



LABORATORIES

# SAFETY DATA SHEET

EMERGENCY CALL: 1-800-424-9300

## 1. IDENTIFICATION

**PRODUCT NAME:** Roebic K-77 Root Killer

**DESCRIPTION:** Kills roots in sewer and septic pipes.

**EPA Reg. No.:** 7792-1

### COMPANY IDENTIFICATION:

Roebic Laboratories

25 Connair Road, P.O. Box 927

Orange, CT 06477

Product Information: 203-795-1283

Fax: 203-795-5227

1-800-424-9300 Chemtrec (TOLL-FREE in USA/Canada)

[Custservice@roebic.com](mailto:Custservice@roebic.com)

## 2. HAZARD IDENTIFICATION

<u>Hazard Class</u>	<u>Hazard Category</u>
Acute toxicity, Oral	Category 4
Acute toxicity, Dermal	Category 5
Skin irritation	Category 2
Eye irritation	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

### Signal word:

Warning

### Hazard Statements:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H410 Very toxic to aquatic life with long lasting effects.

## Hazard pictograms:



### Precautionary Statements:

P273 Avoid release to the environment.

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

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

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

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

P330 Rinse mouth.

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.

P391 Collect spillage.

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

P270 Do not eat, drink or smoke when using this product.

P264 Wash skin thoroughly after handling.

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

### Emergency Overview:

Copper Sulfate Crystal is a blue crystalline odorless solid. Potentially fatal if swallowed. May cause irritation to the eyes and skin. Fire may produce irritating, corrosive and / or toxic fumes. Firefighters should use full protective equipment and clothing.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

CAS #	Component	Percent
7758-99-8	Copper (II) Sulfate Pentahydrate	> 99

**Synonyms:** Copper Sulfate Crystals, Blue Copper, Blue Stone, Blue Vitriol, Copper (II) sulfate, Cupric Sulfate, Copper Sulfate Fine 200, Fine 100, Fine 30, 20, 25, Small, Medium, Large, FCC IV, and Very High Purity

## 4. FIRST AID

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
If in eyes	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>

If swallowed	<ul style="list-style-type: none"> <li>• Call poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
If on skin or clothing	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
NOTE TO PHYSICIAN	
Probable mucosal damage may contraindicate the use of gastric lavage. For emergency assistance, please call toll free 1-800-424-9300.	

## 5. FIREFIGHTING MEASURES

### General Fire Hazards

Copper Sulfate Pentahydrate is not combustible, but may decompose in the heat of a fire to produce corrosive and/ or toxic fumes.

### Hazardous Combustion Products

Sulfur oxides and copper fumes.

### Extinguishing Media

Use methods for surrounding fire.

### Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self-contained breathing apparatus. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

## 6. ACCIDENTAL RELEASE MEASURES

### Evacuation Procedures

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering. Keep materials which can burn away from spilled material. In case of large spills, follow all facility emergency response procedures.

### Special Procedures

Remove soiled clothing and launder before reuse. Avoid all skin contact with the spilled material. Have emergency equipment readily available. Clean up spills immediately observing the precautions in Section 8 of this SDS. Control spill at the source and vacuum spill to avoid creating dust. Once all material is cleaned up and placed in disposal containers, seal the containers and arrange for disposal.

## 7. HANDLING AND STORAGE

Do not contaminate water, food, or feed by storage.

**Pesticide Storage:** Store in a dry place. Avoid storage near food or feed products. Keep away from Children.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

### General Product Information



Follow the applicable exposure limits.

### Component Exposure Limits

The exposure limits given are for Copper & Inorganic Compounds, as Cu (7440-50-8), Copper fume as Cu or Copper dusts and mists, as Cu.

ACGIH:	1 mg/m <sup>3</sup> TWA (dusts & mists) 0.2 mg/m <sup>3</sup> TWA (fume)
OSHA:	1 mg/m <sup>3</sup> TWA (dusts & mists) 0.1 mg/m <sup>3</sup> TWA (fume)
NIOSH:	1 mg/m <sup>3</sup> TWA (dusts & mists) 0.1 mg/m <sup>3</sup> TWA (fume)
DFG MAKs:	1 mg/m <sup>3</sup> TWA Peak, 2-MAK 15 minutes, average value, 1-hr interval (copper and inorganic copper compounds) 0.1 mg/m <sup>3</sup> TWA Peak, 2-MAK15 minutes, average value, 1-hr interval (fume)

### Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Copper (7440-50-8) and inorganic compounds, as Cu, Copper (7440-50-8) dusts and mists, as Cu and Copper fume, Cu.

