

CHAITANYA CHS, 2nd FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.
CONTACT: +9122 28725393 /94/ 95 | EMAILID: CARE@SUVCHEM.COM

MATERIAL SAFETY DATA SHEET (MSDS)**CYCOHEXENE (FOR SYNTHESIS)****1. Product Identification**

Synonyms: 1,2,3,4-Tetrahydrobenzene; benzene tetrahydride
CAS No.: 110-83-8

Product Coad: SS0114702500

Molecular Weight: 82.15
Chemical Formula: C₆H₁₀

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Cyclohexene	110-83-8	99 - 100%	Yes

3. Hazards Identification

Emergency Overview DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF SWALLOWED OR INHALED. AFFECTS CENTRAL NERVOUS SYSTEM. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

Inhalation: May cause irritation to the respiratory tract. Symptoms may include coughing, sore throat, labored breathing, and chest pain. High concentrations have a narcotic effect. High concentrations in the air cause a deficiency of oxygen with the risk of unconsciousness.

Ingestion: May produce abdominal pain, nausea. Aspiration into lungs can produce severe lung damage and is a medical emergency. Other symptoms expected to parallel inhalation.

Skin Contact: May cause irritation with redness and pain.

Eye Contact: May cause irritation, redness and pain.

Chronic Exposure: Chronic exposure may cause skin effects.

Aggravation of Pre-existing Conditions: No information found.

4. First Aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact: Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician if irritation persists.

5. Fire Fighting Measures

Fire: Flash point: < -7C (< 19F) CC

Autoignition temperature: 244C (471F)

Extremely Flammable Liquid.

Explosion: Above the flash point, explosive vapor-air mixtures may be formed. Vapors can flow along surfaces to distant ignition source and flash back. Contact with oxidizers may generate explosive mixtures. Sensitive to static discharge. **Fire Extinguishing Media:** Dry chemical, alcohol foam or carbon dioxide. Water may be ineffective. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. This highly flammable liquid must be kept from sparks, open flame, hot surfaces, and all sources of heat and ignition.

6. Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or

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detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. After 12 months' storage, test material for peroxide and either treat it for recovery or properly discard it. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL): 300 ppm (TWA)

-ACGIH Threshold Limit Value (TLV): 100 ppm (TWA)

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a full facepiece respirator with organic vapor cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Clear, colorless liquid.

Odor: Sweet odor.

Solubility: Insoluble in water.

Specific Gravity: 0.81 @ 20C/4C

pH: No information found.

% Volatiles by volume @ 21C (70F): 100

Boiling Point: 83C (181F)

Melting Point: -103.7C (-155F)

Vapor Density (Air=1): 2.8

Vapor Pressure (mm Hg): 160 @ 30C (86F)

Evaporation Rate (BuAc=1): No information found.

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage. Readily auto oxidizes in air at room temperature to form peroxide. Sufficient peroxide can be formed to be hazardous if the material is distilled, especially if vacuum distilled.

Hazardous Decomposition Products: Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization: Will not occur.

Incompatibilities: Strong oxidizers.

Conditions to Avoid: Heat, flame, ignition sources, air, incompatibles

11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Cyclohexene (110-83-8)	No	No	None

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12. Ecological Information

Environmental Fate:

When released into the soil, this material is expected to quickly evaporate. When released to water, this material is expected to quickly evaporate.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Proper Shipping Name: CYCLOHEXENE

Hazard Class: 3

UN/NA: UN2256

Packing Group: II

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Cyclohexene (110-83-8)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----

--Canada--

Ingredient	Korea	DSL	NDSL	Phil.
Cyclohexene (110-83-8)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----

-SARA 302- -----SARA 313-----

Ingredient	RQ	TPQ	List	Chemical Catg.
Cyclohexene (110-83-8)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----

-RCRA- -TSCA-

Ingredient	CERCLA	261.33	8(d)
Cyclohexene (110-83-8)	No	No	Yes

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Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No

Reactivity: No (Pure / Liquid)

Australian Hazchem Code: 3[Y]E

Poison Schedule: None allocated.

WHMIS: This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 1 Flammability: 3 Reactivity: 0

Label Hazard Warning:

DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF SWALLOWED OR INHALED. AFFECTS CENTRAL NERVOUS SYSTEM. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

Label Precautions:

Avoid breathing vapor.

Avoid contact with eyes, skin and clothing.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

Keep away from heat, sparks and flame.

Label First Aid:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. Call a physician if irritation develops or persists.

Product Use:

Laboratory Reagent.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

DISCLAIMER:

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

End of document