



SAFETY DATA SHEET

CYCLOHEXANE

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: CYCLOHEXANE
Recommended use: Chemical for industrial
Manufacturer/Supplier: MODERN CHEMICAL CO.,LTD.
82/80 Soi Ekamai 22 (Nuannoi), Sukhumvit 63,
Klong Tan Nuea, Watthana, Bangkok 10110
Telephone No: 0-2715-0897-9, 0-2392-3410-3
Fax No: 0-2715-0908-9, 0-2391-1571-2
Emergency Telephone No: 0-2715-0897-9, 0-2392-3410-3

2. HAZARDS IDENTIFICATION

Label elements

Pictogram



Signal word

Danger

Hazard statement(s):

- 1.) Highly flammable liquid and vapour.
- 2.) May be fatal if swallowed and enters airways.
- 3.) Causes skin irritation.
- 4.) May cause drowsiness or dizziness.
- 5.) Very toxic to aquatic life.

Precautionary statement(s):

- 1.) Keep away from heat, hot surfaces, sparks, open flames and ignition sources - No smoking.
- 2.) Keep container tightly closed.
- 3.) Ground and bond container and receiving equipment.
- 4.) Use non-sparking tools.



- 5.) Take action to prevent static discharge.
- 6.) Avoid breathing dust/fume/gas/mist/vapours/spray.
- 7.) Wash skin thoroughly after handling.
- 8.) Contaminated work clothing should not be allowed out of the workplace.
- 9.) Avoid release to the environment.
- 10.) Wear protective gloves/protective clothing/eye protection/face protection.
- 11.) Do NOT induce vomiting. Get medical advice/attention.
- 12.) Collect spillage.
- 13.) IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- 14.) IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- 15.) If skin irritation occurs: Get medical advice/attention.
- 16.) Take off contaminated clothing and wash before reuse.
- 17.) IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- 18.) Store locked up.
- 19.) Store in a well-ventilated place. Keep cool.
- 20.) Dispose of contents/container in accordance with local/regional/national/international/regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym: Hexahydrobenzene

Ingredients	% (w/w)	CAS NO.
CYCLOHEXANE	100	110-82-7

4. FIRST AID MEASURES

- General advice:** Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
- Inhalation:** Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.
- Skin contact:** Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and consult a physician if felt uncomfortable.



- Eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if fell uncomfortable.
- Ingestion:** Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Extinguish with carbon dioxide, dry chemical or alcohol-resistant foam.

Unsuitable Extinguishing Media:

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from Chemicals:

Will form explosive mixtures with air. Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/or vapour concentration. Vapours may travel to source of ignition and flash back. Liquid and vapour are flammable. Containers may explode when heated. Fire exposed containers may vent contents through pressure relief valves. May expansion or decompose explosively when heated or involved in fire.

Special protective equipment for fire-fighters:

As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear. Fight fire from a safe distance, with adequate cover. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Avoid breathing vapors and contacting with skin and eye. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Emergency personnel wear positive pressure self-contained breathing apparatus. Wear protective and anti-static clothing. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

Environmental precautions:

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided.



Methods and Material for Containment and Clean Up:

Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. HANDING AND STORAGE

Precautions for Safe Handling & Product Transfer:

Avoid inhalation of vapors. Use only non-sparking tools. To prevent fire caused by electrostatic discharge steam, equipment on all metal parts should be grounded. Use explosion proof equipment. Handling is performed in a well ventilated place. Wear suitable protective equipment. Avoid contact with skin and eyes. Keep away from heat/sparks/open flames/hot surfaces. Take precautionary measures against static discharges.

Conditions for Safe Storage & Unsuitable Materials:

Keep containers tightly closed. Keep containers in a dry, cool and well-ventilated place. Keep away from heat/sparks/open flames/hot surfaces. Store away from incompatible materials and foodstuff containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: TWA 250 ppm

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Set up emergency exit and necessary risk-elimination area. electrical/ventilating/lighting/equipment.

Individual Protection Measures

Respiratory protection: If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEX (EN 14387) respirator cartridges.

