



Registered Off. : 101-A, Deep Enclave, Pocket 'D', Ashok Vihar, Phase-III, Delhi-110 052 (India)  
Corporate Off. : 152, Vardhman City Centre, Near Shakti Nagar Underbridge, Delhi-110052 (India)  
Works : Plot No.1022, Modern Industrial Estate, Bahadurgarh-124507, Haryana (India)  
Telephone : 0091 - 11 - 23646422 E-mail : tecpharm@gmail.com  
Website : www.technopharmchem.com

## CYCLOHEXANE

### 1. Product Identification

Synonyms: Hexahydrobenzene; hexamethylene; Hexanaphthene

CAS No.: 110-82-7

Molecular Weight: 84.16

Chemical Formula: C<sub>6</sub>H<sub>12</sub>

Product Code : 38198, 38205

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Cyclohexane	110-82-7	90 - 100%

### 3. Hazards Identification

Potential Health Effects

Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. High concentrations have a narcotic effect.

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: Causes irritation to skin. Symptoms include redness, itching, and pain.

Eye Contact: Causes irritation, redness, and pain.

Chronic Exposure: Chronic exposure may cause skin effects.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

### 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: Aspiration hazard. If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Call a physician immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

### 5. Fire Fighting Measures

Fire: Flash point: -18C (0F) CC

Autoignition temperature: 245C (473F)

Flammable limits in air % by volume: lel: 1.3; uel: 8.0

Explosion: Above flash point, vapor-air mixtures are explosive within flammable limits noted above.

Vapors can flow along surfaces to distant ignition source and flash back. Sealed containers may rupture when heated. Contact with strong oxidizers may cause fire. Sensitive to static discharge.



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Fire Extinguishing Media: Dry chemical, 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 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.

#### 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.

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 impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

#### 9. Physical and Chemical Properties

Appearance: Clear, colorless liquid.

Odor: Characteristic odor. Faint ether-like odor.

Solubility: Insoluble in water.



Specific Gravity: 0.78 @ 20C/4C  
pH: No information found.  
% Volatiles by volume @ 21C (70F): 100  
Boiling Point: 81C (178F)  
Melting Point: 7C (45F)  
Vapor Density (Air=1): 3.0  
Vapor Pressure (mm Hg): 95 @ 20C (68F)  
Evaporation Rate (BuAc=1): 2.6 (Ether = 1)

#### 10. Stability and Reactivity

Stability: Stable at room temperature in sealed containers.  
Hazardous Decomposition Products: Carbon dioxide and carbon monoxide may form when heated to decomposition.  
Hazardous Polymerization: Will not occur.  
Incompatibilities: Strong oxidizers, heat and sources of ignition.  
Conditions to Avoid: Incompatibles.

#### 11. Toxicological Information

Oral rat LD50 12,705 mg/kg. Investigated as a mutagen.

-----\Cancer Lists\-----

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Cyclohexane (110-82-7)	No	No	None

#### 12. Ecological Information

Environmental Fate:  
When released into the soil, this material may biodegrade to a moderate extent. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released to water, this material is expected to quickly evaporate. This material has a log octanol-water partition coefficient of greater than 3.0. This material may bioaccumulate to some extent. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life between 1 and 10 days.  
Environmental Toxicity: This material is expected to be slightly toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l.

#### 13. Disposal Considerations

Dispose of container and unused contents in accordance with federal, state and local requirements.



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#### 14. Transport Information

Land

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Proper Shipping Name: CYCLOHEXANE  
Hazard Class: 3  
UN/NA: UN1145  
Packing Group: II  
Information reported for product/size: 52L

International (Water, I.M.O.)

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Proper Shipping Name: CYCLOHEXANE  
Hazard Class: 3  
UN/NA: UN1145  
Packing Group: II  
Information reported for product/size: 52L

International (Air, I.C.A.O.)

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Proper Shipping Name: CYCLOHEXANE  
Hazard Class: 3  
UN/NA: UN1145  
Packing Group: II  
Information reported for product/size: 52L

#### 15. Regulatory Information

SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No  
Reactivity: No (Pure / Liquid)

#### 16. Other Information

Product Use:

Laboratory Reagent.