



NEAR INTERNATIONAL TRADE CO.,LIMITED  
ADD:FLAT 1506,15/F,LUCKY CENTER,NO.165-  
171 WAN CHAI ROAD,WAN CHAI,HONG KONG  
WEB:<https://nearchemical.net/>

# Material Safety Data Sheet

## 🔑 Section 1 - Chemical Product

MSDS Name: Cyclohexanone 99.9%

Synonym: Ketoexamethylene; Pimelic ketone.

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## 🔑 Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#
108-94-1	Cyclohexanone	99.9%	203-631-1

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## 🔑 Section 3 - HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Flammable. Harmful by inhalation.

### Potential Health Effects

#### Eye:

May result in corneal injury. Vapors may cause eye irritation.

Contact produces irritation, tearing, and burning pain.

#### Skin:

Causes skin irritation. Harmful if absorbed through the skin. Ingestion:

Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May be harmful if swallowed. Inhalation:

Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause liver and kidney damage. May cause narcotic effects in high concentration. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. May cause irritation of the mucous membranes.

#### Chronic:

Prolonged or repeated skin contact may cause defatting and dermatitis. Prolonged exposure may cause non-specific nervous system effects.

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## 🔑 Section 4 - FIRST AID MEASURES



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

Skin:

Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

Cyclohexanol in urine can be useful in diagnosis.

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## 🔥 Section 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media:

Use water spray to cool fire-exposed containers. Water may be ineffective. For large fires, use water spray, fog or alcohol-resistant foam. Do NOT use straight streams of water. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.

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## 🔥 Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Scoop up with a nonsparking tool, then place into a suitable container for disposal. Remove all sources of ignition. Provide ventilation. Clean up residual material by washing area with a 2-5% solution of soda ash.

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## 🔥 Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Use with adequate ventilation.



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Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Flammables-area.

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## 🔗 Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment Eyes: Wear chemical goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149.

Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

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## 🔗 Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: clear, colorless

Odor: Acetone or peppermint

odor pH: Not available.

Vapor Pressure: 4.5 mbar @ 20 deg C

Viscosity: Not available.

Boiling Point: 155 deg C @ 760mm Hg

Freezing/Melting Point: -47 deg C

Autoignition Temperature: 420 deg C ( 788.00 deg F)

Flash Point: 44 deg C ( 111.20 deg F)

Explosion Limits, lower: 1.10 vol %

Explosion Limits, upper: 9.4 vol %

Decomposition Temperature:



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Solubility in water: Slightly soluble.

Specific Gravity/Density: .9470g/cm<sup>3</sup>

Molecular Formula: C<sub>6</sub>H<sub>10</sub>O

Molecular Weight: 98.14

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#### 📌 Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, ignition sources, excess heat.

Incompatibilities with Other Materials:

Red metals, lead, amines, sulfuric acid, nitric acid, oxidizing agents, strong acids, aliphatic amines, rubber, resins.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide, toxic gases.

Hazardous Polymerization: Will not occur.

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#### 📌 Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 108-94-1: GW1050000 LD50/LC50:

CAS# 108-94-1: Draize test, rabbit, eye: 20 mg Severe; Draize test, rabbit, eye: 250 ug/24H Severe;

Inhalation, rat: LC50 = 8000 ppm/4H; Oral, mouse: LD50 = 1400 mg/kg; Oral, rat: LD50 = 1620 uL/kg;

Skin, rabbit: LD50 = 1 mL/kg.

Carcinogenicity:

Cyclohexanone - ACGIH: A4 - Not Classifiable as a Human Carcinogen IARC: Group 3

carcinogen Other:

See actual entry in RTECS for complete information.

