

# 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** 2,5-dichloroaniline

### 1.2 Other means of identification

**Product number** -  
**Other names** 2,5-DICHLORO-BENZENAMINE; 2,5-dichloro; Azobase  
DCA

### 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 Yien Chemical Technology Co., Ltd  
**Address** Building 6, 28 Yingong Road, Fengxian District, Shanghai  
Chemical Industry Zone, Shanghai, 201400, China  
**Telephone** +86-400-133-2688

### 1.5 Emergency phone number

**Emergency phone number** +86-400-133-2688  
**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

Acute toxicity - Category 3, Oral  
Acute toxicity - Category 3, Dermal  
Acute toxicity - Category 3, Inhalation  
Specific target organ toxicity – repeated exposure, Category 2  
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word** Danger  
**Hazard statement(s)** H301 Toxic if swallowed

H311 Toxic in contact with skin  
H331 Toxic if inhaled  
H373 May cause damage to organs through prolonged or repeated exposure  
H410 Very toxic to aquatic life with long lasting effects

**Precautionary statement(s)**

**Prevention**

P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P271 Use only outdoors or in a well-ventilated area.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P273 Avoid release to the environment.

**Response**

P301+P316 IF SWALLOWED: Get emergency medical help immediately.  
P321 Specific treatment (see ... on this label).  
P330 Rinse mouth.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P316 Get emergency medical help immediately.  
P361+P364 Take off immediately all contaminated clothing and wash it before reuse.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P319 Get medical help if you feel unwell.  
P391 Collect spillage.

**Storage**

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

**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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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
2,5-dichloroaniline	2,5-dichloroaniline	95-82-9	202-455-2	100%

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

**If inhaled**

Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.

**Following skin contact**

Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention .

**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

SYMPTOMS: Symptoms of exposure to this compound may include irritation of the skin, eyes, and mucous membranes. ACUTE/CHRONIC HAZARDS: This compound is a local irritant. It emits toxic fumes when heated to decomposition. (NTP, 1992)

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

Basic treatment: Establish patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for shock and treat if necessary . Anticipate seizures and treat if necessary . For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport . Do not use emetics. For ingestion, rinse mouth and administer 5 mL/kg up to 200 mL of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal . Aniline 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: Use dry chemical or carbon dioxide. Cool all affected containers with flooding quantities of water. use water in flooding quantities as fog. Dichloroaniline

### **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, powder, alcohol-resistant foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water. NO direct contact 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 including self-contained breathing apparatus. Remove all ignition sources. Do NOT wash away into sewer. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. Carefully collect remainder. Then store and dispose of according to local regulations.

### **6.2 Environmental precautions**

Personal protection: chemical protection suit including self-contained breathing apparatus. Remove all ignition sources. Do NOT wash away into sewer. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. Carefully collect remainder. 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. 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 strong oxidants and food and feedstuffs. STORE IN A COOL, DRY, WELL-VENTILATED LOCATION. SEPARATE FROM ACIDS, OXIDIZING MATERIALS, & COMBUSTIBLES. DICHLOROANILINES

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## 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 safety goggles or face shield.

#### Skin protection

Protective gloves. Protective clothing.

#### Respiratory protection

Use 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>	PHYSICAL DESCRIPTION: Brown crystalline solid. (NTP, 1992)
<b>Colour</b>	Light brown or amber-colored crystalline mass
<b>Odour</b>	no data available
<b>Melting point/freezing point</b>	248°C(lit.)
<b>Boiling point or initial boiling point and boiling range</b>	160°C/2mmHg(lit.)
<b>Flammability</b>	Combustible. Gives off irritating or toxic fumes (or gases) in a fire. Heating will cause rise in pressure with risk of bursting.
<b>Lower and upper explosion limit/flammability limit</b>	no data available
<b>Flash point</b>	94°C(lit.)
<b>Auto-ignition temperature</b>	540°C
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	no data available
<b>Solubility</b>	less than 1 mg/mL at 72.5° F (NTP, 1992)
<b>Partition coefficient n-octanol/water</b>	log Kow= 2.92
<b>Vapour pressure</b>	Pa at 25°C: <1
<b>Density and/or relative density</b>	1.401 g/cm <sup>3</sup>
<b>Relative vapour density</b>	(air = 1): 5.6
<b>Particle characteristics</b>	no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Decomposes at 380°C. Decomposes on burning. This produces toxic fumes including nitrogen oxides and hydrogen chloride (see ICSC 0163).

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

2,5-DICHLOROANILINE is incompatible with acids, acid chlorides, acid anhydrides and oxidizing agents. (NTP, 1992)

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

When heated to decomposition it emits highly toxic fumes of /hydrogen chloride/ and nitrogen oxides.

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Rat oral 1600 mg/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

The substance is severely irritating to the eyes. The substance may cause effects on the blood. This may result in the formation of methaemoglobin. Exposure could cause death. The effects may be delayed. Medical observation is indicated.

### STOT-repeated exposure

Repeated or prolonged contact may cause skin sensitization. The substance may have effects on the blood. This may result in the formation of methaemoglobin.

### 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: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

The effects of dichlorine-substituted anilines on Guelph loam were studied. 2,5-Dichloroaniline at concentrations of 5 to 100 ug/g soil was inhibitory against the oxidation of the nitrogen of ammonia to nitrite nitrogen, but not nitrite nitrogen to nitrate nitrogen. It showed almost a linear rate of decomposition over the 12 wk period of the expt. The dichloroanilines were more persistent than aniline or the monochloroanilines.

### 12.3 Bioaccumulative potential

An estimated BCF of 35 was calculated for 2,5-dichloroaniline(SRC), using log Kow of 2.92(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is moderate.

### 12.4 Mobility in soil

The Koc for 2,5-dichloroaniline is 355(1). According to a classification scheme(2), this Koc value suggests that 2,5-dichloroaniline is expected to have moderate mobility in soil. However, when released to soil containing humic material, 2,5-dichloroaniline may undergo a covalent chemical bonding resulting in its chemical alteration to a latent form resulting in strong adsorption(3).

### 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: UN3442 (For reference only, please check.)

IMDG: UN3442 (For reference only, please check.)

IATA: UN3442 (For reference only, please check.)

### 14.2 UN Proper Shipping Name

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

IMDG:  
DICHLOROANILINES,  
SOLID (For reference only,  
please check.)

IATA:  
DICHLOROANILINES,  
SOLID (For reference only,  
please check.)

### 14.3 Transport hazard class(es)

ADR/RID: 6.1 (For reference only, please check.)

IMDG: 6.1 (For reference only, please check.)

IATA: 6.1 (For reference only, please check.)

### 14.4 Packing group, if applicable

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

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

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

### 14.5 Environmental hazards

ADR/RID: Yes

IMDG: Yes

IATA: Yes

### 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
2,5-dichloroaniline	2,5-dichloroaniline	95-82-9	202-455-2
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

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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

Depending on the degree of exposure, periodic medical examination is suggested. Specific treatment is necessary in case of poisoning with this substance; the appropriate means with instructions must be available.

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

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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.*