

Material Safety Data Sheet

Transportation and Medical Emergency Phone: **1-800-535-5053 (INFOTRAC)**

General Phone: 317-580-8282

EPA Reg. Number: 67690-26

Creation Date: 03/08/2005

Revision Date: 03/07/2006

SpinOut* Root Growth Regulator

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: SpinOut* Root Growth Regulator

SUPPLIER IDENTIFICATION:

American Hydrotech, Inc.

303 East Ohio Street

Chicago, IL 60611

www.hydrotechusa.com

Phone: 312.337.4998

2. HAZARDOUS IDENTIFICATIONS

EMERGENCY OVERVIEW

Gray viscous liquid. Odor not determined.

- May cause mild irritation with possible reversible corneal opacification.
- Slightly to non-toxic orally, dermally, and by inhalation.

EMERGENCY PHONE NUMBER: 800-535-5053

3. COMPOSITION / INFORMATION ON INGREDIENTS

Copper Hydroxide	CAS# 20427-59-2	7.1%
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Components not precisely identified are proprietary or not hazardous.

4. FIRST AID MEASURES

EYES: Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice.

SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of soap and water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Have person sip a large glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably by mouth to mouth. Call a poison control center or doctor for further treatment advice.

NOTE TO PHYSICIAN: Treat symptomatically. Acute oral overexposure to copper hydroxide, a component of this product, may cause hypotension, hemolysis, and, rarely, methemoglobinemia. Severe intoxication is associated with serum copper levels greater than 500 mcg/dl. Copper hydroxide is an emetic, however, dilution with fluids, adsorption with activated charcoal, or lavage may be indicated. Chelation therapy with BAL or D-penicillamine has proved useful in cases of acute overexposure.

Unless extensive vomiting has occurred, empty the stomach by gastric lavage with water, milk, sodium bicarbonate solution of a 0.1% solution of potassium ferrocyanide. (Gosselin, **Clinical Toxicology of Commercial Products, 5th Ed.**) Administration of gastric lavage should be performed only by qualified medical personnel. Probable mucosal damage may contraindicate use of gastric lavage.

5. FIRE FIGHTING MEASURES

FLASH POINT: Not determined

METHOD USED: Not determined

FLAMMABLE LIMITS:

LFL: Not determined

UFL: Not determined

AUTO-IGNITION TEMPERATURE: Not determined

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide, water spray, or foam.

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard when exposed to heat or flame. Product will not burn but may splatter if temperature exceeds boiling point.

FIRE FIGHTING EQUIPMENT/INSTRUCTIONS: Wear self-contained breathing apparatus and full protective gear. Prevent human exposure to fire, smoke, fumes or products of combustion.

HAZARDOUS COMBUSTION PRODUCTS: Dried solids can burn giving off oxides of carbon.

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6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS AND LEAKS:

LAND SPILL: Cover spill with absorbent material such as a sweeping compound or clay. Sweep up and place in suitable (fiberboard) container for later disposal.

WATER SPILL: If feasible, copper may be precipitated / ultrafiltrated with caustics or other chemicals and resulting sludge disposed of in a chemical landfill.

Report large spills to INFOTRAC and consult SePRO Corporation for assistance.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Do not store near food or feed. Store in a clean, dry area at a temperature above 32° F. Do not store in containers that have aluminum or brass fittings. Average shelf life under proper storage conditions is 2 years.

Keep out of reach of children.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

EXPOSURE GUIDELINES:

Copper Hydroxide[†]: ACGIH TLV = 1 mg/m³, OSHA PEL = 1 mg/m³.

[†]As copper dusts or mists (CAS # 7440-50-8).

APPLICATORS AND ALL OTHER HANDLERS: Refer to the product label and Directions for Use for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

VENTILATION: Control enclosed spaces with adequate ventilation to prevent exceeding of ACGIH TLV or OSHA PEL.

RESPIRATORY PROTECTION: In enclosed spaces where the TLV or PEL may be exceeded, wear NIOSH/OSHA approved dust or mist respirator.

EYE/FACE PROTECTION: Wear safety glasses to prevent contact with this substance.

SKIN PROTECTION: Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves, shoes plus socks.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Viscous liquid

COLOR: Gray

ODOR: Not determined

VAPOR PRESSURE: Not determined

DENSITY: 1.47 g/mL

SOLUBILITY IN WATER (20° C): Dilutable aqueous suspension.

pH: 9.4

BOILING POINT: Not determined

MELTING POINT: Not determined

10. STABILITY AND REACTIVITY

STABILITY: This material is stable under normal conditions.

INCOMPATIBILITY (specific materials/conditions to avoid): Not determined

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposes to Cupric Oxide (CuO) and water (H₂O) above 140° C.

HAZARDOUS POLYMERIZATION: Material not known to polymerize.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS: This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

NOTE: Copper hydroxide, which comprises 7.1% of this product, governs the toxicity of the product. The remaining components have low to negligible toxicity.

Special Health Effects: Copper-intolerant individuals should not be exposed to this material. No additional information is available on whether overexposure to this material would aggravate other existing special medical conditions.

