

# SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product identifier**

Product name : 4-Methyl-2-pentanone  
CAS No. : 108-10-1

**Manufacturer or supplier's details**

Company : Heynova (Shanghai) New Material Technology CO., Ltd  
Address : Building 3, No. 690 Bibo Road, Pudong New Area, Shanghai, China  
Telephone : +86-178-2110-2608  
E-mail address : info@heynovachem.com

## 2. HAZARDS IDENTIFICATION

**Emergency Overview**

**Appearance** : liquid  
**Color** : colorless

Highly flammable liquid and vapor. May be harmful if swallowed. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Causes damage to organs (Nervous system) through prolonged or repeated exposure.

**GHS Classification**

Flammable liquids : Category 2  
Acute toxicity (Oral) : Category 5  
Acute toxicity (Inhalation) : Category 4  
Serious eye damage/eye irritation : Category 2A  
Carcinogenicity : Category 2  
Specific target organ toxicity - single exposure : Category 3 (respiratory tract irritation, Narcotic effects)  
Specific target organ toxicity - repeated exposure : Category 1 (Nervous system)

**GHS label elements**

Hazard pictograms :   

Signal Word : Danger

Hazard Statements : 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 (Nervous system) through prolonged or repeated exposure.

**Precautionary Statements**

**Prevention:**

P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
 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 skin 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.

**Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P312 Call a POISON CENTER/ doctor if you feel unwell.  
 P337 + P313 If eye irritation persists: Get medical advice/ attention.  
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P403 + P235 Store in a well-ventilated place. Keep cool.  
 P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Physical and chemical hazards**

Highly flammable liquid and vapor.

**Health hazards**

May be harmful if swallowed. Harmful if inhaled. Causes serious eye irritation. Suspected of causing cancer. May cause respiratory irritation. May cause drowsiness or dizziness. Causes damage to organs through prolonged or repeated exposure.

**Environmental hazards**

Not classified based on available information.

**Other hazards which do not result in classification**

None known.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

**Components**

Chemical name	CAS RN	Concentration (% w/w)
4-Methyl-2-pentanone	108-10-1	99.5

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#### 4. FIRST AID MEASURES

If inhaled	:	Remove person to fresh air and keep comfortable for breathing. Get medical advice/ attention if you feel unwell.
In case of skin contact	:	Take off all contaminated clothing immediately. If on skin, rinse well with water. If skin irritation or rash occurs: Get medical advice/ attention.
In case of eye contact	:	Rinse with plenty of water. If easy to do, remove contact lens, if worn. If eye irritation persists: Get medical advice/ attention.
If swallowed	:	Get medical advice/ attention. Rinse mouth.
Most important symptoms and effects, both acute and delayed	:	None known.

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#### 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Dry powder, Foam, Water spray, Carbon dioxide (CO <sub>2</sub> )
Specific hazards during fire fighting	:	No information available.
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Remove undamaged containers from fire area if it is safe to do so.
Special protective equipment for fire-fighters	:	Use personal protective equipment.

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#### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Wear suitable protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions	:	Prevent product from entering drains.
Methods and materials for containment and cleaning up	:	Collect as much of the spill as possible with a suitable absorbent material.

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#### 7. HANDLING AND STORAGE

##### Handling

Technical measures	:	Prevent generation of vapor or mist. Take precautionary measures against static discharge. Use explosion-proof equipment.
Local/Total ventilation	:	Ensure adequate ventilation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Use a local exhaust ventilation.
Advice on safe handling	:	Avoid contact with skin, eyes and clothing.

Wear personal protective equipment.  
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 Do not subject to grinding, shock or friction.  
 Wash hands and face thoroughly after handling.  
 Confirm in advance if peroxides exist when operations involving heating such as distillation are carried out.

Avoidance of contact : Oxidizing agents, Reducing agents, Strong bases, Organic peroxides

#### Storage

Conditions for safe storage : Keep container tightly closed.  
 Store in a cool and shaded area.  
 Keep in a well-ventilated place.  
 Use explosion-proof equipment.  
 Store locked up.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Ingredients with workplace control parameters

Components	CAS RN	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
4-Methyl-2-pentanone	108-10-1	TWA	20 ppm	ACGIH
		STEL	75 ppm	ACGIH

**Engineering measures** : Install a closed system or local exhaust.  
 Also install safety shower and eye bath.

#### Personal protective equipment

Respiratory protection : Gas mask  
 Self-contained breathing apparatus

Eye/face protection : Safety glasses  
 Safety goggles  
 Face-shield

Skin and body protection : Impervious protective clothing

Hand protection : Impervious gloves

\*Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : colorless

Odor : No data available

Odor Threshold : 0.68 ppm

pH : No data available

Melting point/freezing point : -85 °C

Boiling point/boiling range : 116 °C

Flash point : 17 °C

Evaporation rate : No data available

Flammability	:	No data available
Upper explosion limit / Upper flammability limit	:	7.5 %(V)
Lower explosion limit / Lower flammability limit	:	1.4 %(V)
Vapor pressure	:	2.1 kPa (20 °C)
Relative vapor density	:	3.45
Relative density	:	0.80
Solubility(ies)		
Water solubility	:	19 g/l slightly soluble (20 °C)
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	1.38
Autoignition temperature	:	460 °C
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Molecular weight	:	100.16 g/mol

