

# SAFETY DATA SHEET

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS)  
Revision Date Jan 06, 2025

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name CYCLOHEXANONE  
CAS-No. 108-94-1  
Product code AR1034, GP1034, RP1034

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses Chemical for analysis and production.

### 1.3 Details of the manufacturer of the safety data sheet

Manufacturer RCI LABSCAN LIMITED.  
24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand  
Telephone number (662) 613-7911-4  
Fax number (662) 613-7915

### 1.4 Emergency Telephone Number

Emergency phone (662) 613-7911-4

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 3), H226  
Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 4), H332  
Acute toxicity, Dermal (Category 4), H312  
Skin irritation (Category 2), H315  
Serious eye damage (Category 1), H318  
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335  
For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 Label elements

#### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H226 Flammable liquid and vapour.  
H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P261 Avoid breathing vapours.

P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P317	IF SWALLOWED: Get medical help.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P354 + P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330	Rinse mouth.

## 2.3 Other hazards

None

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms Pimelic ketone, Cyclohexyl ketone, Ketoexamethylene.

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
108-94-1	203-631-1	606-010-00-7	C <sub>6</sub> H <sub>10</sub> O	98.14 g/mol	<=100

### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Concentration	Classification
<b>Cyclohexanone</b>		
CAS-No 108-94-1 EC-No 203-631-1 EC-Index-No 606-010-00-7	<=100%	Flammable liquids (Category 3), H226 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Inhalation (Category 4), H332 Acute toxicity, Dermal (Category 4), H312 Skin irritation (Category 2), H315 Serious eye damage (Category 1), H318 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water. If signs of poisoning appear, treat as for inhalation. Obtain medical attention. Wash contaminated clothing before reuse. Contaminated combustible material, e.g. clothing ignites more readily and burns fiercely.
Eye contact	If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. Do not induce vomiting. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus. Obtain medical attention. Never give anything by mouth to an unconscious person.

**4.2 Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in section 2.2 and section 11

**4.3 Indication of any immediate medical attention and special treatment needed**

Laxative: Sodium Sulfate 1 tablespoon/250 ml of water.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Extinguish with carbon dioxide, dry chemical or foam. In the event of fire, cool tanks with water spray.

**5.2 Special hazards arising from the substance or mixture**

Vapors may form explosive mixture with air at ambient temperature. Flash back possible over considerable distance.

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus and protective suit.

**5.4 Further information**

Standard procedure for chemical fires. Take measures to prevent electrostatic charging. Prevent firefighting water from entering surface water or groundwater.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

**6.2 Environmental precautions**

Contain or absorb leaking liquid with sand or earth, consults an expert. Prevent liquid entering sewers, basements and workpits. If substance has entered a water course or sewer or contaminated soil, advise police.

**6.3 Methods and materials for containment and cleaning up**

Spillage: May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silica gel or chemical absorbent pads). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere. Transfer to covered steel drums. Dispose of promptly.

**6.4 Reference to other sections**

For disposal see **Section 13**.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Keep container tightly closed. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not empty into drains.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep tightly closed in a dry, cool and well ventilated place. Keep away from heat and sources of ignition. Keep out of direct sunlight and away from incompatible materials. Store in original container. Electrical equipment should be protected to the appropriate standard.

**Storage class** 3; Flammable liquids.

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****8.2 Exposure controls****Appropriate engineering controls**

The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

**Individual protection measures (Personal protective equipment, PPE)****Eye/face protection**

Goggles giving complete protection to eyes.

**Skin protection**

Chemical resistant apron / flame retardant antistatic protective clothing, heavy duty work shoes.

Handle with gloves

- Full contact wears gloves from butyl rubber material.
- Splash contact wears gloves from viton material.

The select protective gloves have to satisfy the specifications of EU Directive 89/686 EEC and standard EN 374 derived from it.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment. Required when vapor/aerosols are generated filter A (EN 141 or EN 14387).

