



WEST BENGAL CHEMICAL INDUSTRIES LIMITED

145/1, Jessore Road, Lake Town,

Kolkata – 700 089, India.

Phone: +9133 4025 1700 Fax: +9133 2574 7410

Email: webcil@wbcil.com

Website: www.wbcil.com

Section 1 - Chemical Product and Company Identification

1.1 MSDS Name: Copper Citrate

1.2 Product Code: CPCNL24

1.3 Relevant identified uses of the substance or mixture and uses advised against:

Industrial and R&D

1.4 Company Identification:

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Section 2 - Hazards Identification

2.1 Classification of the substance or mixture:

Skin irritation (Category 2)

Eye irritation (Category 2A)

Specific target organ toxicity - single exposure (Category 3), Respiratory system

2.2 Signal word:

Warning

2.3 Hazard statement(s):

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

2.4 Precautionary statement(s):

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a poison center or doctor if you feel unwell.

P321 Specific treatment (see supplemental first aid instructions on this label).



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P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

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

P405 Store locked up.

P501 Dispose of contents/container to an approved waste disposal plant.

2.5 Hazard symbols:

Xi Irritant

R-phrases

R 36 / 37 / 38 Irritating to eyes, respiratory system and skin.

2.6 Pictogram:



2.7 NFPA rating:



NFPA Scale (0-4)

2.8 HMIS rating:

Health	1
Flammability	0
Physical Hazard	0
Personal protection	G

HMIS RATINGS (0-4)

Section 3 - Composition / Information on Ingredients

3.1 Chemical Name: Copper Citrate

3.2 CAS Number: 866-82-0

3.3 EC Number: 212-752-9

3.4 Molecular Formula: $C_6H_4Cu_2O_7$

3.5 Molecular Weight: 315.18 g/mol



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Section 4 - First Aid Measures

4.1 Description of First Aid Measures:

4.1.1 Eye Contact:

Flush eyes with large amounts of water for fifteen minutes. Separate eyelids with fingers. If irritation persists, seek medical attention.

4.1.2 Skin Contact:

Wash skin with soap and water. If irritation persists, seek medical attention.

4.1.3 Ingestion:

Do not induce vomiting. Seek medical attention.

4.1.4 Inhalation:

Move to a fresh air environment. Contact a physician if breathing becomes difficult. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay

4.2 Most important symptoms and effects, both acute and delayed:

Irritation, nausea, headache, shortness of breath.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptomatically. Call a physician.

Section 5 - Fire-Fighting Measures

5.1 Extinguishing Media:

Carbon dioxide, dry chemical powder, alcohol resistant foam or water spray.

5.2 Flash Point:

Not Available

5.3 Explosion Limits:

5.3.1 Lower:

Not Available

5.3.2 Upper:

Not Available

5.4 Auto Ignition Temperature:

Not Available

5.5 Protective Equipment:

Wear self-contained respirator and fully protective impervious suit.

5.6 Specific Hazards:

May emit hazardous fumes, like carbon oxides, copper oxides or other toxic fumes.



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Section 5 - Fire-Fighting Measures

5.7 Advice for firefighters:

As in any fire, wear a NIOSH-approved or equivalent, pressure-demand, self-contained breathing apparatus and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures:

Wear a self-contained breathing apparatus, rubber boots and gloves, and disposable coveralls. Dispose of coveralls after use. Keep unprotected persons away.

6.2 Environmental Protection:

Keep spills out of sewers and bodies of water. Dike and contain the spill with inert material. Absorb on sand, vermiculite or diatomite. Transfer material to a container for disposal or recovery. Ventilate area and wash spill site after material pickup is complete.

6.3 Methods and materials for containment and cleaning up:

Prevent further leak or spill if safe to do so. Vacuum, sweep up, or absorb with inert material and place into a suitable disposal container. Consult local regulations for disposal. See section 13 for further disposal information.

Section 7 - Handling and Storage

7.1 Precautions for safe handling:

7.1.1 Handling

Avoid breathing dust, vapor, mist or gas. Avoid contact with skin and eyes. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Open and handle container with care. Keep ignition sources away.

7.2 Conditions for safe storage, including any incompatibilities:

7.2.1 Storage:

Store in a tightly closed container in a dry, well-Ventilated place.

7.2.2 Sensitivities:

Not Available

7.2.3 Storage Temperature:

Not exceeding 25°C

Section 8 - Exposure Controls / Personal Protection

8.1 Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.



Section 8 - Exposure Controls / Personal Protection

8.2 Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

8.3 Personal protective equipment

8.3.1 Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.3.2 Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

8.3.3 Eye protection

Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention. Use eyewear tested and approved under appropriate government standards such as OSHA 29 CFR 1910.133 or EU EN166

8.3.4 Skin and body protection

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention.



