

# SAFETY DATA SHEETS

According to the UN GHS revision 9

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

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## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** 2-chlorobenzaldehyde

### 1.2 Other means of identification

**Product number** -  
**Other names** USAF m-7; 2-CHLOROBENZALDEHYDE FOR PHARMA SYNTHESIS; O-CHLOROBENZALDEHYDE( OCBA)

### 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).

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## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Skin corrosion, Sub-category 1B

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word** Danger  
**Hazard statement(s)** H314 Causes severe skin burns and eye damage  
**Precautionary statement(s)**  
**Prevention** P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 Wash ... thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
**Response** P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT

induce vomiting.  
P363 Wash contaminated clothing before reuse.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P316 Get emergency medical help immediately.  
P321 Specific treatment (see ... on this label).  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P405 Store locked up.  
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.

**Storage**  
**Disposal**

## 2.3 Other hazards which do not result in classification

no data available

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
2-chlorobenzaldehyde	2-chlorobenzaldehyde	89-98-5	201-956-3	100%

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## 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 for at least 15 minutes. Refer for medical attention .

**Following eye contact**

Rinse with plenty of water for several minutes (remove contact lenses if easily possible). Refer for medical attention.

**Following ingestion**

Rinse mouth. Give one or two glasses of water to drink. Do NOT induce vomiting. Refer for medical attention .

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

SYMPTOMS: Symptoms of exposure to this compound may include skin, eye and upper respiratory tract irritation. ACUTE/CHRONIC HAZARDS: This compound may cause skin, eye and respiratory tract irritation. When heated to decomposition it emits toxic fumes. (NTP, 1992)

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

no data available

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Fires involving this compound can be controlled with a dry chemical, carbon dioxide or Halon extinguisher. (NTP, 1992)

### 5.2 Specific hazards arising from the chemical

This chemical is combustible. (NTP, 1992)

### 5.3 Special protective actions for fire-fighters

Use water spray, foam, powder, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

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## SECTION 6: Accidental release measures

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

Personal protection: chemical protection suit and protective gloves. Do NOT let this chemical enter the environment. Collect leaking liquid in sealable containers. Absorb remaining liquid in dry sand or inert absorbent. Then store and dispose of according to local regulations.

### 6.2 Environmental precautions

Personal protection: chemical protection suit and protective gloves. Do NOT let this chemical enter the environment. Collect leaking liquid in sealable containers. Absorb remaining liquid in dry sand or inert absorbent. Then store and dispose of according to local regulations.

### 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

NO open flames. Above 87°C use a closed system and ventilation. 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

Separated from food and feedstuffs. Dry. Well closed. Store in an area without drain or sewer access. Provision to contain effluent from fire extinguishing.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure limit values

Component	2-chlorobenzaldehyde			
CAS No.	89-98-5			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Canada - Ontario			4	23
	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 safety goggles or face shield.

**Skin protection**

Protective gloves. Protective clothing.

**Respiratory protection**

Use ventilation, local exhaust or breathing protection.

**Thermal hazards**

no data available

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

<b>Physical state</b>	Liquid.
<b>Colour</b>	Clear to yellowish.
<b>Odour</b>	no data available
<b>Melting point/freezing point</b>	11.9 °C.
<b>Boiling point or initial boiling point and boiling range</b>	213.6 °C. Atm. press.:1 013.3 hPa.
<b>Flammability</b>	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
<b>Lower and upper explosion limit/flammability limit</b>	no data available
<b>Flash point</b>	97 °C. Atm. press.:1 000.6 hPa.
<b>Auto-ignition temperature</b>	360 °C. Atm. press.:Ca. 1 Bar.
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	no data available
<b>Solubility</b>	1 to 5 mg/mL at 75° F (NTP, 1992)
<b>Partition coefficient n-octanol/water</b>	log Pow = 2.44. Temperature:25 °C.
<b>Vapour pressure</b>	4.6 Pa. Temperature:20 °C.;8.3 Pa. Temperature:25 °C.;95.2 Pa. Temperature:50 °C.
<b>Density and/or relative density</b>	1.25 g/cm <sup>3</sup> . Temperature:20 °C.
<b>Relative vapour density</b>	4.84 (vs air)
<b>Particle characteristics</b>	no data available

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**SECTION 10: Stability and reactivity****10.1 Reactivity**

Decomposes on heating. This produces toxic and corrosive fumes including hydrogen chloride (see ICSC 0163).

**10.2 Chemical stability**

no data available

**10.3 Possibility of hazardous reactions**

2-CHLOROBENZALDEHYDE reacts with iron and strong oxidizers, strong bases and strong reducing agents. (NTP, 1992)

**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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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 - rat (female) - ca. 3 150 mg/kg bw.
- Inhalation: LC50 - rat (male/female) - > 1 203 mg/m<sup>3</sup> air.
- Dermal: approximate LD50 - guinea pig - 20 000 mg/kg bw.

### 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

The substance is severely irritating to the eyes, skin and possibly the respiratory tract.

### STOT-repeated exposure

no data available

### Aspiration hazard

No indication can be given about the rate at which a harmful concentration of this substance in the air is reached on evaporation at 20°C.

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## SECTION 12: Ecological information

### 12.1 Toxicity

- Toxicity to fish: LC50 - Danio rerio (previous name: Brachydanio rerio) - 14.83 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: EC0 - Daphnia magna - 21 mg/L - 24 h.
- Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - 16.8 mg/L - 72 h.
- Toxicity to microorganisms: EC50 - activated sludge of a predominantly domestic sewage - 132 mg/L - 3 h. Remarks:Respiration rate.

### 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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## 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: UN3265 (For reference only, please check.)

IMDG: UN3265 (For reference only, please check.)

IATA: UN3265 (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)

IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)

IATA: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: 8 (For reference only, please check.)

IMDG: 8 (For reference only, please check.)

IATA: 8 (For reference only, please check.)

### 14.4 Packing group, if applicable

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

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

IATA: I (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
2-chlorobenzaldehyde	2-chlorobenzaldehyde	89-98-5	201-956-3
European Inventory of Existing Commercial Chemical Substances			Listed.

<b>(EINECS)</b>	
<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.

## 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/>

### Other Information

The apparent melting point caused by loss of crystal water is given.

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

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