



# Safety Data Sheet

## CYCLOHEXANE

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### 1. PRODUCT AND COMPANY IDENTIFICATION

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**Product Name:** Cyclohexane ACS, HPLC

**Synonyms/Generic Names:** Hexahydro-benzene, Hexamethylene, Hexanaphthene

**Product Number:** CP-A1311, CP-C1311,

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer:** ChemPure Brand Chemicals  
39103 Warren Road  
Westland, MI 48185

**For More Information Call:** 734-729-1805 (Monday-Friday 8:00-4:30)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

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### 2. HAZARDS IDENTIFICATION

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**OSHA Hazards:** Flammable liquid, Irritant

**Target Organs:** Lungs, Central Nervous System

**Signal Words:** Danger **Pictograms:**



**GHS Classification:**

Flammable liquids	Category 2
Acute toxicity, Inhalation	Category 4
Acute toxicity, Dermal	Category 5
Skin irritation	Category 2
Eye irritation	Category 2B
Specific target organ toxicity-single exposure	Category 3
Aspiration hazard	Category 1
Acute aquatic toxicity	Category 1

Chronic aquatic toxicity	Category 1
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#### GHS Label Elements, including precautionary statements:

##### Hazard Statements:

H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H313	May be harmful in contact with skin.
H315+H320	Causes skin and eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H410	Very toxic to aquatic life with long lasting effects.

##### Precautionary Statements:

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P273	Avoid release to the environment.
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 so. Continue rinsing.
P331	Do NOT induce vomiting.
P501	Dispose of contents/containers to an approved waste disposal plant.

##### Potential Health Effects

<b>Eyes</b>	Causes eye irritation.
<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Ingestion</b>	May be harmful if swallowed. Aspiration hazard if swallowed – can enter lungs and cause damage.

##### NFPA Ratings

<b>Health</b>	1
<b>Flammability</b>	3
<b>Reactivity</b>	0
<b>Specific hazard</b>	Not Available

##### HMIS Ratings

<b>Health</b>	1
<b>Fire</b>	3
<b>Reactivity</b>	0
<b>Personal</b>	H

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Cyclohexane	100	110-82-7	203-806-2	C <sub>6</sub> H <sub>12</sub>	84.16 g/mol

### 4. FIRST-AID MEASURES

<b>Eyes</b>	In case of eye contact, rinse with plenty of water and seek medical attention.
<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Skin</b>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.

<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.
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## 5. FIRE-FIGHTING MEASURES

<b>Suitable (and unsuitable) extinguishing media</b>	Product is flammable. Use dry chemical, alcohol-resistant foam, or carbon dioxide to extinguish fire. Use appropriate media for adjacent fire. Cool containers with water.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	Emits toxic fumes (carbon oxides) under fire conditions. (See also Stability and Reactivity section).

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	See section 8 for recommendations on the use of personal protective equipment.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	Neutralize spill. Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation and avoid inhalation of vapors/mists. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols. Keep away from sources of ignition.

### Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Cyclohexane	100 ppm 344 mg/m <sup>3</sup>	TLV	NIOSH
	300 ppm 1050 mg/m <sup>3</sup>	PEL	OSHA

	300 ppm 1050 mg/m <sup>3</sup>	REL	ACGIH
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TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes. IDLH:

Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

#### Personal Protection

<b>Eyes</b>	Wear chemical safety glasses or goggles.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
<b>Skin</b>	Wear nitrile or rubber gloves, apron or lab coat.
<b>Other</b>	Not Available

#### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless liquid.
Odor	Mildly sweet odor.
Odor threshold	25 ppm
pH	Not Available
Melting point/freezing point	6.5 °C (43.6°F)
Initial boiling point and boiling range	80.7 °C (117.3°F)
Flash point	-18 °C (-0.4°F)
Evaporation rate	Not Available
Flammability (solid, gas)	Flammable
Upper/lower flammability or explosive limit	LEL: 1% (V) UEL: 9% (V)
Vapor pressure	225 hPa (168.8 mmHg) at 37.7°C (99.9°F) 102.7 hPa (77 mmHg) at 20°C (68°F)
Vapor density	2.98 (air=1)
Density	0.779 g/cm <sup>3</sup>
Solubility (ies)	Soluble in methanol.
Partition coefficient: n-octanol/water	log Pow: 3.44
Auto-ignition temperature	245°C (473°F)
Decomposition temperature	Not Available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur.
<b>Conditions to Avoid</b>	Heat, flames, sparks. Extremes of temperature and direct sunlight.

<b>Incompatible Materials</b>	Strong oxidizing agents.
<b>Hazardous Decomposition Products</b>	Carbon oxides.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

<b>Skin</b>	LD50 – Rabbit - >2,000 mg/kg
<b>Eyes</b>	LC50 – Rat – 13,900 mg/m <sup>3</sup> – 4h
<b>Respiratory</b>	Not Available
<b>Ingestion</b>	LD50 – Rat – 12, 705 mg/kg

### Carcinogenicity

<b>IARC</b>	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>ACGIH</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<b>NTP</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
<b>OSHA</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Signs & Symptoms of Exposure

<b>Skin</b>	Irritation, redness, itching.
<b>Eyes</b>	Irritation, redness, watering eyes.
<b>Respiratory</b>	Coughing, wheezing, shortness of breath, dizziness, drowsiness.
<b>Ingestion</b>	Nausea, vomiting, diarrhea, dizziness, drowsiness.

<b>Chronic Toxicity</b>	Drying, cracking of exposed skin. Damage to specific organs.
<b>Teratogenicity</b>	Not Available
<b>Mutagenicity</b>	May alter genetic material.
<b>Embryotoxicity</b>	Not Available
<b>Specific Target Organ Toxicity</b>	Damages kidneys, liver, cardiovascular system, central nervous system.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

<b>Aquatic Vertebrate</b>	LC50 – Lepomis macrochirus – 34.7 mg/L – 96h LC50 – Pimephales promelas – 32-93 mg/L – 96h
<b>Aquatic Invertebrate</b>	EC50 – Daphnia magna – 3.78 mg/L – 48h
<b>Terrestrial</b>	Not Available

<b>Persistence and Degradability</b>	Not readily biodegradable.
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in Soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	Very toxic to aquatic life with long lasting effects.

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### 13. DISPOSAL CONSIDERATIONS

<b>Waste Residues</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

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### 14. TRANSPORTATION INFORMATION

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US DOT	UN1145, Cyclohexane, 3, pg II
TDG	UN1145, CYCLOHEXANE, 3, pg II
IMDG	UN1145, CYCLOHEXANE, 3, pg II
Marine Pollutant	No
IATA/ICAO	UN1145, Cyclohexane, 3, pg II

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### 15. REGULATORY INFORMATION

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TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Cyclohexane
SARA 312	Cyclohexane
SARA 313	Listed: Cyclohexane
WHMIS Canada	Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). Class D-2B: Poisonous and infectious material – Other effects - Toxic

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## 16. OTHER INFORMATION

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Revision	Date
Revision 1	07-13-2012
Revision 2	08/16/2013
Revision 3	11/04/2021

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