

1 Identification of the substance/mixture and of the company

- **Product identifier**
- **Trade name:** MIBK
- **Product number:** M080100
- **CAS Number:**
108-10-1
- **EC number:**
203-550-1
- **Index number:**
606-004-00-4
- **Application of the substance / the preparation** Solvents
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
MicroChem Corp
90 Oak Street, PO Box 426
Newton, MA 02464-0002
- **Information department:**
Product Safety
Email: productsafety@microchem.com
- **Emergency telephone number:**
MicroChem Corp : 617-965-5511
Chemtrec USA Emergency : 800-424-9300
Chemtrec International Emergency : 703-527-3887

2 Composition/information on ingredients

- **Chemical characterization:** Substances
- **CAS No. Description**
108-10-1 4-methylpentan-2-one
- **Identification number(s)**
- **EC number:** 203-550-1
- **Index number:** 606-004-00-4

3 Hazards identification

- **Classification of the substance or mixture**



GHS02 Flame

H225 Highly flammable liquid and vapour.



GHS07

H332 Harmful if inhaled.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements**

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

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· Hazard pictograms



GHS02 GHS07

· Signal word Danger

· Hazard-determining components of labelling:

methyl isobutyl ketone

· Hazard statements

Highly flammable liquid and vapour.

Harmful if inhaled.

Causes serious eye irritation.

May cause respiratory irritation.

· Precautionary statements

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 2

Fire = 3

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 2

Fire = 3

Reactivity = 0

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: Immediately rinse with water.

· After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing: Seek medical treatment.

USA

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5 Firefighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing 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.
- **Protective equipment:** Wear SCBA.

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 protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and containers:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container well-sealed in cool, dry location.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

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

108-10-1 methyl isobutyl ketone

PEL	410 mg/m ³ , 100 ppm
REL	Short-term value: 300 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm
TLV	Short-term value: 307 mg/m ³ , 75 ppm Long-term value: 82 mg/m ³ , 20 ppm
BEI	

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from food and beverages.

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*Immediately remove all soiled and contaminated clothing.**Wash hands before breaks and at the end of work.**Avoid contact with the eyes and skin.*· **Respiratory equipment:***In case of low exposure, use cartridge respirator. In case of intensive or longer exposure, use SCBA.*· **Protection of hands:** PVA gloves· **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** Contact glove manufacture for break-through time.· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties· **General Information**· **Appearance:****Form:**

Fluid

Color:

Colorless

· **Odor:**

Characteristic

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition****Melting point/Melting range:**

-83.5°C (-118 °F)

Boiling point/Boiling range:

114°C (237 °F)

· **Flash point:**

14°C (57 °F)

· **Flammability (solid, gaseous):**

Not applicable.

· **Ignition temperature:**

460°C (860 °F)

· **Decomposition temperature:**

Not determined.

· **Auto igniting:**

Not determined.

· **Danger of explosion:***Product is not explosive. However, formation of explosive air/vapor mixtures are possible.*· **Explosion limits:****Lower:**

1.7 Vol %

Upper:

9 Vol %

· **Vapor pressure at 20°C (68 °F):**

8 hPa (6 mm Hg)

· **Density at 20°C (68 °F):**0.8008 g/cm³ (6.683 lbs/gal)· **Relative density**

Not determined.

· **Vapour density**

Not determined.

· **Evaporation rate**

Not determined.

· **Solubility in / Miscibility with****Water at 20°C (68 °F):**

19 g/l

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- Segregation coefficient (n-octanol/water): Not determined.
- Viscosity:
 - Dynamic: Not determined.
 - Kinematic: Not determined.
 - Organic solvents: 100.0 %
 - VOC content: 100.0 %
- Other information: No further relevant information available.

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Acute toxicity:

- LD/LC50 values that are relevant for classification:

Oral	LD50	5800 mg/kg (mouse)
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108-10-1 methyl isobutyl ketone

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: Irritant to skin and mucous membranes.
 - on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.

12 Ecological information

- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Additional ecological information:
- General notes:
 - Water hazard class 1 (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

- Waste treatment methods
- Recommendation:
 - Must not be disposed of as regular garbage/trash. Do not allow product to reach sewage system.



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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made in accordance with Federal, State, and Local regulations.

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN1245
· UN proper shipping name	
· DOT, IMDG, IATA	METHYL ISOBUTYL KETONE
· ADR	1245 METHYL ISOBUTYL KETONE
· Transport hazard class(es)	
· DOT, IMDG, IATA	
	
· Class	3 Flammable liquids.
· Label	3
· ADR	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, ADR, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	UN1245, METHYL ISOBUTYL KETONE, 3, II

15 Regulatory information· **Sara**· **Section 355 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is listed.

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· **TSCA (Toxic Substances Control Act):**

Substance is listed.

· **Proposition 65**· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

· **Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

108-10-1 | methyl isobutyl ketone

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· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

· **GHS label elements**

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GHS02 GHS07

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*IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***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:** Mr. Bedet

· **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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent