

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 08.30.2016

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Cyclohexane, ACS Grade

SECTION 1: Identification

Product identifier

Product name: Cyclohexane, ACS Grade

Product code: CY8830

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory chemicals

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:

United States

AquaPhoenix Scientific, Inc.

860 Gitts Run Road

Hanover, PA 17331

1-717-632-1291

Supplier:

AquaPhoenix Scientific, Inc.

860 Gitts Run Road

Hanover, PA 17331

1-717-632-1291

Emergency telephone number:

United States

ChemTel Inc

+1(800)255-3924

+1(813)248-0585

SECTION 2: Hazard(s) identification

GHS classification:

Flammable liquids, category 2

Acute aquatic hazard, category 1

Chronic aquatic hazard, category 1

Skin irritation, category 2

Specific target organ toxicity - single exposure, category 3, central nervous system

Aspiration hazard, category 1

Label elements

Hazard pictograms:



Signal word: Danger

Hazard statements:

H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

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

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P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P271 Use only outdoors or in a well-ventilated area.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/light/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.
P264 Wash skin thoroughly after handling.
P303+P361+P353 If on skin (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower.
P301+P310 If swallowed: Immediately call a poison center or doctor/physician.
P370+P378 In case of fire: Use agents recommended in section 5 for extinction.
P391 Collect spillage.
P321 Specific treatment (see supplemental first aid instructions on this label).
P362 Take off contaminated clothing and wash before reuse.
P302+P352 If on skin: Wash with soap and water.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P304+P340+P312 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.
P331 Do not induce vomiting.
P405 Store locked up.
P403+P233 Store in a well ventilated place. Keep container tightly closed.
P501 Dispose of contents and container as instructed in Section 13.

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 110-82-7	Cyclohexane	>99.99

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position

Maintain an unobstructed airway

Get medical advice/attention if you feel unwell

After skin contact:

Wash affected area with soap and water

Seek medical attention if symptoms develop or persist

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes

If symptoms develop or persist, seek medical attention

After swallowing:

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Rinse mouth thoroughly

Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use Water (fog only), dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam

Unsuitable extinguishing media:

Do not use a water stream as an extinguisher

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Vapors can flow to distant ignition sources and flashback

Liquid is volatile and may generate an explosive atmosphere

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Shut off sources of ignition

Carbon monoxide and carbon dioxide may form upon combustion

Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

Beware of vapors accumulating to form explosive concentrations

Vapors can accumulate in low areas

Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing

Use spark-proof tools and explosion-proof equipment

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)

Dispose of contents / container in accordance with local regulations

Reference to other sections:

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Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

- Use only with adequate ventilation.
- Avoid breathing mist or vapor.
- Do not eat, drink, smoke or use personal products when handling chemical substances.
- Take precautionary measures against electrostatic discharges.
- Use only non-sparking tools.

Conditions for safe storage, including any incompatibilities:

- Keep container tightly sealed.
- Protect from freezing and physical damage.
- Store in a cool, well-ventilated area.
- Store away from all ignition sources (open flames, hot surfaces, direct sunlight, spark sources).

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Cyclohexane	110-82-7	ACGIH TLV TWA 100 ppm
United States (OSHA)	Cyclohexane	110-82-7	OSHA PEL TWA 300 ppm
	Cyclohexane	110-82-7	OSHA PEL TWA 1050 mg/m ³
NIOSH	Cyclohexane	110-82-7	NIOSH REL TWA 300 ppm
	Cyclohexane	110-82-7	NIOSH REL TWA 1050 mg/m ³

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

- Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.
- Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

- Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
- Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
- Use explosion-proof ventilation equipment.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

- Select glove material impermeable and resistant to the substance.
- Wear appropriate clothing to prevent any possibility of skin contact.

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.

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General hygienic measures:

- Avoid contact with skin, eyes and clothing.
- Wash hands before breaks and at the end of work.
- Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear liquid
Odor	Sweet
Odor threshold	Not determined or not available
pH	Not determined or not available
Melting point/freezing point	6.5°C
Initial boiling point/range	81°C
Flash point (closed cup)	-18°C
Evaporation rate	6.1 (n-butyl acetate)
Flammability (solid, gas)	Not determined or not available
Upper flammability/explosive limit	8.0
Lower flammability/explosive limit	1.3
Vapor pressure	104 mbar at 20°C
Vapor density	2.90 (Air = 1.0)
Density	Not determined or not available
Relative density	0.770
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not determined or not available
Auto/Self-ignition temperature	260°C
Decomposition temperature	Not determined or not available
Dynamic viscosity	0.94 mPa.s at 20°C
Kinematic viscosity	Not determined or not available
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials:

Strong oxidizing agents.

Hazardous decomposition products:

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Carbon monoxide, carbon dioxide.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Skin corrosion/irritation

Assessment: Causes skin irritation

Product data: No data available.

Substance data:

Name	Result
Cyclohexane	May cause skin irritation.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: May cause drowsiness or dizziness

Product data: No data available.

Substance data:

Name	Result
Cyclohexane	May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

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Aspiration toxicity

Assessment: May be fatal if swallowed and enters airways

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Very toxic to aquatic life

Product data: No data available.

Substance data:

Name	Result
Cyclohexane	Pseudokirchneriella subcapitata (green algae) - 3.4 mg/l - 72 h
	Pimephales promelas (fathead minnow) - 4.53 mg/l
	Daphnia magna (Water flea) - 0.9 mg/l - 48 h

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.



SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	1145
UN proper shipping name	Cyclohexane, Marine Pollutant
UN transport hazard class(es)	3  
Packing group	II
Environmental hazards	Marine Pollutant

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Special precautions for user	None
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International Maritime Dangerous Goods (IMDG)

UN number	1145
UN proper shipping name	Cyclohexane, Marine Pollutant
UN transport hazard class(es)	3  
Packing group	II
Environmental hazards	Marine Pollutant
Special precautions for user	None
EmS number	F-E, S-D
Limited quantity	1L

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	1145
UN proper shipping name	Cyclohexane, Marine Pollutant
UN transport hazard class(es)	3  
Packing group	II
Environmental hazards	Marine Pollutant
Special precautions for user	None
Limited quantity	1L

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Bulk Name	None
Ship type	None
Pollution category	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

110-82-7	Cyclohexane	Listed
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Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

Acute	Chronic	Fire	Pressure	Reactive
No	No	No	No	No

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

110-82-7	Cyclohexane	Listed
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CERCLA:

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110-82-7	Cyclohexane	Listed	1000
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RCRA:

110-82-7	Cyclohexane	Listed	
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Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

110-82-7	Cyclohexane	Listed	
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New Jersey Right to Know:

110-82-7	Cyclohexane	Listed	
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New York Right to Know:

110-82-7	Cyclohexane	Listed	
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Pennsylvania Right to Know:

110-82-7	Cyclohexane	Listed	
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California Proposition 65: Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 1-3-0

HMIS: 1-3-0

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End of Safety Data Sheet