Section 9 - Physical and Chemical Properties

Appearance Form	:	Blue color powder
Color	:	Blue
Odour	:	no data available
pH	:	2.0 – 5.0
Boiling Point Range	:	100 °C
Melting point/freezing point	:	0 °C
Flash Point	:	> 93 °C
Evaporation Rate	:	Not available.

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Flammability (solid, gas)	:	Please see section 2
Explosive limits	:	no data available
Vapour pressure	:	no data available
Density:	:	1 g/cm ³ at 20 °C
Vapour density	:	23 hPa at 20 °C
Solubility	:	no data available
Relative Density	:	1 (water=1)
Refractive Index	:	no data available
Decomposition temperature	:	no data available
Volatility	:	no data available
Auto-ignition Temperature	:	no data available
Partition Coefficient	:	no data available
Other safety information		no data available

Section 10 - Stability and Reactivity

10.1 Stability:

Stable under normal temperatures and pressures.

10.2 Incompatibility:

Strong oxidizing agents.

10.3 Conditions to Avoid:

Heat, Flame, Sparks, oxidizing agents, strong acids or bases, other ignition sources.

10.4 Incompatible materials:

Strong acids, strong bases

10.5 Hazardous Decomposition Products:

Carbon oxides, Copper oxides.

Section 11 - Toxicological Information

11.1 RTECS:

Not available.

11.2 Acute toxicity:

LD50 Oral-Rat-1580mg/kg.

11.3 Routes of exposure:

Inhalation, eye contact, skin contact, ingestion.

11.4 Germ cell mutagenicity:

No data available.

11.5 Carcinogenicity:

No data available.

11.6 Reproductive toxicity:

No data available.

11.7 Specific target organ toxicity - single exposure:



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Section 11 - Toxicological Information

Inhalation - May cause respiratory irritation.

11.8 Specific target organ toxicity - repeated exposure:

11.8.1 Eyes:

Dust may cause eye irritation.

11.8.2 Ingestion:

May cause gastrointestinal tract irritation, with nausea, vomiting and diarrhea if heavy ingestion is done.

11.9 Aspiration hazard:

No data available.

11.10 Potential health effects:

11.10.1 Inhalation:

Dust may cause respiratory tract irritation.

11.10.2 Ingestion:

May cause gastrointestinal tract irritation. The toxicological properties of this substance have not been fully investigated.

11.10.3 Skin:

May cause skin irritation.

11.10.4 Eyes:

Dust may create eye irritation.

Section 12 - Ecological Information

12.1 Toxicity:

No data available

12.2 Persistence and degradability:

Readily degradable in the environment.

12.3 Bio-accumulative potential:

No data available

12.4 Mobility in soil:

Aqueous solution has high mobility in soil

12.5 PBT and vPvB assessment:

No data available

12.6 Other adverse effects:

No data available

Section 13 - Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options.



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Section 13 - Disposal Considerations

State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Contaminated packaging: Dispose of as unused product.

Section 14 - Transport Information

14.1 UN-Number:

Not Regulated

14.2 UN proper shipping name:

Not Regulated

14.3 Transport hazard class:

14.3.1 Packing group:

Not regulated.

14.4 DOT Classification:

Not a DOT controlled material

14.5 Air transport Goods:

Nonhazardous/non-dangerous as per IATA DGR.

Special Provisions for Transport Not applicable.

IATA Specification Non-dangerous, non-hazardous.



Section 15 - Regulatory Information

United States:

Toxic Substance Control Act (TSCA): Not listed

Superfund Amendments and Reauthorization Act (SARA 302): Not listed Superfund

Amendments and Reauthorization Act (SARA 311/312): Not listed Superfund

Amendments and Reauthorization Act (SARA 313): Not listed

RCRA (hazardous waste code): None of the ingredients is listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act): None of the ingredients is listed.

Proposition 65 (California):

Chemicals known to cause cancer: None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.

Chemicals known to cause developmental toxicity: None of the ingredients is listed.

European Union:

European Inventory of Existing Chemical Substances (EINECS): Not Available

Hazard Codes: Not Available



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Section 15 - Regulatory Information

Risk Statements: Not Available

Safety Statements: Not Available

Canada

Canadian Domestic Substances List (DSL): Not listed Canadian

Non-Domestic Substances List (NDSL): Not listed

Section 16 - Other Information

Disclaimer: This material safety data sheet is provided as an information resource only. WEST BENGAL CHEMICAL INDUSTRIES LIMITED believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

CFR: Code of Federal Regulations (USA)

SARA: Superfund Amendments and Reauthorization Act (USA)

CERCLA: Resource Conservation and Recovery Act (USA)

TSCA: Toxic Substances Control Act (USA)

NPRI: National Pollutant Release Inventory (Canada)

DOT: US Department of Transportation

Issue Date: April, 2024

Revision Date: March, 2026

Revision No.: 01