Class / packing group	49 CFR road, IMDG and IATA: UN 2256, Class 3, packing group II. The selected reference transport entry states marine pollutant: no; environmental-release controls remain necessary.
Transport precautions	Protect packaging and closures from damage, secure loads and prevent releases. This reference is not a shipping declaration for a specific consignment.

15. Regulatory Information

Identity	Cyclohexene; CAS 110-83-8; EC 203-807-8
HS reference	290219; reference heading rather than a destination customs ruling.
Compliance	Apply applicable workplace, environmental and transport rules. A raw-material listing does not establish authorization for a finished formulation.
Assessment	No ZXCHEM-specific chemical safety assessment or destination registration is asserted.

16. Other Information

Hazard meanings	H225: highly flammable liquid and vapour. H302: harmful if swallowed. H304: may be fatal if swallowed and enters airways. H411: toxic to aquatic life with long-lasting effects.
Limitations	Prepared as reference safety information for the identified material. It is not a batch analytical certificate or safety assessment of a different solvent-containing formulation.
Revision	2026.1; prepared 2026-10-07. Customer-document branding and title corrected; technical safety data retained.
Document scope	Reference safety information for the material and grade described in Sections 1 and 3. Different concentrations, solvents or formulations require the applicable safety information. This is not a batch analytical certificate.

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