

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 25.01.2021

Revision: 25.01.2021

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Cyclohexanone
- **CAS Number:**
108-94-1
- **EC number:**
203-631-1
- **Index number:**
606-010-00-7
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:** Petrochem Middle East FZE – Dubai
- **Further information obtainable from:**

HEALTH	2
FIRE	2
REACTIVITY	0

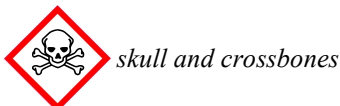
Product safety department.
sales@petrocheme.com

2 Hazards identification

- **Classification of the substance or mixture**



Flam. Liq. 3 H226 Flammable liquid and vapour.



Acute Tox. 3 H311 Toxic in contact with skin.



Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

- **Label elements**
- **GHS label elements**
The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS02 GHS06

- **Signal word** *Danger*
- **Hazard statements**
Flammable liquid and vapour.
Harmful if swallowed or if inhaled.
Toxic in contact with skin.

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Trade name: Cyclohexanone

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- **Precautionary statements**
 - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 - Use explosion-proof electrical/ventilating/lighting equipment.
 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - Specific treatment (see on this label).
 - Store locked up.
 - Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterisation: Substances**
- **CAS No. Description**
108-94-1 cyclohexanone
- **Identification number(s)**
- **EC number:** 203-631-1
- **Index number:** 606-010-00-7

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:

108-94-1 cyclohexanone

PEL (USA)	Long-term value: 200 mg/m ³ , 50 ppm
REL (USA)	Long-term value: 100 mg/m ³ , 25 ppm Skin
TLV (USA)	Long-term value: 50 mg/m ³ , 20 ppm Skin, BEI
IOELV (EU)	Short-term value: 81.6 mg/m ³ , 20 ppm Long-term value: 40.8 mg/m ³ , 10 ppm Skin
WEL (Great Britain)	Short-term value: 82 mg/m ³ , 20 ppm Long-term value: 41 mg/m ³ , 10 ppm Sk, BMGV

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· Ingredients with biological limit values:**108-94-1 cyclohexanone****BEI (USA)**

80 mg/L

Medium: urine

Time: end of shift at end of workweek

Parameter: 1,2-Cyclohexanediol with hydrolysis (nonspecific, semi-quantitative)

8 mg/L

Medium: urine

Time: end of shift

Parameter: Cyclohexanol with hydrolysis (nonspecific, semi-quantitative)

BMGV (Great Britain)

2 mmol/mol creatinine

Medium: urine

Sampling time: post shift

Parameter: cyclohexanol

· Additional information: The lists valid during the making were used as basis.**· Exposure controls****· Personal protective equipment:****· General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:

Tightly sealed goggles

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9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/freezing point:	26 °C
Initial boiling point and boiling range:	153-156 °C

- **Flash point:** 44 °C

- **Flammability (solid, gas):** Not applicable.

- **Ignition temperature:** 420 °C

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Not determined.

- **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

Lower:	1.3 Vol %
Upper:	9.4 Vol %

- **Vapour pressure at 20 °C:** 5 hPa

Density at 20 °C:	0.95 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

- **Solubility in / Miscibility with water at 20 °C:** 80 g/l

- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.

- **Chemical stability**

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

- **Possibility of hazardous reactions** No dangerous reactions known.

- **Conditions to avoid** No further relevant information available.

- **Incompatible materials:** No further relevant information available.

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· **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity**

· **LD/LC50 values relevant for classification:**

Oral	LD50	1,535 mg/kg (rat)
Dermal	LD50	948 mg/kg (rabbit)
Inhalative	LC50/4 h	8,000 mg/l (rat)

· **Primary irritant effect:**

· **Skin corrosion/irritation** No irritant effect.

· **Serious eye damage/irritation** No irritating effect.

· **Respiratory or skin sensitisation** No sensitising effects known.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behaviour in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **ADR, IMDG, IATA**

UN1915

· **UN proper shipping name**

· **ADR**

· **IMDG, IATA**

1915 CYCLOHEXANONE

CYCLOHEXANONE

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· **Transport hazard class(es)**· **ADR, IMDG, IATA**· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**· **ADR, IMDG, IATA**

III

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Flammable liquids.

· **Hazard identification number (Kemler code):**

30

· **EMS Number:**

3-07

· **Stowage Category**

A

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **Transport category**

3

· **Tunnel restriction code**

D/E

· **IMDG**· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 1915 CYCLOHEXANONE, 3, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**

GHS02

GHS06

· **Signal word** *Danger*· **Hazard statements***Flammable liquid and vapour.*

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*Harmful if swallowed or if inhaled.**Toxic in contact with skin.***· Precautionary statements***Keep away from heat/sparks/open flames/hot surfaces. No smoking.**Use explosion-proof electrical/ventilating/lighting equipment.**IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**Specific treatment (see on this label).**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***· Directive 2012/18/EU****· Named dangerous substances - ANNEX I** Substance is not listed.**· Seveso category P5c** FLAMMABLE LIQUIDS**· Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t**· Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Product safety department.**· Contact:** PME**· Abbreviations and acronyms:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 3: Flammable liquids – Category 3**Acute Tox. 4: Acute toxicity - oral – Category 4**Acute Tox. 3: Acute toxicity - dermal – Category 3*

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