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#### 📌 Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: Rainbow trout: LC50 = 90.0 mg/L; 96 Hr.; 320.0 mg/L CaCO<sub>3</sub> Fish: Rainbow trout: LC50 = 44.0 mg/L; 96 Hr.; 20.0 mg/L CaCO<sub>3</sub> Fish: Fathead Minnow: LC50 = 527.0 mg/L; 96 Hr.; Flow-through, 24-

26 degrees C, pH 7.5 Water flea Daphnia: EC50 = 820.0 mg/L; 48 Hr.; Unspecified Algae: EC50 = 20.0 mg/L; 96 Hr.; Unspecified Bacteria: Phytobacterium phosphoreum: EC50 = 18.7 mg/L; 5 minutes;

Microtox Test

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#### 📌 Section 13 - DISPOSAL CONSIDERATIONS



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## ➤ Section 14 - TRANSPORT INFORMATION

IATA

Shipping Name: CYCLOHEXANONE

Hazard Class: 3

UN Number: 1915

Packing Group: III

IMO

Shipping Name: CYCLOHEXANONE

Hazard Class: 3.3

UN Number: 1915

Packing Group: III

RID/ADR

Shipping Name: CYCLOHEXANONE

Dangerous Goods Code: 3(31C)

UN Number: 1915

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## ➤ Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC

Directives Hazard Symbols: XN

Risk Phrases:

R 10 Flammable.

R 20 Harmful by inhalation.

Safety Phrases:

S 25 Avoid contact with eyes.

WGK (Water Danger/Protection)

CAS# 108-94-1: 1

United Kingdom Occupational Exposure Limits

CAS# 108-94-1: OES-United Kingdom, TWA 25 ppm TWA; 102 mg/m<sup>3</sup> TWA

CAS# 108-94-1: OES-United Kingdom, STEL 100 ppm STEL; 408 mg/m<sup>3</sup>

STEL Canada

CAS# 108-94-1 is listed on Canada's DSL List.

CAS# 108-94-1 is listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 108-94-1: OEL-AUSTRALIA:TWA 25 ppm (100 mg/m<sup>3</sup>)

OEL-AUSTRIA:TWA 50 ppm (200 mg/m<sup>3</sup>) OEL-

BELGIUM:TWA 25 ppm (100 mg/m<sup>3</sup>) OEL-

CZECHOSLOVAKIA:TWA 200 mg/m<sup>3</sup>;STEL 400 mg/m<sup>3</sup>

OEL-DENMARK:TWA 25 ppm (100 mg/m<sup>3</sup>)

OEL-FINLAND:TWA 50 ppm (200 mg/m<sup>3</sup>);STEL 75 ppm (250 mg/m<sup>3</sup>)

OEL-FRANCE:TWA 25 ppm (100 mg/m<sup>3</sup>)



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OEL-GERMANY:TWA 50 ppm (200 mg/m<sup>3</sup>) OEL-  
HUNGARY:TWA 100 mg/m<sup>3</sup>;STEL 200 mg/m<sup>3</sup>;Skin  
OEL-JAPAN:TWA 25 ppm (100 mg/m<sup>3</sup>)  
OEL-THE NETHERLANDS:TWA 50 ppm (200 mg/m<sup>3</sup>)  
OEL-THE PHILIPPINES:TWA 50 ppm (200 mg/m<sup>3</sup>)  
OEL-POLAND:TWA 2 mg/m<sup>3</sup>  
OEL-RUSSIA:TWA 25 ppm;STEL 10 mg/m<sup>3</sup>  
OEL-SWEDEN:TWA 25 ppm (100 mg/m<sup>3</sup>);STEL 50 ppm (20 mg/m<sup>3</sup>);Skin  
OEL-SWITZERLAND:TWA 25 ppm (100 mg/m<sup>3</sup>);STEL 50 pp (200 mg/m<sup>3</sup>)  
OEL-TURKEY:TWA 50 ppm (200 mg/m<sup>3</sup>)  
OEL-UNITED KINGDOM:TWA 25 ppm (100 mg/m<sup>3</sup>);STEL 10 ppm OEL IN  
BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN  
NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV  
US FEDERAL  
TSCA  
CAS# 108-94-1 is listed on the TSCA inventory.

📌 Section 16 – OTHER INFORMATION