



Printing date 03.08.2006

Reviewed on 24.07.2006

**1 Identification of the substance/preparation and of the company/undertaking**

- **Product details**
- **Trade name:** cyclohexanone
- **Manufacturer/Supplier:**  
Petrochem Middle East FZE  
PO Box 17028,  
Jebel Ali Free Zone  
Dubai, UAE  
Ph +971 4 8839222; Fax +971 4 8834133
- **Further information obtainable from:** Product safety department.

**2 Composition/information on ingredients**

- **Chemical characterization:**
- **CAS No. Description**  
108-94-1 cyclohexanone
- **Identification number(s)**
- **EINECS Number:** 203-631-1
- **EU Number:** 606-010-00-7

**3 Hazards identification**

- **Hazard description:**



Xn Harmful

- **Information concerning particular hazards for human and environment:**  
R 10 Flammable.  
R 20 Harmful by inhalation.

**4 First aid measures**

- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **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:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.

**5 Fire-fighting measures**

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet

(Contd. on page 2)

UAE



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(Contd. of page 1)

**Protective equipment:** Mouth respiratory protective device.**6 Accidental release measures**

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

**7 Handling and storage**

- **Handling:**
- **Information 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.
- **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.

**8 Exposure controls/personal protection**

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

- **Ingredients with limit values that require monitoring at the workplace:**

**108-94-1 cyclohexanone**

PEL (USA)	200 mg/m <sup>3</sup> , 50 ppm
REL (USA)	100 mg/m <sup>3</sup> , 25 ppm
	Skin
TLV (USA)	50 mg/m <sup>3</sup> , 20 ppm
	Skin
TLV (EU)	Short-term value: 81.6 mg/m <sup>3</sup> , 20 ppm
	Long-term value: 40.8 mg/m <sup>3</sup> , 10 ppm
	Skin
WEL (Great Britain)	Short-term value: 20 ppm
	Long-term value: 10 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.
- **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:**  
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.

(Contd. on page 3)

UAE



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(Contd. of page 2)

*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***9 Physical and chemical properties****· General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Characteristic

**· Change in condition**

<b>Melting point/Melting range:</b>	ca. - 26°C
<b>Boiling point/Boiling range:</b>	153 - 156°C

<b>· Flash point:</b>	43°C
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<b>· Ignition temperature:</b>	420°C
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<b>· Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
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**· Explosion limits:**

<b>Lower:</b>	1.3 Vol %
<b>Upper:</b>	9.4 Vol %

<b>· Vapour pressure at 20°C:</b>	5 hPa
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<b>· Density at 20°C:</b>	0.95 g/cm <sup>3</sup>
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<b>· Solubility in / Miscibility with water at 20°C:</b>	80 g/l
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**10 Stability and reactivity****· Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.**· Dangerous reactions** No dangerous reactions known.**· Dangerous decomposition products:** No dangerous decomposition products known.**11 Toxicological information****· Acute toxicity:****· LD/LC50 values relevant for classification:**

Oral	LD50	1535 mg/kg (rat)
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(Contd. on page 4)

UAE



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(Contd. of page 3)

Dermal	LD50	948 mg/kg (rabbit)
Inhalative	LC50/4 h	8000 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

## 12 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.

## 13 Disposal considerations

- **Product:**
- **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

- **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 3 Flammable liquids.
- **Danger code (Kemler):** 30
- **UN-Number:** 1915
- **Packaging group:** III
- **Hazard label:** 3
- **Description of goods:** 1915 CYCLOHEXANONE

- **Maritime transport IMDG:**



- **IMDG Class:** 3
- **UN Number:** 1915
- **Label** 3
- **Packaging group:** III
- **EMS Number:** F-E,S-D

(Contd. on page 5)

UAE



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(Contd. of page 4)

**· Proper shipping name:** CYCLOHEXANONE**· Air transport ICAO-TI and IATA-DGR:****· ICAO/IATA Class:** 3  
**· UN/ID Number:** 1915  
**· Label:** 3  
**· Packaging group:** III  
**· Proper shipping name:** CYCLOHEXANONE**15 Regulatory information****· Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

**· Code letter and hazard designation of product:**

Xn Harmful

**· Risk phrases:**

10 Flammable.

20 Harmful by inhalation.

**· Safety phrases:**

2 Keep out of the reach of children.

25 Avoid contact with eyes.

**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 MSDS:** Product safety department.**· Contact:** Terminal Manager

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