

Safety Data Sheet

Cyclohexane

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Cyclohexane
Recommended Use: Science education applications
Synonyms: Hexahydrobenzene; Hexamethylene
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes eye irritation. Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

GHS Classification:

Aspiration Hazard Category 1, Hazardous to the aquatic environment - Acute Category 1, Hazardous to the aquatic environment - Chronic Category 1, Flammable Liquid Category 2, Serious Eye Damage/Eye Irritation Category 2B, Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 3, Acute Toxicity - Inhalation Vapor Category 4, Acute Toxicity - Dermal Category 5

Acute Toxicity Dermal Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3 Composition / Information on Ingredients

| <u>Chemical Name</u> | <u>CAS #</u> | <u>%</u> |
|----------------------|--------------|----------|
| Cyclohexane | 110-82-7 | 100 |

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Eyes: 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.
Skin Contact: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Section 5 Firefighting Procedures

Extinguishing Media: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Vapors may travel back to ignition source. Closed Containers exposed to heat may explode. Explosive when mixed with oxidising substances.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

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Section 6

Spill or Leak Procedures

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Collect spillage.

Section 7

Handling and Storage

Handling: 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. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Bond and ground containers when transferring liquid.

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

Storage Code: Red - Flammables. Store in approved flammable containers. Store away from oxidizing materials.

Section 8

Protection Information

| <u>Chemical Name</u> | <u>ACGIH</u> | | <u>OSHA PEL</u> | |
|----------------------|--------------|---------------|--------------------------------|---------------|
| | <u>(TWA)</u> | <u>(STEL)</u> | <u>(TWA)</u> | <u>(STEL)</u> |
| Cyclohexane | 100 ppm TWA | N/A | 300 ppm TWA; 1050 mg/m3 TWA | N/A |

Control Parameters

Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

Nitrile

Section 9

Physical Data

Formula: C6H12
Molecular Weight: 84.16
Appearance: Colorless Liquid
Odor: No data available
Odor Threshold: No data available
pH: No data available
Melting Point: No data available
Boiling Point: 81 C
Flash Point: -18 C
Flammable Limits in Air: 1.30% 8.00%

Vapor Pressure: 96.9 mmHg at 20 °C
Evaporation Rate (BuAc=1): >1
Vapor Density (Air=1): 2.9
Specific Gravity: .779 at 25 °C
Solubility in Water: Practically Insoluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: 100%

Section 10

Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: None known. Sparks, open flame, other ignition sources, and elevated temperatures.
Hazardous Polymerization: Will not occur

Section 11

Toxicity Data

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Routes of Entry: Ingestion, skin and eye contact.
Symptoms (Acute): N/A
Delayed Effects: No data available

Acute Toxicity:

| Chemical Name | CAS Number | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|------------|---|----------------|--|
| Cyclohexane | 110-82-7 | Oral LD50 Rabbit 5.5 mg/kg Oral LD50 Mouse 813 mg/kg Oral LD50 Rat 12705 mg/kg | Not determined | INHALATION LC50 Mouse 70000 MG/M3 INHALATION LC50 MAMMAL 70 GM/M3 |

Carcinogenicity:

| Chemical Name | CAS Number | IARC | NTP | OSHA |
|-------------------|------------|------------|------------|------------|
| No data available | 110-82-7 | Not listed | Not listed | Not listed |

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2
Chronic: Mutation data cited., Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12

Ecological Data

Overview: This material is not expected to be harmful to the ecology. Highly/very toxic to fish and other water organisms.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

| Chemical Name | CAS Number | Eco Toxicity |
|---------------|------------|--|
| Cyclohexane | 110-82-7 | 24 HR EC50 DAPHNIA MAGNA > 400 MG/L 72 HR EC50 DESMODESMUS SUBSPICATUS > 500 MG/L |

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name: UN1145, Cyclohexane, 3, II
Air - IATA Proper Shipping Name: UN number: 1145 Class: 3 Packing group: II

Section 15

Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

| Chemical Name | CAS Number | § 313 Name | § 304 RQ | CERCLA RQ | § 302 TPQ | CAA 112(2) TQ |
|---------------|------------|-------------|------------|-----------------------------------|-----------|---------------|
| Cyclohexane | 110-82-7 | Cyclohexane | 1000 lb RQ | 1000 lb final RQ; 454 kg final RQ | No | No |

Section 16

Additional Information

Cyclohexane

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

| | | | |
|--------|---|------|---|
| ACGIH | American Conference of Governmental Industrial Hygienists | NTP | National Toxicology Program |
| CAS | Chemical Abstract Service Number | OSHA | Occupational Safety and Health Administration |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act | PEL | Permissible Exposure Limit |
| DOT | U.S. Department of Transportation | ppm | Parts per million |
| IARC | International Agency for Research on Cancer | RCRA | Resource Conservation and Recovery Act |
| N/A | Not Available | SARA | Superfund Amendments and Reauthorization Act |
| | | TLV | Threshold Limit Value |
| | | TSCA | Toxic Substances Control Act |
| | | IDLH | Immediately dangerous to life and health |