

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

- 1.1 **PRODUCT IDENTIFIER:** EPA REGISTRATION NO. 34704-393
TRADE NAME: C-O-C-S 15 SULFUR 25 DUST
- 1.2 **RECOMMENDED USE:** FUNGICIDE FOR ORGANIC PRODUCTION
- 1.3 **SUPPLIER DETAILS:**
LOVELAND PRODUCTS, INC.
P.O. Box 1286 • Greeley, CO 80632-1286
- 1.4 **24 Hour Emergency Phone:** 1-800-424-9300 - **Medical Emergencies:** 1-866-944-8565 – **Product Information:** 1-888-574-2878 (LPI-CUST)
U.S. Coast Guard National Response Center: 1-800-424-8802

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to 29 CFR 1910.1200

Acute Toxicity – Oral	Category 4	H302
Acute Toxicity - Dermal	Category 4	H312
Eye Damage/Irritation	Category 2A	H319
Acute Toxicity – Inhalation	Category 4	H332

2.2 Label elements



- Signal word: WARNING
- Hazard Statement: H302 – Harmful if swallowed.
H312 – Harmful in contact with skin.
H319 – Causes severe eye irritation.
H332 – Harmful if inhaled.
- Precautionary Statement: (Prevention): P264 – Wash hands and face thoroughly after handling.
P270 – Do not eat, drink or smoke when using this product.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P261 – Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 – Use only outdoors or in a well-ventilated area.
- Precautionary Statement: (Response): P301+P312: IF SWALLOWED: Call a poison center/doctor/physician if you feel unwell.
P330 – Rinse mouth.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P312 – Call a poison center or doctor/physician if you feel unwell.
P321 – Specific treatment (see Note To Physician and First Aid Information on the product label).
P333+P313 – If skin irritation occurs: Get medical advice/attention.
P362 – Take off contaminated clothing and wash it before reuse.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313 – If eye irritation persists: Get medical advice/attention.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 – Call a poison center/doctor/ physician if you feel unwell.
- Precautionary Statement: (Storage): P402+P404 – Store in a dry place. Store in a closed container.



SAFETY DATA SHEET

SDS NUMBER: 000393-17-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 12/19/17

C-O-C-S 15 SULFUR 25

SUPERSEDES: 12/12/12

Precautionary
Statement:
(Disposal):

P501 – Dispose of contents/container in accordance with federal, state and local regulations.

2.3 Other hazards

None known

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Chemical Name:	CAS No.	Concentration [%]
Copper Oxychloride	1332-65-6	18.87
Basic Copper Sulfate	1344-73-6	7.49
Sulfur	7704-34-9	25.00
Other Ingredients		48.64

Ingredients not precisely identified are proprietary or non-hazardous.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

- If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
- If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
- If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Harmful if swallowed. Harmful in contact with skin. Causes serious eye irritation. Harmful if inhaled.

4.3 Immediate Medical Attention and Special Treatment

Treatment: Treat symptomatically.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-844-8565

Have the product label or container with you when calling a poison control center or doctor or going for treatment.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.



SAFETY DATA SHEET

SDS NUMBER: 000393-17-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 12/19/17

C-O-C-S 15 SULFUR 25

SUPERSEDES: 12/12/12

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide (CO₂), foam, water spray or fog.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: Thermal decomposition will release hydrogen chloride, oxides of hydrogen, oxides of copper, and other toxic and/or hazardous gases.

5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and deny unnecessary entry.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Avoid inhalation of vapors and dusts and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing. Remove all sources of ignition.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: This product is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwater or rinsate.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Large Spills: Avoid breathing dusts. Sweep up spills and transfer to approved chemical containers for disposal.
Small Spills: Sweep up spills and transfer to approved chemical containers for disposal. Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling: Do not use, pour, spill or store near heat or open flame. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, fold and roll back bags, clamp and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal. In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS

U.S. Workplace Exposure Level (ACGIH) TLVs

Components	Type	Value
Copper, dusts and mists, as Cu	TWA	1 mg/m ³

U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
Copper, dusts and mists, as Cu	TWA	1 mg/m ³



SAFETY DATA SHEET

SDS NUMBER: 000393-17-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 12/19/17

C-O-C-S 15 SULFUR 25

SUPERSEDES: 12/12/12

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Specimen
No listings		

8.2 EXPOSURE CONTROLS:

Engineering Measures

Local exhaust ventilation is recommended.

Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended.

Skin Protection: Long sleeved shirt and long pants, chemical-resistant gloves. Shoes and socks.

Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapors, use suitable respiratory equipment approved by MSHA/NIOSH. Wear respiratory protection during operations where spraying or misting occurs. If respirators are used, a program should be in place to assure compliance with national or provincial standards. Wear air supplied respiratory protection if exposure concentrations are unknown.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 APPEARANCE: Powder
ODOR: Sulfur-like.
ODOR THRESHOLD: No data available.
COLOR: Greenish.
pH: No data available.
MELTING POINT / FREEZING POINT: No data available.
BOILING POINT: No data available
FLASH POINT: No data available.
FLAMMABILITY (solid, gas): No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: No data available.
VAPOR PRESSURE: No data available.
SOLUBILITY: Insoluble.
PARTITION CO-EFFICIENT, n-OCTANOL / WATER: No data available.
AUTO-IGNITION TEMPERATURE: No data available.
DECOMPOSITION TEMPERATURE: No data available.
VISCOSITY: No data available.
SPECIFIC GRAVITY (Water = 1): 0.48 – 0.64 g/ml
BULK DENSITY: 30 – 40 lbs/ft³ | 480 - 640 kg/m³

Note: These physical data are typical values based on material tested but may vary from sample to sample.
Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

10. STABILITY AND REACTIVITY

10.1 REACTIVITY

Stable

10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No data available. Will not polymerize.

10.4 CONDITIONS TO AVOID

Temperatures above 124 °F. Avoid sodium or potassium metals, strong acids.

10.5 INCOMPATIBLE MATERIALS

Strong acids and oxidizers. Copper is corrosive to aluminum and iron, especially when in aqueous forms and at elevated temperatures.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Hydrogen chloride, oxides of hydrogen, oxides of copper, and other toxic and/or hazardous gases due to thermal decomposition.



SAFETY DATA SHEET

SDS NUMBER: 000393-17-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 12/19/17

C-O-C-S 15 SULFUR 25

SUPERSEDES: 12/12/12

11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE

Eyes. Skin. Ingestion. Inhalation.

LC₅₀ (rat): 1.29 mg/L (4 HR).

LD₅₀ Oral (rat): 1,600 mg/kg (based on the active).

LD₅₀ Dermal (rat): > 2,000 mg/kg (based on the active)

Acute Toxicity Estimates: No data available.

Eye Irritation (rabbit): Serious irritant.

Skin Irritation (rabbit): Irritant.

Inhalation: Harmful if inhaled.

Ingestion: Harmful if swallowed.

Specific Target Organ Toxicity: No data available.

Aspiration: No data available.

Skin Sensitization (guinea pig): Not a sensitizer

Carcinogenicity: None listed.

Germ Cell Mutagenicity: No data available.

Interactive Effects: None known.

12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

The pesticide is toxic to fish and aquatic invertebrates.

Ecotoxicological Data

	Species	Test Results
Copper Oxychloride	Gambusia affinis	1.75 mg/L – 96-hour LC ₅₀
	Lepomis macrochirus	0.98 mg/L – 96-hour LC ₅₀
	Oncorhynchus mykiss	0.78 mg/L – 48-hour LC ₅₀

Drift or runoff may adversely affect non-target plants.

Do not apply directly to water.

Do not contaminate water when disposing of equipment wash water.

Do not apply when weather conditions favor drift from target area.

12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: No data available.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: No data available.

12.4 MOBILITY IN SOIL

No data available.

12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.

13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.



SAFETY DATA SHEET

SDS NUMBER: 000393-17-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 12/19/17

C-O-C-S 15 SULFUR 25

SUPERSEDES: 12/12/12

14 TRANSPORT INFORMATION

14.3 LAND TRANSPORT

DOT Shipping Description: NOT REGULATED.

U.S. Surface Freight Classification: INSECTICIDES OR FUNGICIDES, INSECT OR ANIMAL REPELLENTS, NOI, OTHER THAN POISON (NMFC 102120; CLASS: 60)

15 REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA

HMIS

1 Health

0 Least

1 Health

0 Flammability

1 Slight

0 Flammability

0 Instability

2 Moderate

0 Reactivity

3 High

B PPE

4 Severe

SARA Hazard Notification/Reporting

SARA Title III Hazard Category:

Immediate

Y

Fire

N

Sudden Release of Pressure

N

Delayed

N

Reactive

N

Reportable Quantity (RQ) under U.S. CERCLA: Not listed.

SARA, Title III, Section 313: Copper Compounds 50%.

RCRA Waste Code: Not applicable.

CA Proposition 65: Not applicable.

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

WARNING

Causes substantial but temporary eye injury.

Harmful if swallowed.

Harmful if absorbed through skin.

Do not get in eyes or on clothing.

Avoid contact with skin.

16 OTHER INFORMATION

SDS STATUS: Format revised.

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

C-O-C-S is a registered trademark of Loveland Products Inc.

Disclaimer and Limitation of Liability: This data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and LOVELAND PRODUCTS, INC. disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purpose.