INHALATION: Slightly toxic by inhalation. May cause irritation of the mucous membranes. Excessive exposure to copper fumes may result in cough, metallic taste, mucous production, shortness of breath, nausea, vomiting, and reflecting metal fume fever with chills, fever, aching muscles, dry throat and headache. May also result in irritation of the upper respiratory tract which, if severe, may lead to perforation of the nasal septum after long periods of exposure. Chronic cough may also occur. Acute inhalation LC₅₀ > 2.94 mg/L (rat - 4 hour mist).

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SKIN: Slight skin irritant. Primary dermal irritation tests in rabbits indicate slight irritation potential for this product. Many copper salts cause itching, eczema and, rarely, sensitization reactions in previously exposed persons. Material is not considered to be a contact skin sensitizer; however, repeated exposure may cause allergic contact dermatitis. Acute dermal LD₅₀ > 2,000 mg/kg. This product is slightly toxic by dermal exposure.

EYES: May cause mild irritation with possible reversible corneal opacification. Considered to be a mild irritant to the eyes of a rabbit.

INGESTION: Slightly toxic by oral exposure. Repeated ingestion or ingestion of large doses of copper salts may result progressively in irritation of the gastrointestinal tract, nausea, vomiting, salivation, anemia, gastric pain, hemorrhagic gastritis, diarrhea, capillary damage, liver and kidney damage, and central nervous system stimulation followed by depression. Jaundice, pain in the liver, and hemolytic anemia have been reported following acute human poisonings. Oral LD₅₀ > 5,000 mg/kg.

12. ECOLOGICAL INFORMATION

CHEMICAL FATE: The degree of mobility of copper in the environment depends upon the pH of ambient soils and waters. The higher the acidity, the more soluble copper salts are and, hence, the more mobile. Partitioning of copper into air is negligible due to the low vapor pressure of copper salts.

ECOTOXICOLOGY (Copper Hydroxide)

Test Type	Species	Value
Aquatic LC ₅₀	Bluegill	180,000 ppb
Aquatic LC ₅₀ (96 hr)	Fathead Minnow	23 ppb
Aquatic LC ₅₀	Rainbow Trout	23 ppb
Aquatic EC ₅₀	<i>Daphnia magna</i>	6.5 ppb
Avian - acute oral LD ₅₀	Bobwhite Quail	>340 mg/kg
Avian - 8-day dietary LD ₅₀	Bobwhite Quail	>10,000 ppm
Avian - 8-day dietary LD ₅₀	Mallard Duck	>10,000 ppm

13. DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL: Wastes resulting from the use of this product may be disposed of on site per label use directions or at an approved waste disposal facility. Follow all local, state, and federal requirements for disposal.

CONTAINER DISPOSAL: Triple rinse (or equivalent) the container. Then dispose of in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Do not flush to surface water or sanitary sewer system.

14. TRANSPORT INFORMATION

Department of Transportation (DOT)	Not Regulated
International Air Transport Association (IATA)	Not Regulated
International Maritime Organization (IMO)	Not Regulated
European transports (ADR)	Regulated†

***Note:** If regulated,
Proper Shipping Name: Environmentally Hazardous Substance
Class: Liquid, n.o.s. (Cupric Hydroxide)
Identification No.: 9
Packing Group: UN 3082
Special Notes: III
MARINE POLLUTANT

For additional shipping information contact SePRO Corporation at 317-580-8282 and speak with the Logistics Manager.

15. REGULATORY INFORMATION

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

U.S. REGULATIONS

SARA TITLE III, SECTION 313: This product contains the following substance(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Chemical Name	CAS Number	Concentration
Metallic copper†	7440-50-8	above de minimis
†From Copper hydroxide)		

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SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An Immediate Health Hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product component(s) are cited on the hazardous substance list(s) in the states indicated below. Non-listed components may be shown in the composition section of the MSDS.

Chemical Name	CAS Number
Metallic copper†	7440-50-8

(†From Copper hydroxide)

- New Jersey – listed as copper on the New Jersey Environmental Hazardous Substances list (NJ Department of Environmental Protection, Title 7 New Jersey Administrative Code (NJAC) Chapter 1G.
- Massachusetts – listed as copper (CAS# 7440-50-8) and copper-based pesticide, solid, toxic (no CAS# assigned).
- Pennsylvania – listed as copper fume or dust (CAS# 7440-50-8) as an environmental hazard.
- Rhode Island

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 701) and HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS): (4=Extreme; 3=High; 2=Moderate; 0=Insignificant)

Category	Rating
Health	1
Flammability	1
Reactivity	0

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT

(CERCLA, OR SUPERFUND): Releases of this material to air, land, or water are reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) only for copper (CAS No. 7440-50-8) which is 5000 pounds. No reportable quantities

found for copper-containing pesticide (CAS No. 10290-12-7) or copper hydroxide (CAS No. 20427-59-2). No reportable quantities found for other components of this product.

RESOURCE CONSERVATION AND RECOVERY ACT

(RCRA): To the best of our knowledge, this product does not meet the characteristic definition of ignitability, corrosivity or reactivity and is not listed in 40 CFR 261.33.

16. OTHER INFORMATION, USES AND RESTRICTIONS

MSDS STATUS: New – 03/08/05
Revised – 03/07/06: All Sections

The information in this Material Safety Data Sheet relates to this specific material. It may not be valid for this material if used in combination with any other materials or in any process. It is the users' responsibility to satisfy themselves as to the suitability and completeness of this information for their own particular use.

The Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult SePRO Corporation for Further Information.