

Shanghai Aladdin Biochemical Technology Co., Ltd.  
No. 809, Chuhua Branch Road, Fengxian District, Shanghai

# SAFETY DATA SHEET

Version: v1  
Revision Date: 2024-01-22  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : 4-Methyl-2-pentanone  
Product Number : M108736  
Brand : aladdin  
CAS-No. : 108-10-1

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

### 1.3 Details of the supplier of the safety data sheet

Company : Shanghai Aladdin Biochemical Tech Co., Ltd  
Address : 36 Xinjinqiao Road, Shanghai  
Telephone : 400-620-6333  
Fax : no data available

### 1.4 Emergency telephone number

Emergency Phone : 0532-83889090

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)  
Flammable liquids (Category 2), H225

Acute toxicity, Oral (Category 5), H303

Acute toxicity, Inhalation (Category 4), H332

Serious eye damage/eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), respiratory tract irritation, H335

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

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H225	Highly Flammable liquid and vapor
H303	May be harmful if swallowed
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure
Precautionary statement(s)	
P201	Obtain special instructions before use.
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P202	Do not handle until all safety precautions have been read and understood.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and ...] thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P312	Call a POISON CENTER or doctor/... if you feel unwell.
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P337+P313	IF eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use ... to extinguish.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

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Synonyms	: Isobutyl methyl ketone Isopropylacetone Methyl isobutyl ketone 4-Methylpentan-2-one MIBK
Formula	: C <sub>6</sub> H <sub>12</sub> O
Molecular weight	: 100.16
CAS No.	: 108-10-1
EC-NO.	: 203-550-1

Component	Classification	Concentration
4-Methyl-2-pentanone	no data available	for HPLC, ≥99.5%

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice

Consult a physician. Show this material 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

Flush eyes with water as a precaution.

If swallowed

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

no data available

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>) Foam Dry powder

Unsuitable extinguishing media

no data available

### 5.2 Special hazards arising from the substance or mixture

Carbon oxides Combustible. Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

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### 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.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep the container tightly closed and store in a dry and ventilated place. Moisture sensitive.

### 7.3 Specific end use(s)

no data available

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## SECTION 8: Exposure controls/personal protection

### 8.1 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.

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#### 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. The selected protective gloves have to satisfy the specifications of Regulation (EU)2016/425 and the standard EN 374 derived from it.

##### 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 fullface particle respirator type N100 (US) or type P3 (EN 143) 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

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	form: liquid color: Colorless
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	-80°C
f) Initial boiling point and boiling range	117-118°C
g) Flash point	14°C
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	0.8
n) Water solubility	Slightly soluble in water, easily soluble in most organic solvents.
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available

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q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

## 9.2 Other safety information

no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

May form peroxides on contact with air. Warming.

### 10.5 Incompatible materials

rubber, various plastics, Copper

### 10.6 Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 2,080 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male - 4 h - 11.6 mg/l

(OECD Test Guideline 403)

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

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Eyes - Rabbit Result: Causes serious eye irritation. - 72 h (OECD Test Guideline 405) (Regulation (EC) No 1272/2008, Annex VI)

Respiratory or skin sensitisation

Maximization Test - Guinea pig Result: negative (OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: rat hepatocytes Metabolic activation: without metabolic activation Method: OECD Test Guideline 473 Result: negative Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Micronucleus test Species: Mouse Cell type: Bone marrow Application Route: Intraperitoneal Method: OECD Test Guideline 474 Result: negative

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

May cause respiratory irritation. - Respiratory system

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 90 d - NOAEL (No observed adverse effect level) - 250 mg/kg - LOAEL (Lowest observed adverse effect level) - 1,000 mg/kg

Remarks: Subchronic toxicity

RTECS: SA9275000

Blurred vision, Dermatitis To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 179 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - > 200 mg/l - 48 h

(OECD Test Guideline 202)

### 12.2 Persistence and degradability

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Biodegradability aerobic - Exposure time 28 d Result: 83 % - Readily biodegradable. (OECD Test Guideline 301F)  
Theoretical oxygen demand 2,720 mg/g Remarks: (Lit.)

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

no data available

### 12.6 Other adverse effects

no data available

## SECTION 13:

### 13.1 Disposal considerations

Product

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur.

Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

## SECTION 14: Transport information

DOT (US)

UN number: 1245

Packing group: II

Class: 3

Proper shipping name: METHYL  
ISOBUTYL KETONE

Reportable Quantity(RQ): no data  
available

Poison Inhalation Hazard: no data  
available

Environmental Hazards: no

IMDG

UN number: 1245

Packing group: II

EMS-No: no data available

Proper shipping name: METHYL ISOBUTYL KETONE

IATA

UN number: 1245

Packing group: II

Class: 3

Proper shipping name: METHYL ISOBUTYL KETONE

## SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.



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## SECTION 16: Other information

### Further information

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