

# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
Creation Date: July 15, 2019  
Revision Date: July 15, 2019

## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** Octan-3-one

### 1.2 Other means of identification

**Product number**

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**Other names**

Ethyl amyl ketone; octane-3-one; 3-n-octanone

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses**

Industrial and scientific research use.

**Uses advised against**

no data available

### 1.4 Supplier's details

**Company**

Shanghai Yansheng Internet Technology Co., Ltd

**Address**

513, A3 / F, green space future center, Fengxian District,  
Shanghai, 201400, China

**Telephone**

+86-4000-6969-66

### 1.5 Emergency phone number

**Emergency phone number**

+86-4000-6969-66

**Service hours**

Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT  
+8 hours).

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Flammable liquids, Category 3

Skin irritation, Category 2

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word**

Warning

**Hazard statement(s)**

H226 Flammable liquid and vapour  
H315 Causes skin irritation

**Precautionary statement(s)**

**Prevention**

P210 Keep away from heat, hot surfaces, sparks, open flames  
and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P240 Ground and bond container and receiving equipment.

<b>Response</b>	P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.
	P242 Use non-sparking tools.
<b>Storage Disposal</b>	P243 Take action to prevent static discharges.
	P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
	P264 Wash ... thoroughly after handling.
	P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
	P370+P378 In case of fire: Use ... to extinguish.
	P302+P352 IF ON SKIN: Wash with plenty of water/...
	P321 Specific treatment (see ... on this label).
	P332+P317 If skin irritation occurs: Get medical help.
	P362+P364 Take off contaminated clothing and wash it before reuse.
	P403+P235 Store in a well-ventilated place. Keep cool.
	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## 2.3 Other hazards which do not result in classification

no data available

# SECTION 3: Composition/information on ingredients

## 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Octan-3-one	Octan-3-one	106-68-3	203-423-0	100%

# SECTION 4: First-aid measures

## 4.1 Description of necessary first-aid measures

### If inhaled

Fresh air, rest. Refer for medical attention.

### Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower.

### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

### Following ingestion

Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

## 4.2 Most important symptoms/effects, acute and delayed

May be harmful by inhalation, ingestion or skin absorption. Vapor or mist is irritating to eyes, mucous membrane and upper respiratory tract. Causes skin irritation. (USCG, 1999)

## 4.3 Indication of immediate medical attention and special treatment needed, if necessary

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Ketones and related compounds

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

If material on fire or involved in fire: Do not extinguish fire unless flow can be stopped or safely confined. Use water in flooding quantities as fog. Solid streams of water may spread fire. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. Use "alcohol" foam, dry chemical or carbon dioxide.

### 5.2 Specific hazards arising from the chemical

Special Hazards of Combustion Products: Vapor may travel considerable distance to a source of ignition and flash back. (USCG, 1999)

### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

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## SECTION 6: Accidental release measures

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

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### 6.2 Environmental precautions

Personal protection: filter respirator for organic gases and vapours adapted to the airborne concentration of the substance. Ventilation. Remove all ignition sources. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations. Do NOT wash away into sewer.

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

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

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

Fireproof. Separated from strong oxidants, strong bases and strong reducing agents. Well closed.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Occupational Exposure limit values

Component	Octan-3-one			
CAS No.	106-68-3			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Austria	25	130	50	260
	Remarks			

**Biological limit values**

no data available

**8.2 Appropriate engineering controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

**8.3 Individual protection measures, such as personal protective equipment (PPE)****Eye/face protection**

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

**Skin protection**

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Respiratory protection**

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

**Thermal hazards**

no data available

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**SECTION 9: Physical and chemical properties and safety characteristics**

