

Safety Data Sheet

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 12.19.2017

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Cyclohexene

SECTION 1: Identification

Product identifier

Product name: Cyclohexene

Product code: S25291

Recommended use of the product and restriction on use

Relevant identified uses: Not determined or not applicable.

Uses advised against: Not determined or not applicable.

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

Manufacturer or supplier details

Manufacturer:

AquaPhoenix Scientific
860 Gitts Run Road
Hanover
PA 17331
(717) 632-1291

Supplier:

Fisher Science Education
6771 Silver Crest Road
Nazareth
PA 18064
800 955-1177

Emergency telephone number:

United States

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazard identification

GHS classification:

Flammable liquids, category 2

Acute toxicity (oral), category 4

Aspiration hazard, category 1

Chronic aquatic hazard, category 2

Label elements

Hazard pictograms:



Signal word: Danger

Hazard statements:

H225 Highly flammable liquid and vapor

H302 Harmful if swallowed

H304 May be fatal if swallowed and enters airways

H411 Toxic to aquatic life with long lasting effects

Precautionary statements:

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

P233 Keep container tightly closed

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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
P264 Wash skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P273 Avoid release to the environment
P303+P361+P353 If on skin (or hair): Immediately remove/take off all contaminated clothing. Rinse skin with water/shower
P370+P378 In case of fire: Use agents recommended in section 5 for extinction
P331 Do not induce vomiting
P301+P310 If swallowed: Immediately call a poison center or doctor/physician
P391 Collect spillage
P403+P235 Store in a well ventilated place. Keep cool
P405 Store locked up
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: 110-83-8 | Cyclohexene | 100 |

Additional Information: None

SECTION 4: First-aid measures

Description of first-aid measures

General notes:

Not determined or not available.

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:

Rinse affected area with soap and water

If symptoms develop or persist, seek medical attention

After eye contact:

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

If symptoms develop or persist, seek medical attention

After ingestion:

Rinse mouth thoroughly

Seek medical attention if irritation, discomfort, or vomiting persists

Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

Do not induce vomiting

Rinse mouth and then drink plenty of water

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Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not available.

Delayed symptoms and effects:

Not determined or not available.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not available.

Notes for the doctor:

Not determined or not available.

SECTION 5: Fire-fighting 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

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Reference to other sections:

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 |
|-----------------------|-------------|------------|---|
| United States (OSHA) | Cyclohexene | 110-83-8 | TWA: 300 ppm (1015 mg/m ³) - 8H |
| NIOSH | Cyclohexene | 110-83-8 | TWA: 300 ppm (1015 mg/m ³) - 8H |

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 (physical state, color): | Clear, colorless liquid |
| Odor: | Sweetish odor |
| Odor threshold: | Not determined or not available. |
| pH-value: | Not determined or not available. |
| Melting/Freezing point: | 0°C |
| Boiling point/range: | 83°C at 760 mmHg |
| Flash point: | -20°C |
| Evaporation rate: | Not determined or not available. |
| Flammability (solid, gaseous): | Not determined or not available. |
| Explosion limit upper: | Not determined or not available. |
| Explosion limit lower: | Not determined or not available. |
| Vapor pressure: | 75 mmHg at 20°C |
| Vapor density: | 2.8 |
| Density: | Not determined or not available. |
| Relative density: | 0.810 g/cm ³ |
| Solubilities: | Insoluble |
| Partition coefficient (n-octanol/water): | Not determined or not available. |
| Auto/Self-ignition temperature: | Not determined or not available. |
| Decomposition temperature: | Not determined or not available. |
| Dynamic viscosity: | Not determined or not available. |
| Kinematic viscosity: | Not determined or not available. |
| Explosive properties | Not determined or not available. |
| Oxidizing properties | Not determined or not available. |

Other information

| | |
|-------------------------|-------|
| Molecular weight | 82.13 |
|-------------------------|-------|

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:

Incompatible materials, light, ignition sources, oxidizers.

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Incompatible materials:

Oxidizing agents and acids.

Hazardous decomposition products:

Carbon monoxide, carbon dioxide.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Harmful if swallowed

Product data: No data available.

Substance data:

| Name | Route | Result |
|-------------|-------|-------------------------|
| Cyclohexene | oral | LD50 - Rat - 1950 mg/kg |

Skin corrosion/irritation

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

Product data: No data available.

Substance data: No data available.

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

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

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

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Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: May be fatal if swallowed and enters airways

Product data: No data available.

Substance data:

| Name | Result |
|-------------|---|
| Cyclohexene | May be fatal if swallowed and enters airways. |

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

Product data: No data available.

Substance data:

| Name | Result |
|-------------|--------------------------------------|
| Cyclohexene | LC50 - 96 H - 7.1 mg/l |
| | LC50 - Crustaceans - 48 H - 9.4 mg/l |

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

Canadian Transportation of Dangerous Goods (TDG)


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| | |
|-------------------------------|---|
| UN number | UN2256 |
| UN proper shipping name | Cyclohexene |
| UN transport hazard class(es) | 3  |
| Packing group | II |
| Environmental hazards | None |
| Special precautions for user | None |

International Maritime Dangerous Goods (IMDG)

| | |
|-------------------------------|---|
| UN number | UN2256 |
| UN proper shipping name | Cyclohexene |
| UN transport hazard class(es) | 3  |
| Packing group | II |
| Environmental hazards | None |
| Special precautions for user | None |

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

| | |
|-------------------------------|---|
| UN number | UN2256 |
| UN proper shipping name | Cyclohexene |
| UN transport hazard class(es) | 3  |
| Packing group | II |
| Environmental hazards | None |
| Special precautions for user | None |

SECTION 15: Regulatory information

Canada regulations

Domestic substances list (DSL):

| | | |
|----------|-------------|--------|
| 110-83-8 | Cyclohexene | Listed |
|----------|-------------|--------|

Non-domestic substances list (NDSL): Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with the Canadian Hazardous Products Regulations and WHMIS 2015. 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

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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: 2-0-0

HMIS: 2-0-0-X

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End of Safety Data Sheet