Hand protection: Wear protective gloves (such as butyl rubber), passing the tests according to EN 374(EU), US F739 or AS/NZS 2161.1 standard.

Eye protection: Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).



- Skin and body Protection:** Wear fire/flame resistant/retardant clothing and antistatic boots.
- Hygiene measure:** Smoking, eating and drinking water is forbidden in the workplace. After work, shower and change clothes. To maintain good health habits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form,Color and Odor: liquid, colourless	Evaporation rate : N/A
Melting Point: 7°C	Specific gravity : 0.777 - 0.784 g/cm ³ at 15 °C
pH: N/A	Solubility in water : Insoluble in water
Boiling: 81°C	Viscosity : N/A
Vapour pressure: 10.3 kPa	Vapour density: 2.9 (Air=1)
Lower explosion limits: 1.3 %Vol	Upper explosive limit: 8.4 %Vol
Auto-ignition temperature: 260 °C	Flash point: -18 °C
Odour threshold: N/A	Flammability (solid, gas): Not applicable
Decomposition temperature: N/A	Solubility in other solvents: N/A
n-octanol/water partition coefficient (log P_{ow}): 3.4	

10. STABILITY AND REACTIVITY

- Chemical Stability:** Stable under recommended storage conditions.
- Reactions:** No data available.
- Possibility of Hazardous Reactions:** In contact with an open flame may cause a fire or explosion.
- Conditions to avoid:** Heat, flame and spark.
- Materials to be avoided:** Oxidants and halogen.
- Hazardous Decomposition Products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

- Acute toxicity:** LD50 (Oral, rat): 12750 mg/kg
- Sensitization:** After skin contact, Causes skin irritation. Single exposure, may cause drowsiness or dizziness. May be fatal if swallowed and enters airways.



Chonic toxicity: No data available.

Further toxicological information: No data available.

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish: LC50 - Fish: 42.3 mg/l - 96h

Toxicity to daphnia and other aquatic invertebrates: No data available.

Toxicity to algae: No data available.

Toxicity to bacteria: No data available.

Biodegradability Remarks: No data available.

Bioaccumulative potential: No data available.

Mobility: No data available.

Affected in any other way: No data available.

13. DISPOSAL CONSIDERATIONS

Material Disposal: If medical advice is needed, have product container or label at hand.

Container Disposal: Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.

14. TRANSPORT INFORMATION

ADR/RID

UN-No: 1145 Class: 3 Packing group: II

Proper shipping name: CYCLOHEXANE

IMDG

UN-No: 1145 Class: 3 Packing group: II

Ems: F-E S-D

Proper shipping name: CYCLOHEXANE

IATA

UN-No: 1145 Class: 3 Packing group: II

Proper shipping name: CYCLOHEXANE



15. REGULATORY INFORMATION

Regulatory information

COMPONENT	A	B	C	D	E	F	G	H
Cyclohexane	Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

[A] Catalog of Hazardous Chemicals (2015 Edition), Notice 5th 2015, China State Administration of Work Safety.

[B] Catalog of Priority Hazardous Chemicals for Environment Management, Notice 33th 2014, Ministry of Environmental Protection of PRC.

[C] List of Toxic Chemicals Restricted to be Imported/Exported in China, Notice 85th 2013, Ministry of Environmental Protection of PRC.

[D] Catalog of Stupefacient and Psychotropic Substances (2013Edition), Notice 230th 2013, China Food and Drug Administration.

[E] Catalog of Hazardous Chemicals for Priority Management (First and Second batches), Notice 95th, 2011, Notice 12th 2013, China State Administration of Work Safety.

[F] List of Ozone Depletion Chemicals Controlled to be Imported/Exported in China (First to Sixth batches), Notice from 2000 to 2012 Ministry of Environmental Protection of PRC.

[G] Dangerous Chemicals Directory Used to Manufacture Exploder (2011 Edition), Notice 25th Nov. 2011, Ministry of Public Security of PRC1.

[H] Catalog of Highly Toxic Chemicals, Notice 142th 2003, China Ministry of Health.

16. OTHER INFORMATION

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