### Engineering Controls

Use mechanical ventilation such as dilution and local exhaust. Use a corrosion-resistant ventilation system and exhaust directly to the outside. Supply ample air replacement. Provide dust collectors with explosion vents.

### Personal Protective Equipment

Eyes/Face: Wear safety glasses.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Solid.
<b>Appearance and Odor:</b>	Blue, odorless crystals.
<b>Vapor Pressure:</b>	No information available.
<b>Odor Threshold:</b>	Not applicable.
<b>Vapor density:</b>	No information available.
<b>pH:</b>	3.5 to 4.5 (at 50 g / l and 20 °C).
<b>Relative density:</b>	No information available.
<b>Melting Point:</b>	Not applicable.
<b>Solubility (H<sub>2</sub>O):</b>	317 g / l at 20 °C.
<b>Solvent solubility:</b>	Solvent methanol, glycerol and slightly soluble in ethanol.
<b>Initial boiling point and boiling range:</b>	Not applicable.
<b>Evaporation Rate:</b>	No information available.
<b>Flash point:</b>	Not applicable.
<b>Flammability:</b>	Product is not flammable.
<b>Upper / Lower Flammable or Explosive Limit:</b>	Not applicable.
<b>Partition coefficient n-octanol / water:</b>	No information available.
<b>Autoignition Temperature:</b>	No information available.

**Decomposition Temperature:** 88-245 °C  
Removing water from the crystallization  
340-650 °C  
**Viscosity:** No information available.

## 10. STABILITY AND REACTIVITY

### Chemical Stability

Copper Sulfate Pentahydrate is hygroscopic, but stable when kept dry, under normal temperature and pressures.

### Chemical Stability: Conditions to Avoid

Avoid high temperatures, exposure to air and incompatible materials.

### Incompatibility

Copper Sulfate causes hydroxylamine to ignite and the hydrated salt is vigorously reduced. Solutions of sodium hypobromite are decomposed by powerful catalytic action of cupric ions, even as impurities. Copper salts, including Copper Sulfate may react to form explosive acetylides when in contact with acetylene or nitromethane. Contact with reducing agents, can cause a vigorous reaction, especially in solution. This product can corrode aluminum, steel and iron. Copper Sulfate Pentahydrate is incompatible with magnesium, strong bases, alkalines, phosphates, acetylene, hydrazine, and zirconium.

### Hazardous Decomposition

Sulfur oxides and Copper oxides.

**Hazardous Polymerization Will not occur.**

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure:** Skin, Eye, and Ingestion

**Dermal LD<sub>50</sub>:** >5050 mg/kg (rabbit)

**Oral LD<sub>50</sub>:** 352 mg/kg (rat)

**Inhalation LC<sub>50</sub>:** N/A

**Primary Eye Irritation:** Irritant

**Primary Skin Irritation:** Irritant

**Carcinogenic:** Not listed by NTP, IARC, or OSHA.

Poisoning may affect the liver and/or kidneys and gastrointestinal tract. Persons with a history of chronic respiratory or skin disease may be at increased risk from exposure.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity:

Subacute Dietary LC<sub>50</sub>: >10,000 ppm (quail and duck)

96-hr Acute Toxicity LC<sub>50</sub>: 0.65 ppm (bluegill), 0.056 ppm (trout), 16 ppm (pink shrimp)

48-hr EC<sub>50</sub>: 54 ppb (eastern oysters)

48-hr LC<sub>50</sub>: 17 ppm (pink shrimp), 600 ppb (daphnia)

24-hr LC<sub>50</sub>: 6.9 ppm (blue crab), 600 ppb (daphnia)

**Bioaccumulation potential:** Not available.

### Persistence and degradability and Mobility in soil:

If released to soil, copper sulfate may leach to groundwater, be partly oxidized or bind to humic materials, clay or hydrous oxides of iron and manganese.

In water, it will bind to carbonates as well as humic materials, clay and hydrous oxides of iron and manganese. Copper is accumulated by plants and animals, but it does not appear to biomagnify from plants to animals.

In air, copper aerosols have a residence time of 2 to 10 days in an unpolluted atmosphere and 0.1 to greater than 4 days in polluted, urban areas.



## 13. DISPOSAL CONSIDERATIONS

**Do not contaminate water, food or feed by disposal.**

**Pesticide Disposal and Container Handling:** Nonrefillable container. Do not reuse or refill this container. **If empty:** Do not reuse this container. Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

## 14. TRANSPORT INFORMATION

**ALL MODES (Ground (49 C.F.R), Air (IATA), and Water (IMDG))**  
**UN 3077**

**Shipping name: Environmentally Hazardous Substance, solid, n.o.s. (Cupric sulfate)**

**Hazard Class: 9**

**Packing Group: III**

**Marine pollutant: Yes**

## 15. REGULATORY INFORMATION

### FIFRA –

This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label:

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER: Corrosive.** Causes irreversible eye damage. May be fatal if swallowed. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin. Wear safety glasses. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. For terrestrial uses, do not apply directly to water. Do not contaminate water when disposing of equipment washwaters or rinsate.

### Other US Federal Regulations

#### General Product Information

Copper Sulfate Pentahydrate (CAS # 7758-99-8) is listed as a Priority and Toxic Pollutant under the Clean Water Act.

**Component Analysis** This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4):

#### **Copper Compounds (7440-50-8)**

**SARA 313:** final RQ = 5000 pounds (2270 kg)

Note: No reporting of releases of this substance is required if the diameter of the pieces of the solid metal released is equal to or greater than 0.004 inches.

**Cupric Sulfate (7758-98-7)**  
CERCLA: final RQ = 10 pounds (4.54 kg)

**Sara 311/312 Tier II Hazard Ratings:**

Component	CAS #	Fire Hazard	Reactivity Hazard	Pressure Hazard	Immediate Health Hazard	Chronic Health Hazard
Copper Sulfate Pentahydrate	7758-99-8	No	No	No	Yes	Yes

**State Regulations:**

**CALIFORNIA PROP 65 STATUS**

Copper Sulfate Pentahydrate is not on the California Proposition 65 chemical lists.

**16. OTHER INFORMATION**

**NFPA Ratings: Health: 2 Fire: 0 Reactivity: 1 Other:**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**REFER TO THE PRODUCT LABEL FOR TERMS AND CONDITIONS OF USE**

**DISCLAIMER:**

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER WILL NOT BE LIABLE FOR ANY LOSS, INJURY OR DAMAGES AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, PURCHASERS AND/OR USERS OF THIS PRODUCT HEREBY WAIVE ANY STRICT LIABILITY. THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR THE PARTICULAR PURPOSE, AND THERE ARE NO OTHER IMPLIED WARRANTIES, EXCEPT AS SPECIFICALLY SET FORTH ON THE PRODUCT LABEL. MANUFACTURER'S OBLIGATION ON ANY CLAIM IS LIMITED TO REPLACEMENT OF ANY DEFECTIVE PACKAGE OF ROEBIC K-77 ROOT KILLER. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER WILL NOT BE LIABLE FOR ANY LOSS, INJURY OR DAMAGES TO PERSONS OR PROPERTY RESULTING FROM FAILURE OR IMPROPER USE OF THE PRODUCT, NOR WILL THE MANUFACTURER BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND SUSTAINED BY THE PURCHASER OR USER OF THIS PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, PURCHASERS AND/OR USERS OF THIS PRODUCT HEREBY WAIVE ANY STRICT LIABILITY OR PRODUCT LIABILITY CLAIM THEY MIGHT HAVE AGAINST THE MANUFACTURER AND/OR SELLER. SELLER AND MANUFACTURER ARE NOT LIABLE FOR ANY USE OF THIS PRODUCT NOT IN COMPLIANCE WITH THE DIRECTIONS ON THE PRODUCT LABEL.

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