



Chemistry for Safer, Sustainable Life

SAFETY DATA SHEET

Section 1: Identification

Product Name: Copper (II) formate tetrahydrate

Product ID: 100FO114

Chemical Name/Synonyms: Cupric formate tetrahydrate

CAS: 5893-61-8

Molecular Formula: C₂H₁₀CuO₈

Molecular weight: 225.64 g/mol

Potential Uses: catalyst, metal precursor, reagent, metal oxide precursor

Company: BioFuran Materials LLC

920 William Pitt Way, Pittsburgh, PA 15238

In emergency call 911 or for information about this SDS, use this contact phone#: 412-376-7101

Section 2: GHS Hazard(s) Identification

Hazard Classification: Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Specific target organic toxicity – single exposure (Category 3), Respiratory system, H335

Signal Word(s): Warning

Hazard Statements: H315 – Causes skin irritation

H319 – Causes serious eye irritation

Pictograms:



Precautionary Statements:

P280 – Wear protective gloves / protective clothing, eye protection / face protection

P264 – Wash hands thoroughly after handling

P302+P352 – If on skin, wash with plenty of soap and water

P332+P313 – If skin irritation occurs, get medical advice / attention

P305+P351+P338 – If in eyes, rinse thoroughly with water for several minutes. Remove contact lenses if present. Continue rinsing for several minutes.

P337+P313 – If eye irritation persists, get medical advice/attention

P321 – See first aid instructions on this SDS

P362+P364 – Take off contaminated clothing and wash them before reuse.

Description of other hazards: none available

Section 3: Composition/ Information on Ingredients

Chemical Name	Synonym	CAS#	Conc.
Copper (II) formate tetrahydrate	Cupric formate tetrahydrate	5893-61-8	95-100%

Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3; H315, H319, H335

Section 4: First-Aid Measures

After skin contact: Wash off with soap and plenty of water. Consult a physician.

After eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

After inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

After swallowing: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5: Fire-Fighting Measures

Suitable extinguishing agents: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

Section 6: Accidental Release Measures

Personal precautions: Wear protective equipment as described in Section 8.

Measures for environmental protection: Do not dispose product in municipal sewers or drains. Notify authorities if product enters sewers or public waters.

Measures for cleaning/collecting: Pick up and arrange disposal without creating dust. Sweep up and shovel any spillages. Keep all wastes and residues in suitable, closed containers for disposal.

Section 7: Handling and Storage

Handling: Avoid contact with skin and eyes. Avoid dust formation and do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust.

Storage: Keep container tightly closed.

Section 8: Exposure Controls/Personal Protection

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Component	CAS No.	Value	Control Parameters
Copper (II) formate tetrahydrate	5893-61-8	ACGIH TWA (mg/m ³)	1 mg/m ³ as Cu

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

Breathing equipment: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (teal cartridge) respirator.

Protection of hands: Neoprene or nitrile rubber gloves.

Eye protection: Chemical goggles. Contact lenses should not be worn.

Section 9: Physical and Chemical Properties

Form: Crystalline powder

Odor: No data available

Odor threshold: No data available

pH: No data available

Melting point/melting range: Decomposes around 130-132°C

Boiling point/boiling range: No data available

Flash point: No data available

Evaporation rate: No data available

Flammability: No data available

Upper/lower flammability or explosive limits: No data available

Auto ignition temperature: No data available

Danger of explosion: No data available

Vapor pressure: No data available

Vapor density: No data available

Relative density: 1.79-1.83g/mL

Solubility in/Miscibility with water: Soluble in water

Section 10: Stability and Reactivity

Reactivity: No data available

Chemical stability: Stable under ambient conditions

Conditions to avoid: No data available

Incompatible materials: Phosphates, soluble carbonates, strong oxidizing agents, sulfuric acid

Hazardous decomposition products: Copper oxide, oxides of carbon

Section 11: Toxicological Information

Acute toxicity: No data available

Potential routes of exposure/potential health effects

Skin: Causes skin irritation
Eye: Causes eye irritation
Inhalation: May cause irritation
Ingestion: No data available
Carcinogenic effects: No data available
Mutagenic effects: No data available
Reproductive toxicity: No data available
Sensitization: No data available
Target organs: No data available

Section 12: Ecological Information (non-mandatory)

Ecotoxicity: No data available
Mobility: No data available
Biodegradation: No data available
Bioaccumulation: No data available

Section 13: Disposal Considerations (non-mandatory)

This material or its residues should not be disposed in drains or in regular trash cans. Contact a licensed waste disposal professional to dispose this material or its residues.

Section 14: Transport Information (non-mandatory)

DOT regulations: Not dangerous goods

- **Land transport ADR/RID (cross-border):** Not regulated for transport
- **Maritime transport IMDG:** Not dangerous goods
- **Air transport ICAO-TI and IATA-DGR:** Not dangerous goods

Section 15: Regulatory Information (non-mandatory)

US Federal Regulations

SARA Section 302: This material is not subject to reporting requirements of SARA Title III, Section 302

SARA Section 313: This material is subject to reporting levels established by SARA Title III, Section 313

TSCA (Toxic Substances Control Act): Copper (II) formate tetrahydrate is listed on the United States TSCA

Section 16: Other Information

SDS date of preparation/update: 05/27/2020 Version 001