

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 16 Aug 2022

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

4-Methyl-2-pentanone

1.1. Catalog No.:

678316

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

HPC Standards GmbH
Am Wieseneck 7

04451 Cunnersdorf
Deutschland

Tel. +49 34291 3372-36
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1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Flammable liquids (Category 2), H225
Acute toxicity, Inhalation (Category 4), H332
Eye irritation (Category 2), H319
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.
Classification according to EU Directives 67/548/EEC or 1999/45/EC
F Highly flammable R11
R66
Xi Irritant R36/37
Xn Harmful R20

2.2. Label elements

2.2.1. Pictogram



2.2.2.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram Signal word Danger Hazard statement(s)

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

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.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard information (EU)

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Isobutyl methyl ketone

Methyl isobutyl ketone

Isopropylacetone

Formula : C₆H₁₂O

Molecular weight : 100,16 g/mol

CAS-No. : 108-10-1

EC-No. : 203-550-1

Index-No. : 606-004-00-4

Registration number : 01-2119473980-30-XXXX

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

Component Classification Concentration

4-Methylpentan-2-one

CAS-No.

EC-No.

Index-No.

108-10-1

203-550-1

606-004-00-4

Flam. Liq. 2; Acute Tox. 4; Eye

Irrit. 2; STOT SE 3; H225,

H319, H332, H335, EUH066

<= 100 %

Hazardous ingredients according to Directive 1999/45/EC

Component Classification Concentration

4-Methylpentan-2-one

CAS-No.

EC-No.

Index-No.

108-10-1

203-550-1

606-004-00-4

F, Xn, R11 - R20 - R36/37 -

R66

<= 100 %

3.1.1. Formula

C6H12O

3.1.2. Molecular Weight (g/mol)

100.16

3.1.3. CAS-No.

108-10-1

4. FIRST AID MEASURES**4.1 Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIRE-FIGHTING MEASURES**5.1 Extinguishing media**

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.
- 6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).
- 6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Storage class (TRGS 510): Flammable liquids
- 7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters
Components with workplace control parameters
- 8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Personal protective equipment
Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry Hands
Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance Form: liquid
 - b) Odour No data available
 - c) Odour Threshold No data available
 - d) pH No data available e) Melting point/freezing point
Melting point/range: -80 °C - lit.
 - f) Initial boiling point and boiling range
117 - 118 °C
 - g) Flash point 14 °C - closed cup
 - h) Evaporation rate No data available
 - i) Flammability (solid, gas) No data available
 - j) Upper/lower flammability or explosive limits
Upper explosion limit: 8 %(V)
Lower explosion limit: 1,2 %(V)
 - k) Vapour pressure 20 hPa at 20 °C
 - l) Vapour density 3,46 - (Air = 1.0)
 - m) Relative density 0,801 g/cm³ at 25 °C
 - n) Water solubility ca.20 g/l
 - o) Partition coefficient: noctanol/water
log Pow: 1,31
 - p) Auto-ignition temperature
No data available
 - q) Decomposition temperature
No data available
 - r) Viscosity No data available
 - s) Explosive properties No data available
 - t) Oxidizing properties No data available
- ### 9.2 Other safety information
- Surface tension 23,6 mN/m at 20 °C
Relative vapour density 3,46 - (Air = 1.0)

10. STABILITY AND REACTIVITY

- 10.1 Reactivity
No data available
 - 10.2 Chemical stability
Stable under recommended storage conditions.
Stable under recommended storage conditions.
 - 10.3 Possibility of hazardous reactions
No data available
 - 10.4 Conditions to avoid
Heat, flames and sparks.
 - 10.5 Incompatible materials
Oxidizing agents, Strong bases
 - 10.6 Hazardous decomposition products
Other decomposition products - No data available
- In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects
Acute toxicity

LD50 Oral - Rat - 2.080 mg/kg
LC50 Inhalation - Rat - 4 h - 8,2 - 16,4 mg/m³
LD50 Dermal - Rabbit - > 16.000 mg/kg
Skin corrosion/irritation
Skin - Rabbit
Result: Mild skin irritation - 24 h
Serious eye damage/eye irritation
Eyes - Rabbit
Result: Moderate eye irritation - 24 h
Respiratory or skin sensitisation
No data available
Germ cell mutagenicity
No data available
Carcinogenicity
IARC: 2B - Group 2B: Possibly carcinogenic to humans (4-Methylpentan-2-one)
Reproductive toxicity
Developmental Toxicity - Mouse - Inhalation
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death.
Developmental Toxicity - Mouse - Inhalation
Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Cardiovascular (circulatory) system.
Specific target organ toxicity - single exposure
May cause respiratory Irritation Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available
Additional Information
RTECS: SA9275000
Blurred vision, Dermatitis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish LC0 - *Leuciscus idus melanotus* - 480 mg/l - 48 h
Toxicity to daphnia and other aquatic invertebrates
EC50 - *Daphnia magna* (Water flea) - 1.550 - 3.623 mg/l - 24 h
Toxicity to algae EC50 - *Desmodesmus subspicatus* (green algae) - 980 - 2.000 mg/l - 48 h
12.2 Persistence and degradability
Biodegradability Biotic/Aerobic - Exposure time 7 d 12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
No data 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
No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging

Dispose of as unused product

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 1245 IMDG: 1245 IATA: 1245
14.2 UN proper shipping name
ADR/RID: METHYL ISOBUTYL KETONE
IMDG: METHYL ISOBUTYL KETONE
IATA: Methyl isobutyl ketone
14.3 Transport hazard class(es)
ADR/RID: 3 IMDG: 3 IATA: 3
14.4 Packaging group
ADR/RID: II IMDG: II IATA: II
14.5 Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no
14.6 Special precautions for user
No data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!