

MSDS – Copper (II) Carbonate

MATERIAL SAFETY DATA SHEET (MSDS) / SAFETY DATA SHEET (SDS)

1. Identification

Product Name: Copper(II) Carbonate

Synonyms: Cupric carbonate; Basic copper carbonate (note: commercial material may be basic copper carbonate)

Chemical Formula: CuCO_3 (often $\text{Cu}_2(\text{OH})_2\text{CO}_3$ for basic form)

CAS Number: 1184-64-1 (Copper(II) carbonate)

Recommended Use: Laboratory reagent, chemical intermediate, pigments, research and industrial applications

Restrictions on Use: Not for food, drug, or household use

2. Hazard Identification

GHS Classification:

Acute toxicity, Oral (Category 4)

Skin irritation (Category 2)

Eye irritation (Category 2A)

Hazardous to the aquatic environment, Acute/Chronic (Category 1)

Signal Word: Warning

Hazard Statements:

Harmful if swallowed

Causes skin and eye irritation

Very toxic to aquatic life with long lasting effects

Precautionary Statements:

Avoid breathing dust

Wash hands thoroughly after handling

Avoid release to the environment

Wear protective gloves and eye/face protection

3. Composition / Information on Ingredients

Component	Concentration
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Copper(II) carbonate	≥ 98%
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Impurities: May contain trace amounts of copper salts

4. First-Aid Measures

Inhalation: Move person to fresh air. If breathing is difficult, seek medical attention.

Skin Contact: Wash immediately with soap and plenty of water. Remove contaminated clothing.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses if present.

Seek medical attention if irritation persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention immediately.

Symptoms: Nausea, vomiting, abdominal pain, irritation of skin and eyes.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Water spray, dry chemical, CO_2 , or foam

Specific Hazards: Decomposes on heating to release carbon dioxide and copper oxides

Protective Equipment: Self-contained breathing apparatus and full protective gear

6. Accidental Release Measures

Personal Precautions: Avoid dust formation. Wear protective equipment.

Environmental Precautions: Prevent entry into waterways; very toxic to aquatic life.
Clean up Methods: Collect spilled material mechanically. Place in suitable waste container. Wash contaminated area.

7. Handling and Storage

Handling: Handle in well-ventilated area. Avoid contact with skin, eyes, and clothing.
Storage: Store in a cool, dry, well-ventilated area. Keep container tightly closed.

8. Exposure Controls / Personal Protection

Exposure Limits: No specific occupational exposure limits established
Engineering Controls: Local exhaust ventilation recommended
Personal Protective Equipment (PPE):
Gloves: Chemical-resistant gloves
Eye Protection: Safety goggles
Respiratory Protection: Dust mask or respirator if dust is generated

9. Physical and Chemical Properties

Appearance: Green to blue-green powder
Odour: Odourless
pH: Not determined
Melting Point: Decomposes before melting
Solubility: Insoluble in water; soluble in acids
Density: ~4.0 g/cm³

10. Stability and Reactivity

Stability: Stable under recommended conditions
Incompatible Materials: Acids, strong oxidizing agents
Hazardous Decomposition Products: Copper oxides, carbon dioxide

11. Toxicological Information

Acute Toxicity: Harmful if swallowed
Chronic Effects: Prolonged exposure may cause copper accumulation leading to liver or kidney effects
Routes of Exposure: Ingestion, inhalation, skin and eye contact

12. Ecological Information

Eco toxicity: Very toxic to aquatic organisms
Persistence and Degradability: Not biodegradable
Bio accumulative Potential: Copper may bio accumulate

13. Disposal Considerations

Dispose of contents and container in accordance with local, regional, and national regulations. Do not dispose into drains or environment.

14. Transport Information

UN Number: Not specifically listed
Transport Hazard Class: Environmentally hazardous substance
Marine Pollutant: Yes

15. Regulatory Information

May be subject to local and international chemical safety regulations. Ensure compliance with applicable laws.

16. Other Information

Preparation Date: 9th April 2024

Disclaimer: This MSDS is provided for informational purposes only and is believed to be accurate.

Users are responsible for determining suitability and compliance with applicable regulations.