



**DESIGN REPORT OF SAFETY DATA SHEET**

No.:220100320424654E

Date:Nov.22,2022

Name of the sample	4,4'-Methylene-bis(2-chloroaniline)		
Applicant	Binhai Xingguang Chemical Co.,Ltd.		
Supplier	Binhai Xingguang Chemical Co.,Ltd.		
Composition of the sample	4,4'-Methylene-bis(2-chloroaniline):=99%,Moisture=1%		
Warranty of Design	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS(GHS)Ninth revised edition		
Design Result of SDS please see next page.			
Designer	孙越越	Approver	For and on behalf of CCIC JIANGSU CO.,LTD. 中国检验认证集团江苏有限公司 王珍



授权签字人Authorized Signature (S)

Notes: This SDS is valid before the implementation of the Tenth revised edition GHS.



4,4'-Methylene-bis(2-chloroaniline)

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### Section 1 Product and Company Identification

#### > Product Identifier

**Product Name** 4,4'-Methylene-bis(2-chloroaniline)  
**Synonyms**  
**CAS No.** 101-14-4  
**EC No.** 202-918-9  
**Molecular Formula** C<sub>13</sub>H<sub>12</sub>Cl<sub>2</sub>N<sub>2</sub>

#### > Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

**Relevant Identified Uses** Please consult manufacturer.  
**Uses Advised Against** Please consult manufacturer.

#### >Details of the Supplier of the Safety Data Sheet

**Applicant Name** Binhai Xingguang Chemical Co.,Ltd.  
**Application Address** Linbai Road, New Coal Chemical Synthetic Material Base, Huaibei City, Anhui Province, China  
**Applicant Post Code** 235100  
**Applicant Telephone** +86-13336134914  
**Applicant Fax** /  
**Applicant E-mail** Joey@chemball.com  
**Supplier Name** Binhai Xingguang Chemical Co.,Ltd.  
**Supplier Address** Linbai Road, New Coal Chemical Synthetic Material Base, Huaibei City, Anhui Province, China  
**Supplier Post Code** 235100  
**Supplier Telephone** +86-13336134914  
**Supplier Fax** /  
**Supplier E-mail** Joey@chemball.com

#### >Emergency Phone Number

**Emergency Phone Number** +86-571-8627 3270

### Section 2 Hazards Identification

Hazard class and label elements of the product according to GHS (the ninth revised edition):

#### >GHS Hazard Class



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<b>Acute Toxicity- Oral</b>	Category 4
<b>Germ Cell Mutagenicity</b>	Category 2
<b>Carcinogenicity</b>	Category 1
<b>Hazardous To The Aquatic Environment - Short-Term(Acute) Hazard</b>	Category 1
<b>Hazardous To The Aquatic Environment - Long-Term (Chronic) Hazard</b>	Category 1

### >GHS Label Elements

Pictogram



Signal Word

**Danger**

### >Hazard Statements

H302	Harmful if swallowed
H341	Suspected of causing genetic defects
H350	May cause cancer
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

### >Precautionary Statements

#### Prevention

P203	Obtain,read and follow all safety instructions before use.
P264	Wash hands and other contact area thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

#### Response

P318	IF exposed or concerned,get medical advice.
P330	Rinse mouth.
P391	Collect spillage.
P301+P317	IF.SWALLOWED:Get medical help.

#### Storage

P405	Store locked up.
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#### Disposal



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P501

Dispose of contents/container in accordance with local/regional/national/ international regulations.

### Section 3 Composition/Information on Ingredients

Component	CAS No.	EC No.	Concentration (weight percent,%)
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	202-918-9	≥99

### Section 4 First Aid Measures

#### >Description of First Aid Measures

##### General Advice

Immediate medical attention is required.Show this safety data sheet (SDS) to the doctor in attendance.

##### Eye Contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.

##### Skin Contact

Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.

##### Ingestion

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

##### Inhalation

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

##### Protecting of First-aiders

Ensure that medical personnel are aware of the substance involved.Take precautions to protect themselves and prevent spread of contamination.

#### >Most Important Symptoms and Effects, both Acute and Delayed

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

#### >Indication of Any Immediate Medical Attention and Special Treatment Needed

- 1 Treat symptomatically.
- 2 Symptoms may be delayed.

### Section 5 Fire Fighting Measures

#### >Extinguishing Media

##### Suitable Extinguishing Media

Dry chemical, carbon dioxide or alcohol-resistant foam.

##### Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter or spread fire.



