



ACP

**Asiatic Chemicals Pakistan**

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## Material Safety Data Sheet

According to 91/155 EEC

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:** Methyl Iso Butyl Ketone
- **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**  
108-10-1 4-methylpentan-2-one
- **Identification number(s)**
- **EINECS Number:** 203-550-1
- **EU Number:** 606-004-00-4

### 3 Hazards identification

- **Hazard description:**



Xn Harmful  
F Highly flammable

- **Information concerning particular hazards for human and environment:**  
At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.  
R 11 Highly flammable.  
R 20 Harmful by inhalation.  
R 36/37 Irritating to eyes and respiratory system.  
R 66 Repeated exposure may cause skin dryness or cracking.

### 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. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

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### 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
- **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 product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
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:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.

### 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:**

#### 108-10-1 4-methylpentan-2-one

PEL (USA)	410 mg/m <sup>3</sup> , 100 ppm
REL (USA)	Short-term value: 300 mg/m <sup>3</sup> , 75 ppm Long-term value: 205 mg/m <sup>3</sup> , 50 ppm
TLV (USA)	Short-term value: 307 mg/m <sup>3</sup> , 75 ppm Long-term value: 205 mg/m <sup>3</sup> , 50 ppm BEI
TLV (EU)	Short-term value: 208 mg/m <sup>3</sup> , 50 ppm Long-term value: 83 mg/m <sup>3</sup> , 20 ppm
WEL (Great Britain)	Short-term value: 416 mg/m <sup>3</sup> , 100 ppm Long-term value: 208 mg/m <sup>3</sup> , 50 ppm

- **Additional information:** The lists valid during the making were used as basis.

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- **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.
  - Avoid contact with the eyes.
  - 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:**
  - 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

## 9 Physical and chemical properties

### · General Information

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

### · Change in condition

**Melting point/Melting range:** -83.5°C  
**Boiling point/Boiling range:** 114-117°C

· **Flash point:** 14°C

· **Ignition temperature:** 460°C

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

### · Explosion limits:

<b>Lower:</b>	1.7 Vol %
<b>Upper:</b>	9 Vol %

· **Vapour pressure at 20°C:** 8 hPa

· **Density at 20°C:** 0.8008 g/cm<sup>3</sup>

· **Solubility in / Miscibility with water at 20°C:** 19 g/l

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- **Viscosity:**  
Dynamic at 20°C: 0.59 mPas

## 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	2080 mg/kg (rat)
Dermal	LD50	16000 mg/kg (rab)
Inhalative	LC50/4 h	8.3-16.6 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** 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):** 33
- **UN-Number:** 1245
- **Packaging group:** II

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- **Hazard label:** 3
- **Description of goods:** 1245 METHYL ISOBUTYL KETONE

· **Maritime transport IMDG:**



- **IMDG Class:** 3
- **UN Number:** 1245
- **Label** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Proper shipping name:** METHYL ISOBUTYL KETONE

· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1245
- **Label** 3
- **Packaging group:** II
- **Proper shipping name:** METHYL ISOBUTYL KETONE

### 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  
F Highly flammable

· **Risk phrases:**

11 Highly flammable.  
20 Harmful by inhalation.  
36/37 Irritating to eyes and respiratory system.  
66 Repeated exposure may cause skin dryness or cracking.

· **Safety phrases:**

2 Keep out of the reach of children.  
9 Keep container in a well-ventilated place.  
16 Keep away from sources of ignition - No smoking.  
29 Do not empty into drains.

### 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