**Environmental exposure controls**

Prevent liquid entering sewers, basements and workpits.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Physical State	Liquid
Color	Colorless
Odour	Stinging
Odour Threshold	Not Available
pH	7 at 20 °C
Melting point/range	-31 °C
Boiling point/range	156.6 °C at 1013 hPa
Flash point	43 °C (closed cup)
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	1.3 % (V)
upper	9.4% (V)
Vapor Pressure	4.5 hPa at 20°C
Relative Vapor Density	3.4

Density	0.945 g/ml at 20°C
Water solubility	90 g/l at 20°C
Partition coefficient (n-octanol/water)	log Pow: 0.81
Auto-Ignition temperature	430 °C
Decomposition Temperature	Not Available
Viscosity	2.2 mPa.s at 20°C
Explosive properties	Not Explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Unsuitable working materials: various plastic, rubber.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Risk of explosion in contact with: hydrogen peroxide, nitric acid, heat, mineral acids.

The substance can react dangerously with: oxidizing agents.

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Oxidizing agents, nitric acid, hydrogen peroxide (risk of explosion), mineral acid.

### 10.6 Hazardous decomposition products

Carbon monoxides, Carbon dioxides (Hazardous decomposition products from under fire condition).

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LC<sub>50</sub> (inhalation, rat): >6.2 mg/l/4 h.

LD<sub>50</sub> (oral, rat): 1620 mg/kg.

LD<sub>50</sub> (dermal, rabbit): 1100 mg/kg.

#### Skin corrosion/irritation

Irritation

#### Serious eye damage/eye irritation

Irritations: risk of corneal clouding.

#### Respiratory or skin sensitization

Not Available

#### Germ cell mutagenicity

Bacterial mutagenicity; Ames cell test is negative.

#### Carcinogenicity

Not Available

#### Reproductive toxicity

Not Available

**Specific target organ toxicity (STOT) - single exposure**

May cause respiratory irritation.

**Specific target organ toxicity (STOT) - repeated exposure**

Not Available

**Aspiration hazard**

Not Available

**Further information**

After absorption of large quantities: Headache, dizziness, Nausea, Vomiting, salivation, narcosis, coma.

Toxic effects on the liver and kidneys.

The product should be handled with the care usual when dealing with chemicals.

## SECTION 12: Ecological information

**12.1 Toxicity**

Toxicity to fish	LC <sub>50</sub> L.idus: 527 mg/l/96h.
Toxicity to daphnia and other aquatic invertebrates	EC <sub>50</sub> Daphnia magna: 800 mg/l /24h.
Toxicity to algae	IC <sub>5</sub> Sc.quadricauda: 370 mg/l /8d.
Toxicity to bacteria	EC <sub>5</sub> Ps. Putida: 180 mg/l /16d.

**12.2 Persistence and degradability**

Biodegradability 87% /14d. Readily Biodegradable.

**12.3 Bioaccumulative potential**

Partition coefficient (n-octanol/water) log Pow: 0.81 (experimental).  
No Bioaccumulation is to be expected (log P o/w <1).

**12.4 Mobility in soil**

Not Available

**12.5 Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

Do not allow to enter waters, waste water or soil.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods****Product**

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

**Contaminated packaging**

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

## SECTION 14: Transport information

### Land Transport (ADR/RID)

UN Number	1915
UN proper shipping name	CYCLOHEXANONE
Transport hazard class(es)	3
Packing group	III
Environmental hazards	No
Special precautions for user	Yes

### Sea transport (IMDG)

UN Number	1915
UN proper shipping name	CYCLOHEXANONE
Transport hazard class(es)	3
Packing group	III
Marine pollutant	No
Special precautions for user	Yes
EmS	F-E S-D

### Air transport (IATA)

UN Number	1915
UN proper shipping name	CYCLOHEXANONE
Transport hazard class(es)	3
Packing group	III
Environmental hazards	No
Special precautions for user	No

### River transport (AND/ADNR)

(Not examined)

## SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Not Available

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

## SECTION 16: Other information

### Recommended restrictions

Take notice of labels and safety data sheets for the working. Chemicals Take necessary action to avoid static electricity discharge.

### Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.

Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.

Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany,

Source: IFA for Databases on hazardous substances (GESTIS).

**Further information**

Contact to RCI Labscan Limited.

**Revision Date**

06/01/2025

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