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### **>Specific Hazards Arising from the Substance or Mixture**

- 1 Containers may explode when heated.
- 2 Fire exposed containers may vent contents through pressure relief valves.
- 3 May expansion or decompose explosively when heated or involved in fire.

### **>Advice for Firefighters**

- As in any fire, wear self-contained breathing apparatus(MSHA/NIOSH approved or equivalent)and full
- 1 protective gear.
  - 2 Fight fire from a safe distance, with adequate cover.
  - 3 Prevent fire extinguishing water from contaminating surface water or the ground water system.

## **Section 6 Accidental Release Measure**

### **>Personal Precautions, Protective Equipment and Emergency Procedures**

- 1 Ensure adequate ventilation. Remove all sources of ignition.
- 2 Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
- 3 Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

### **>Environmental Precautions**

- 1 Prevent further leakage or spillage if safe to do so.
- 2 Discharge into the environment must be avoided.

### **>Methods and Materials for Containment and Cleaning Up**

- 1 Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by 1 bunding .
- 2 Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations .
- 3 Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## **Section 7 Handling and Storage**

### **>Precautions for Handling**

- 1 Handling is performed in a well ventilated place.
- 2 Wear suitable protective equipment.
- 3 Avoid contact with skin and eyes.
- 4 Keep away from heat/sparks/open flames/ hot surfaces.
- 5 Take precautionary measures against static discharges.

### **>Precautions for Storage**



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- 1 Keep containers tightly closed.
- 2 Keep containers in a dry, cool and well-ventilated place.
- 3 Keep away from heat/sparks/open flames/ hot surfaces.
- 4 Store away from incompatible materials and foodstuff containers.

## Section 8 Exposure Controls/Personal Protection

### >Control Parameters

#### Occupational Exposure Limit Values

Component	Country/Region	Limit Value -Eight Hours		Limit Value -Short Term	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
4,4'-Methylene-bis(2-chloroaniline) 101-14-4	USA-NIOSH		0.003		
	South Korea	0.01	0.11		
	Ireland		0.005		
	France	0.02	0.22		
	Denmark	0.01	0.11	0.02	0.22
	Australia	0.02	0.22		

#### Biological Limit Values

No information available

#### Monitoring Methods

- 1 EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
- 2 GBZ/T 160 Determination of toxic substances in workplace air(Series effective standard)and GBZ/T 300 Determination of toxic substances in workplace air(Series standard).

### >Engineering Controls

- 1 Ensure adequate ventilation, especially in confined areas.
- 2 Ensure that eyewash stations and safety showers are close to the workstation location.
- 3 Use explosion-proof electrical/ventilating/lighting/equipment.
- 4 Set up emergency exit and necessary risk-elimination area.

### >Personal Protection Equipment

- Eye Protection** Tightly fitting safety goggles (approved by EN 166(EU)or NIOSH(US).
- Hand Protection** Wear protective gloves (such as butyl rubber),passing the tests according to EN 374(EU),US F739 or AS/NZS 2161.1 standard.
- Respiratory protection** If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US)or type AXBEK(EN 14387) respirator cartridges.
- Skin and Body Protection** Wear fire/flame resistant/retardant clothing and antistatic boots.



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### Section 9 Physical and Chemical Properties

**Appearance:** Light yellow flaky

**Odor Threshold:** No information available

**Melting Point/Freezing Point (°C):** 110

**Flash Point(°C)(Closed Cup):**Not applicable

**Flammability:** No information available

**Vapor Pressure (KPa):** Not applicable

**Relative Density(Water=1):**1.44

**n-Octanol/Water Partition Coefficient:**2.5

**Decomposition Temperature(°C):** No information available

**Particle characteristics:** No information available

**Odor:** No information available

**pH:** No information available

**Initial Boiling Point and Boiling Range (°C):**202

**Evaporation Rate:** Not applicable

**Upper/lower explosive limits[% (v/v)]:** Upper limit:No information available; Lower limit: No information available

**Relative Vapour Density(Air=1):** Not applicable

**Solubility:** Insoluble in water

**Auto-Ignition Temperature(°C):** No information available

**Kinematic Viscosity (mm<sup>2</sup>/s):** Not applicable

### Section 10 Stability and Reactivity

<b>Reactivity</b>	Contact with incompatible substances can cause decomposition or other chemical reactions.
<b>Chemical Stability</b>	Stable under proper operation and storage conditions.
<b>Possibility of Hazardous Reactions</b>	In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen.
<b>Conditions to Avoid</b>	Incompatible materials, heat, flame and spark.
<b>Incompatible Materials</b>	Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.
<b>Hazardous Decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### Section 11 Toxicological Information