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## 10. STABILITY AND REACTIVITY

Reactivity	:	No data available
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Reacts with air to form peroxides.
Conditions to avoid	:	Electrical spark Open flame Electrostatic discharge Exposure to air.
Incompatible materials	:	Oxidizing agents, Reducing agents, Strong bases, Organic peroxides
Hazardous decomposition products	:	Carbon monoxide, Carbon dioxide (CO <sub>2</sub> )

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### **Product:**

Acute oral toxicity	:	Assessment: The component/mixture is minimally toxic after single ingestion.
Acute inhalation toxicity	:	Assessment: The component/mixture is moderately toxic after short term inhalation.

**Components:**
**4-Methyl-2-pentanone:**

Acute oral toxicity	:	LD50 (Rat): 2,080 mg/kg Assessment: The component/mixture is minimally toxic after single ingestion.
Acute inhalation toxicity	:	Assessment: The component/mixture is moderately toxic after short term inhalation.
Acute toxicity (other routes of administration)	:	LD50 (Rat): 400 mg/kg Application Route: Intraperitoneal injection
Skin corrosion/irritation	:	No information available.

**Serious eye damage/eye irritation**
**Product:**

Result	:	Eye irritation
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**Components:**
**4-Methyl-2-pentanone:**

Result	:	Eye irritation
Respiratory or skin sensitization	:	No information available.
Germ cell mutagenicity	:	No information available.

**Carcinogenicity**
**Product:**

Carcinogenicity - Assessment	:	Suspected human carcinogens
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**Components:**
**4-Methyl-2-pentanone:**

Carcinogenicity - Assessment	:	Suspected human carcinogens
Reproductive toxicity	:	No information available.

**STOT-single exposure**
**Product:**

Assessment	:	May cause respiratory irritation. May cause drowsiness or dizziness.
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**Components:**
**4-Methyl-2-pentanone:**

Assessment	:	May cause respiratory irritation. May cause drowsiness or dizziness.
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**STOT-repeated exposure**
**Product:**

Target Organs	:	Nervous system
Assessment	:	Causes damage to organs through prolonged or repeated exposure.

**Components:****4-Methyl-2-pentanone:**

Target Organs : Nervous system  
Assessment : Causes damage to organs through prolonged or repeated exposure.

**Repeated dose toxicity** : No information available.

**Aspiration toxicity** : No information available.

**RTECS No.** : SA9275000 (4-Methyl-2-pentanone)

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**12. ECOLOGICAL INFORMATION****Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential****Components:****4-Methyl-2-pentanone:**

Partition coefficient: n-octanol/water : 1.38

**Mobility in soil****Components:****4-Methyl-2-pentanone:**

Distribution among environmental compartments : Koc: 123

**Other adverse effects**

No data available

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**13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Disposal in accordance with local and national regulations.  
Take precautions against ignition or explode.  
Entrust disposal to a licensed waste disposal company.

Contaminated packaging : Disposal in accordance with local and national regulations.  
Before disposal of used container, remove contents completely.

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**14. TRANSPORT INFORMATION****International Regulations****IATA-DGR**

UN/ID No. : UN 1245  
Proper shipping name : Methyl isobutyl ketone  
Class : 3  
Packing group : II

**IMDG-Code**

UN number : UN 1245

Proper shipping name : METHYL ISOBUTYL KETONE  
Class : 3  
Packing group : II  
EmS Code : F-E, S-D

**Domestic regulation****GB 6944/12268**

UN number : UN 1245  
Proper shipping name : METHYL ISOBUTYL KETONE  
Class : 3  
Packing group : II

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**15. REGULATORY INFORMATION****Regulations on Safety Management of Hazardous Chemicals**

Catalogue of Hazardous Chemicals : Listed

**The ingredients of this product are reported in the following inventories:**

CH BAGREG : On the inventory, or in compliance with the inventory  
TSCA : All substances listed as active on the TSCA inventory  
AIIIC : On the inventory, or in compliance with the inventory  
DSL : All components of this product are on the Canadian DSL  
ENCS : On the inventory, or in compliance with the inventory  
ISHL : On the inventory, or in compliance with the inventory  
KECI : On the inventory, or in compliance with the inventory  
PICCS : On the inventory, or in compliance with the inventory  
IECSC : On the inventory, or in compliance with the inventory  
NZIoC : On the inventory, or in compliance with the inventory

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**16. OTHER INFORMATION**

Revision Date : 2024/12/28  
Date format : yyyy/mm/dd

**Disclaimer**

This SDS was prepared sincerely based on the information obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling operations, sufficient care should be taken, in addition to the safety measures suitable for the given situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.