

# SAFETY DATA SHEETS

## According to the UN GHS revision 8

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

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### 1. SECTION 1: Identification

#### 1.1. GHS Product identifier

Product name 4-oxovaleric acid

#### 1.2. Other means of identification

Product number -

Other names laevulinic acid; 4-Oxopentanoic acid,4-Oxovaleric acid; 3-Acetylpropionic Acid

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

Identified uses Food additives -> Flavoring Agents

Uses advised against no data available

#### 1.4. Supplier's details

Company Shandong Sincere Chemical Co., Ltd.  
Address No.21 Industrial North Road, Licheng District,  
Jinan City, Shandong Province, China.

Telephone (+86) 188-6575-9396.

#### 1.5. Emergency phone number

Emergency phone number (+86) 188-6575-9396.

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

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### 2. SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

Acute toxicity - Category 4, Oral

Skin sensitization, Category 1

Serious eye damage, Category 1

#### 2.2. GHS label elements, including precautionary statements

Pictogram(s)



Signal word Danger

Hazard statement(s) H302 Harmful if swallowed H317 May cause an allergic skin reaction H318 Causes serious eye damage

Precautionary statement(s)

Prevention P264 Wash ... thoroughly after handling. P270 Do

**Response**

not eat, drink or smoke when using this product.P261 Avoid breathing dust/fume/gas/mist/vapours/spray.P272 Contaminated work clothing should not be allowed out of the workplace.P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P301+P317 IF SWALLOWED: Get medical help.P330 Rinse mouth.P302+P352 IF ON SKIN: Wash with plenty of water/...P333+P317 If skin irritation or rash occurs: Get medical help.P321 Specific treatment (see ... on this label).P362+P364 Take off contaminated clothing and wash it before reuse.P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.P317 Get medical help.

**Storage**

none

**Disposal**

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

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**3. SECTION 3: Composition/information on ingredients****3.1. Substances**

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
4-oxovaleric acid	4-oxovaleric acid	123-76-2	204-649-2	99.0%

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**4. SECTION 4: First-aid measures****4.1. Description of necessary first-aid measures**

Medical attention is required. Consult a doctor. Show this safety data sheet (SDS) to the doctor in attendance.

**If inhaled**

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

**Following skin contact**

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

**Following eye contact**

Rinse with pure water for at least 15 minutes. Consult a doctor.

**Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

**4.2. Most important symptoms/effects, acute and delayed**

no data available

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

no data available

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**5. SECTION 5: Fire-fighting measures**

**5.1. Suitable extinguishing media**

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

**5.2. Specific hazards arising from the chemical**

no data available

**5.3. Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

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**6. 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**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

**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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**7. 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

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

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# 8. SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

### Occupational Exposure limit values

no data available

### 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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# 9. SECTION 9: Physical and chemical properties and safety characteristics

<b>Physical state</b>	Liquid,PelletsLargeCrystals
<b>Colour</b>	no data available
<b>Odour</b>	no data available
<b>Melting point/freezing point</b>	40.02 °C. Remarks:Other details not available.
<b>Boiling point or initial boiling point and boiling range</b>	225.99 °C. Remarks:Other details not available.
<b>Flammability</b>	no data available
<b>Lower and upper explosion limit/flammability limit</b>	no data available

<b>Flash point</b>	57°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>	In water: 674 600 mg/L. Remarks:Other details not available.
<b>Partition coefficient n-octanol/water</b>	log Pow = -0.49. Remarks:Other details not available.
<b>Vapour pressure</b>	3.786 Pa. Temperature:25 °C.
<b>Density and/or relative density</b>	1.13
<b>Relative vapour density</b>	no data available
<b>Particle characteristics</b>	no data available

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## 10. SECTION 10: Stability and reactivity

### 10.1. Reactivity

no data available

### 10.2. Chemical stability

no data available

### 10.3. Possibility of hazardous reactions

no data available

### 10.4. Conditions to avoid

no data available

### 10.5. Incompatible materials

no data available

### 10.6. Hazardous decomposition products

no data available

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## 11. SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 - rat - 3 000 mg/kg bw.
- 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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## 12. SECTION 12: Ecological information

### 12.1. Toxicity

- Toxicity to fish: LC50 - Pimephales promelas - 4 556.39 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - 3 038.622 mg/L - 48 h.
- Toxicity to algae: EC50 - microalgae - 375.014 mg/L - 72 h.
- Toxicity to microorganisms: no data available

### 12.2. Persistence and degradability

no data available

### 12.3. Bioaccumulative potential

no data available

### 12.4. Mobility in soil

no data available

### 12.5. Other adverse effects

no data available

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## 13. 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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## 14. SECTION 14: Transport information

**14.1. UN Number**

ADR/RID: Not dangerous goods. (For reference only, please check.)      IMDG: Not dangerous goods. (For reference only, please check.)      IATA: Not dangerous goods. (For reference only, please check.)

**14.2. UN Proper Shipping Name**

ADR/RID: Not dangerous goods. (For reference only, please check.)      IMDG: Not dangerous goods. (For reference only, please check.)      IATA: Not dangerous goods. (For reference only, please check.)

**14.3. Transport hazard class(es)**

ADR/RID: Not dangerous goods. (For reference only, please check.)      IMDG: Not dangerous goods. (For reference only, please check.)      IATA: Not dangerous goods. (For reference only, please check.)

**14.4. Packing group, if applicable**

ADR/RID: Not dangerous goods. (For reference only, please check.)      IMDG: Not dangerous goods. (For reference only, please check.)      IATA: Not dangerous goods. (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

**15. 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
4-oxovaleric acid	4-oxovaleric acid	123-76-2	204-649-2
<b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>			Listed.
<b>EC Inventory</b>			Listed.
<b>United States Toxic Substances Control Act (TSCA) Inventory</b>			Listed.
<b>China Catalog of Hazardous chemicals 2015</b>			Not Listed.
<b>New Zealand Inventory of Chemicals (NZIoC)</b>			Listed.
<b>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</b>			Listed.
<b>Vietnam National Chemical Inventory</b>			Listed.
<b>Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)</b>			Listed.
<b>Korea Existing Chemicals List (KECL)</b>			Listed.

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## 16. 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/>

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*Disclaimer: 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. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.*