#### >Acute Toxicity

Component	CAS No.	LD <sub>50</sub> (Oral)	LD <sub>50</sub> (Dermal)	LC <sub>50</sub> (Inhalation, 4h)
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	1140mg/kg (Rat)	>5000mg/kg (Rabbit)	No information available

#### >Skin Corrosion/Irritation



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No information available

### >Serious Eye Damage/Irritation

No information available

### >Skin Sensitization

No information available

### >Respiratory Sensitization

No information available

### >Germ Cell Mutagenicity

Suspected of causing genetic defects(Category 2)

### >Carcinogenicity

ID	CAS No.	Component	IARC	NTP
1	101-14-4	4,4'-Methylene-bis(2-chloroaniline)	Category 1	Not Listed

### >Reproductive Toxicity

No information available

### >Reproductive Toxicity(Additional)

No information available

### >STOT-Single Exposure

No information available

### >STOT-Repeated Exposure

No information available

### >Aspiration Hazard

No information available

## Section 12 Ecological Information

### >Acute Aquatic Toxicity

Component	CAS No.	Fish	Crustaceans	Algae
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	LC <sub>50</sub> :0.61mg/L	EC <sub>50</sub> :0.92mg/L (48h)	ErC <sub>50</sub> :>0.85mg/L (72h)





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		(96h)(Fish)		
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## >Chronic Aquatic Toxicity

Component	CAS No.	Fish	Crustaceans	Algae
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	No information available	NOEC:0.0095mg/L	NOEC:0.54mg/L

## >Others

<b>Persistence and Degradability</b>	No information available
<b>Bioaccumulative Potential</b>	No information available
<b>Mobility in Soil</b>	No information available
<b>Results of PBT and vPvB Assessment</b>	4,4'-Methylene-bis(2-chloroaniline) does not meet the criteria for PBT and vPvB according to Regulation(EC)No 1907/2006,annex XII.

## Section 13 Disposal Considerations

<b>Waste Chemicals Contaminated Packaging Disposal Recommendations</b>	Before disposal should refer to the relevant national and local laws and regulation. Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible. Refer to Waste chemicals and Contaminated packaging.
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## Section 14 Transport Information

### Transporting Label



<b>Marine pollutant</b>	Yes
<b>UN Number</b>	3077
<b>UN Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
<b>Transport Hazard Class</b>	9
<b>Transport Subsidiary Hazard Class</b>	NONE
<b>Packing Group</b>	III

(Description: The graphic "fish and tree" is transport marking.)

## Section 15 Regulatory Information



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## >International Chemical Inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
4,4'-Methylene-bis(2-chloroaniline)	✓	✓	✓	✓	✓	✓	✓	✓	✓

【EINECS】 European Inventory of Existing Commercial Chemical Substances.

【TSCA】 United States Toxic Substances Control Act Inventory.

【DSL】 Canadian Domestic Substances List.

【IECSC】 China Inventory of Existing Chemical Substances.

【NZIoC】 New Zealand Inventory of Chemicals.

【PICCS】 Philippines Inventory of Chemicals and Chemical Substances.

【KECI】 Existing and Evaluated Chemical Substances.

【AICS】 Australia Inventory of Chemical Substances.

【ENCS】 Existing And New Chemical Substances.

Note

"√" Indicates that the substance included in the regulations

"x" That no data or included in the regulations

## Section 16 Additional Information

**Creation Date** Nov.22,2022  
**Revision Date** Nov.22,2022  
**Reason for Revision** -

## >Disclaimer

This Safety Data Sheet(SDS) was prepared according to UN GHS(the 9th revised edition).The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.



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### Terms of the Using of the Report

1. The report is issued by CCIC according to the information of the chemicals and the information of its shipping provided by the applicant (shipper or his agent).
2. According to the demand of this SDS, CCIC requires the applicant to provide true and exact sample and data.
3. Information from applicant is the key of this SDS, so CCIC will not respond for the wrong of applicant.
4. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
5. This report will be effective only after it is signed by the inspector, approver and stamped by CCIC.
6. CCIC guarantees the objectivity and fairness of this report, and carries out confidentiality obligations on business secrets such as business information, technical documents and so on.
7. The partly duplicating of this report is prohibited without the written approver of CCIC.
8. The report is invalid when anything of the following happens-illegal transfer,embezzlement, imposture, modification or tampering in any media form.



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