

Safety Data Sheet

Cyclohexene

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Cyclohexene
Recommended Use: Science education applications
Synonyms: 1,2,3,4-Tetrahydrobenzene, Benzenetetrahydride
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. Harmful if swallowed. May be fatal if swallowed and enters airways. Toxic to aquatic life.

GHS Classification:

Aspiration Hazard Category 1, Flammable Liquid Category 2, Hazardous to the aquatic environment - Acute Category 2, Acute Toxicity - Oral Category 4

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Cyclohexene	110-83-8	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Section 5 Firefighting Procedures

Extinguishing Media: Water fog Water in flooding amounts. Do not use dry chemical, CO₂, or halon.
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.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

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Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Ventilate the contaminated area. 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. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area.

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. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Storage: 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

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
Cyclohexene	300 ppm TWA	N/A	300 ppm TWA; 1015 mg/m3 TWA	N/A

Control Parameters

Engineering Measures:

Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

Respiratory protection may be required to avoid overexposure when handling this product. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

Respirator Type(s):

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: C6H10
Molecular Weight: 82.14
Appearance: Colorless Liquid
Odor: Moderate Sweet
Odor Threshold: No data available
pH: No data available
Melting Point: -104 C
Boiling Point: 83 C
Flash Point: -7 C
Flammable Limits in Air: 0.8 - 2.8%

Vapor Pressure: 89 mmHg at 25 °C
Evaporation Rate (BuAc=1): No data available
Vapor Density (Air=1): 2.8
Specific Gravity: 0.8110 at 20 °C
Solubility in Water: Soluble
Log Pow (calculated): 2.86
Autoignition Temperature: 244 C
Decomposition Temperature: No data available
Viscosity: 0.770
Percent Volatile by Volume: 100%

Section 10 Reactivity Data

Reactivity: Mildly reactive - See below
Chemical Stability: Stable under normal conditions. May form explosive peroxides

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Conditions to Avoid:	Temperatures above flash point in combination with sparks, open flames, or other sources of ignition.
Incompatible Materials:	Strong oxidizing agents
Hazardous Decomposition Products:	Carbon oxides
Hazardous Polymerization:	Will not occur

Section 11 Toxicity Data

Routes of Entry	Inhalation, Ingestion, and Skin contact.
Symptoms (Acute):	Headache, Respiratory Irritation, Central Nervous System Depression, Hypoxia, Depressed Activity, Anesthetic properties., Chemical Pneumonia
Delayed Effects:	Dermatitis Respiratory Irritation Chemical Pneumonia Central Nervous System Depression Depressed Activity

Acute Toxicity:				
Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Cyclohexene	110-83-8	Oral LD50 Rat 1946 mg/kg	Dermal LD50 GUINEA PIG > 20 ml/kg	INHALATION LC50 Mouse 50000 MG/M3

Carcinogenicity:				
Chemical Name	CAS Number	IARC	NTP	OSHA
Cyclohexene	110-83-8	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:	Lungs, Central Nervous System
Chronic:	Skin

Section 12 Ecological Data

Overview:	Moderate ecological hazard. This product may be dangerous to plants and/or wildlife.
Mobility:	This material is expected to have only slight mobility in soil. It absorbs strongly to most soil types.
Persistence:	Evaporation into atmosphere
Bioaccumulation:	Bioconcentration may occur.
Degradability:	Biodegrades slowly.
Other Adverse Effects:	No data

Chemical Name	CAS Number	Eco Toxicity
Cyclohexene	110-83-8	Aquatic LC50 Guppy 7.1 MG/L Aquatic EC50 (48h) Daphnia

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):	If discarded, this product is considered a RCRA ignitable waste, D001.

Section 14 Transport Information

Ground - DOT Proper Shipping Name:	Air - IATA Proper Shipping Name:
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UN2256
Cyclohexene
Class 3
P.G. II

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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
Cyclohexene	110-83-8	No	No	No	No	No

Section 16

Additional Information

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Replaces: 09/03/2014

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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