

# S.T. Biologicals, Inc

## SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identity:** Instill-O

**Recommended use:** Fungicide and Bactericide  
**Restrictions on Use:** Use only as directed on the product label.

**Supplier:** S.T. Biologicals, Inc.  
P.O. Box 385370  
Minneapolis, MN 55438  
Telephone: +1 (952) 378-1157, 800-356-8733

**Emergency Phone:** For Chemical Emergency  
Spill, Leak, Fire, or Accident  
Call **CHEMTREC** Day or Night  
Within USA and Canada: 1-800-424-9300  
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

### 2. HAZARDS IDENTIFICATION

#### GHS Classification:

Physical:	Health:	Environmental
Not Hazardous	Eye Irritation Category 2A	Aquatic Toxicity Acute Category 1 Aquatic Toxicity Chronic Category 2

#### GHS Label Elements: WARNING!



#### Statements of Hazard

Causes serious eye irritation.  
Very toxic to aquatic life.  
Toxic to aquatic life with long lasting effects.

#### Prevention

Wash hands thoroughly after handling.  
Avoid release to the environment.  
Wear eye protection.

#### Response

IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.  
Collect spillage.

#### Disposal

Dispose of contents and container in accordance with local, regional, and national regulations.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount
Copper (II) Sulfate pentahydrate	7758-99-8	12.58%
Polyol	Proprietary	10-30%
Other Ingredients	Mixture	Balance

The exact percentage is a trade secret.

### 4. FIRST AID MEASURES

**Eye:** Flush victim's eyes with large quantities of water for at least 15 minutes, holding the eyelids apart. Remove contact lenses if present and easy to do after 5 minutes, then continue flushing. Get medical attention if irritation persists.

**Skin:** Wash skin with soap and water. Get medical attention if irritation persists.

**Ingestion:** Do not induce vomiting. If conscious, rinse mouth with water. Never give anything by mouth to an unconscious or convulsing person. Get medical attention.

**Inhalation:** Immediately move victim to fresh air. Get medical attention if irritation or symptoms develop.

**Most important Symptoms:** Causes eye irritation. May cause skin irritation. Inhalation of mists may cause respiratory irritation. Swallowing may cause irritation to the mouth and intestinal tract. Ingestion of copper sulfate may additionally cause irregular heartbeat, respiratory difficulty, metallic taste, gastrointestinal bleeding, liver and kidney failure.

**Indication of immediate medical attention/special treatment:** Immediate medical attention is generally not required,

## 5. FIRE FIGHTING MEASURES

**Suitable (and Unsuitable) Extinguishing Media:** Use any media that is suitable for the surrounding fire.

**Specific hazards arising from the chemical:** Not flammable or combustible. Thermal decomposition may produce copper fumes and oxides of carbon, sulfur and nitrogen.

**Special Protective Equipment and Precautions for Fire-Fighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water spray. Do not allow run-off from firefighting to enter drains or water courses.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Evacuate spill area and keep unprotected personnel away. Do not breathe mists. Avoid contact with eyes, skin and clothing. Wear appropriate protective clothing.

**Methods and Materials for Containment and Cleaning Up:** Contain and collect using inert absorbent materials and place in appropriate containers for disposal. Do not flush to sewer! Report releases as required by local, state and federal authorities. Contact your local pesticide, environmental control agency, or hazardous waste representative for advice.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Avoid contact with eyes, skin and clothing. Avoid breathing mists. Wear appropriate protective clothing and equipment. Use only with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use.

Do not cut, drill, grind or weld on or near containers, even empty containers. Do not reuse containers. Empty containers retain product residues which can be hazardous. Follow all SDS precautions when handling empty containers.

**Conditions for Safe Storage, Including Any Incompatibilities:** Do not contaminate water, food or feed by storage or disposal. Do not freeze. Store in original container. Store away from oxidizers and other incompatible materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines:

Copper (II) Sulfate (as copper)	1 mg/m <sup>3</sup> TWA OSHA PEL 1 mg/m <sup>3</sup> TWA ACGIH TLV
Polyol	5 mg/m <sup>3</sup> (respirable), 15 mg/m <sup>3</sup> (total) TWA OSHA PEL

**Engineering Controls:** Use with adequate general or local exhaust ventilation to maintain exposures below the occupational exposure limits.

**Personal Protective Equipment:** Refer to the product label for additional requirements for pesticide use.

**Respiratory Protection:** In operations where exposure levels are excessive, an approved respirator with dust/mist cartridges or supplied air respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

**Skin Protection:** Wear impervious gloves.

**Eye Protection:** Chemical safety goggles recommended.

**Other:** Impervious recommended where need to avoid skin contact and contamination of personal clothing. An eye wash should be available in the immediate work area.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance and Odor:** Dark green liquid.

