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CHINA CERTIFICATION & INSPECTION GROUP



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CNAS IB0074-012

正本
ORIGINAL

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 |



中国检验认证集团

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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Warranty of Design:GHS(Ninth Revised
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SDS

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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 C₁₃H₁₂Cl₂N₂

> 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



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

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

>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.

Disposal



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

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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. |



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

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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



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

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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 ³ | ppm | mg/m ³ |
| 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/flare 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 (mm²/s): Not applicable

Section 10 Stability and Reactivity

Reactivity

Contact with incompatible substances can cause decomposition or other chemical reactions.

Chemical Stability

Stable under proper operation and storage conditions.

**Possibility of Hazardous
Reactions**

In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen.

Conditions to Avoid

Incompatible materials, heat, flame and spark.

Incompatible Materials

Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.

Hazardous

Under normal conditions of storage and use, hazardous decomposition products

Decomposition products

should not be produced.

Section 11 Toxicological Information

>Acute Toxicity

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

>Skin Corrosion/Irritation



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

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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 ₅₀ :0.61mg/L | EC ₅₀ :0.92mg/L (48h) | ErC ₅₀ :>0.85mg/L (72h) |



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

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(96h)(Fish)

>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

Persistence and Degradability

No information available

Bioaccumulative

No information available

Potential

No information available

Mobility in Soil

Results of PBT and

vPvB Assessment

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

Waste Chemicals

Contaminated

Packaging

Disposal

Recommendations

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.

Section 14 Transport Information

Transporting Label



Marine pollutant

Yes

UN Number

3077

UN Proper Shipping Name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Transport Hazard Class

9

Transport Subsidiary

Hazard Class

NONE

Packing Group

III

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

Section 15 Regulatory Information



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

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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.



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

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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.