<b>Physical state</b>	Ethyl amyl ketone is a clear colorless liquid with a pungent odor. Insoluble in water and partially soluble in alcohol. Flash point of 138°F. Vapors are denser than air and may have a narcotic effect in high concentrations. Used in making perfumes and as a solvent for nitrocellulose and vinyl resins.
<b>Colour</b>	Colorless liquid
<b>Odour</b>	Mild fruity odor
<b>Melting point/freezing point</b>	265°C(lit.)
<b>Boiling point or initial boiling point and boiling range</b>	167°C
<b>Flammability</b>	Flammable.
<b>Lower and upper explosion limit/flammability limit</b>	no data available
<b>Flash point</b>	54°C(lit.)
<b>Auto-ignition temperature</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	no data available
<b>Solubility</b>	Insoluble (NIOSH, 2016)
<b>Partition coefficient n-octanol/water</b>	log Kow = 2.22 (est)
<b>Vapour pressure</b>	1.5mmHg at 25°C
<b>Density and/or relative density</b>	0.822
<b>Relative vapour density</b>	(air = 1): 4.4
<b>Particle characteristics</b>	no data available

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**SECTION 10: Stability and reactivity**

## 10.1 Reactivity

Reacts with oxidants, strong reducing agents and strong bases. This generates fire hazard.

## 10.2 Chemical stability

no data available

## 10.3 Possibility of hazardous reactions

**FIRE HAZARD: MODERATE.** The vapour is heavier than air and may travel along the ground; distant ignition possible. Ketones, such as ETHYL AMYL KETONE, are reactive with many acids and bases liberating heat and flammable gases (e.g., H<sub>2</sub>). The amount of heat may be sufficient to start a fire in the unreacted portion of the ketone. Ketones react with reducing agents such as hydrides, alkali metals, and nitrides to produce flammable gas (H<sub>2</sub>) and heat. Ketones are incompatible with isocyanates, aldehydes, cyanides, peroxides, and anhydrides. They react violently with aldehydes, HNO<sub>3</sub>, HNO<sub>3</sub> + H<sub>2</sub>O<sub>2</sub>, and HClO<sub>4</sub>.

## 10.4 Conditions to avoid

no data available

## 10.5 Incompatible materials

Strong oxidizers

## 10.6 Hazardous decomposition products

no data available

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# SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD<sub>50</sub> Rat oral >5 g/kg
- Inhalation: no data available
- Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

no data available

### STOT-repeated exposure

no data available

### Aspiration hazard

no data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: LC50; Species: *Daphnia magna* (Water flea, age < or =24 hr); Conditions: freshwater, static, 20-22 deg C, pH 7.6-7.7, hardness 16 dH; Concentration: 517 mg/L for 24 hr
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

AEROBIC: 3-Octanone, at 500 mg/L, was inoculated with activated sludge from Columbus (municipal treatment plant) and Brookside (residential waste); BOD reached an average 1.1, 2.0, and 3.4% of the theoretical oxygen demand within 6, 12, and 24 hours, respectively(1). Columbus sludge had a greater ability to oxidize this compound, reaching 150 mg/L BOD within 24 hours(1).

### 12.3 Bioaccumulative potential

An estimated BCF of 7 was calculated in fish for 3-octanone(SRC), using a water solubility of 2600 mg/L(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

### 12.4 Mobility in soil

The Koc of 3-octanone is estimated as 58(SRC), using a water solubility of 2600 mg/L(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that 3-octanone is expected to have high mobility in soil.

### 12.5 Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### 13.1 Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: UN2271 (For reference only, please check.)

IMDG: UN2271 (For reference only, please check.)

IATA: UN2271 (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: ETHYL AMYL KETONE (For reference only, please check.)

IMDG: ETHYL AMYL KETONE (For reference only, please check.)

IATA: ETHYL AMYL KETONE (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: 3 (For reference

IMDG: 3 (For reference

IATA: 3 (For reference only,

only, please check.)

only, please check.)

please check.)

#### 14.4 Packing group, if applicable

ADR/RID: III (For reference only, please check.)

IMDG: III (For reference only, please check.)

IATA: III (For reference only, please check.)

#### 14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

#### 14.6 Special precautions for user

no data available

#### 14.7 Transport in bulk according to IMO instruments

no data available

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### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Octan-3-one	Octan-3-one	106-68-3	203-423-0
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

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### SECTION 16: Other information

#### Information on revision

Creation Date July 15, 2019

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#### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

#### References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)**

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