<b>Physical State:</b> Liquid	<b>Odor Threshold:</b> Not Determined
<b>Vapor Density:</b> Same as water	<b>Initial Boiling Point/Range:</b> Not Determined
<b>Solubility in Water:</b> Soluble	<b>Vapor Pressure:</b> Same as water
<b>Relative Density:</b> Not Determined	<b>Evaporation Rate:</b> Same as water
<b>Melting/Freezing Point:</b> Not Determined	<b>pH:</b> Not Determined
<b>VOC Content:</b> Not Determined	<b>Octanol/Water Coefficient:</b> Not Determined
<b>Viscosity:</b> Not determined	<b>Decomposition Temperature:</b> Not determined
<b>Flashpoint:</b> None	<b>Flammability (solid, gas):</b> Not applicable
<b>Flammable Limits: LEL:</b> Not applicable <b>UEL:</b> Not applicable	<b>Autoignition Temperature:</b> Not applicable

## 10. STABILITY AND REACTIVITY

**Reactivity:** Not normally reactive

**Chemical Stability:** Stable under normal storage and handling conditions.

**Possibility of Hazardous Reactions:** Reaction with oxidizers may generate heat.

**Conditions to Avoid:** None known.

**Incompatible Materials:** Avoid oxidizing agents.

**Hazardous Decomposition Products:** Thermal decomposition yields oxides of nitrogen, carbon, copper and sulfur.

## 11. TOXICOLOGICAL INFORMATION

### HEALTH HAZARDS:

**Eye:** Contact may cause moderate irritation with redness, tearing and stinging. Moderate eye irritant in animal studies.

**Skin:** May cause skin irritation.

**Ingestion:** Swallowing may cause irritation to the mouth and intestinal tract. Ingestion of copper sulfate may additionally cause irregular heartbeat, respiratory difficulty, metallic taste, gastrointestinal bleeding, liver and kidney failure.

**Inhalation:** Inhalation of mists may cause mucous membrane and respiratory irritation and effects similar to ingestion.

**Chronic:** None known.

**Sensitization:** Components are not sensitizers.

**Carcinogenicity:** None of the components are listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, OSHA or the EU CLP.

**Germ Cell Mutagenicity:** Components are not germ cell mutagens.

**Reproductive Toxicity:** Components are not reproductive toxins.

**Numerical Measures of Toxicity:** Calculated Acute Toxicity Estimate (ATE) oral: 3846 mg/kg

Copper (II) Sulfate: Oral rat LD50 481 mg/kg

Polyol: Oral rat LD50 >5000 mg/kg

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity:

Copper (II) Sulfate – LC50 *Cyprinus carpio* – 810 ug/L/96 hr; LC50 freshwater trout – 190-210 ug/L/96 hr;

This product is classified as very toxic to the aquatic environment with long-term effects. Releases to the environment should be avoided.

**Persistence and Degradability:** Biodegradation does not apply to inorganic substances such as copper sulfate.

**Bioaccumulative Potential:** No data available.

**Mobility in Soil:** No data available.

**Other Adverse Effects:** No data available.

## 13. DISPOSAL CONSIDERATIONS

Pesticide wastes are acutely 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. Open dumping is prohibited.

## 14. TRANSPORT INFORMATION

**DOT Hazardous Materials Description:** This product is not regulated for transport in containers less than 79 lbs. For containers with 79 lbs or greater, the following shipping information applies:

**Proper Shipping Name:** Environmentally hazardous substance, liquid, n.o.s. (Copper (II) Sulfate), RQ

**UN Number:** UN3082

**Hazard Class/Packing Group:** 9, III

**Labels Required:** Class 9, Marine Pollutant

**IMDG Shipping Name:** Environmentally hazardous substance, liquid, n.o.s. (Copper (II) Sulfate)

**IMDG Hazard Class:** 9, III

**UN Number:** UN3082

**IMDG Hazard Labels Required:** Class 9, Marine Pollutant

**IATA Shipping Name:** Environmentally hazardous substance, liquid, n.o.s. (Copper (II) Sulfate)

**IATA Hazard Class:** 9, PG III

**UN Number:** UN3082

**IATA Hazard Labels Required:** Class 9, EHS Mark

## 15. REGULATORY INFORMATION

**CERCLA 103 Reportable Quantity:** This product has a Reportable Quantity (RQ) of 79 lbs. (based on the RQ for Copper (II) Sulfate of 10 lbs present at 12.58%). Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**Hazard Category for Section 311/312:** Refer to Section 2 for the OSHA Hazard Classification.

**Section 313 Toxic Chemicals:** This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

Copper (II) Sulfate	7758-98-7	12.58%
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**Section 302 Extremely Hazardous Substances (TPQ):** None

## 16. OTHER INFORMATION

**SDS Date of Preparation:** April 4, 20

### NOTICE

This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. S.T. Biologicals, Inc shall not be held liable for any damage resulting from handling or from contact with the above product. This information relates only to the product designated herein and does not relate to its use in combination with any other material or process.