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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

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Date: December 9, 1981

Subject: EPA Registration Number: 32460-1
Swim Free Algaecide

From: Deloris F. Graham
PHB/TSS

To: Richard Mountfort
Product Manager (23)

Applicant: Hydrology Laboratories, Inc.
P. O. Box 714
Smithtown, NY 11787

Active Ingredient:
Copper as elemental 7.1%
Inert Ingredients 92.9%

Background: Acute Oral, Acute Dermal, Acute Inhalation, Eye Irritation and Skin Corrosivity studies. Studies conducted by BioSafe Systems, Inc. Accession number 246213. Alternate method of support.

Recommendation:

(1) FHB/TSS finds these studies acceptable to support conditional registration of this product. However, in the Skin Corrosivity study, intact and abraded skin sites must be used and readings made at 24 and 72 hours.

(2) The appropriate signal word is "CAUTION."

Label:

(1) The precautionary statements must precede "Directions For Use."

(2) The precautionary statements must be revised to read:

Causes eye injury. Harmful if swallowed or absorbed through skin. If in eyes, flush with plenty of water. Get medical attention if irritation persists. If swallowed, drink 1 or 2 glasses of water, induce vomiting by placing fingers in back of throat and see a doctor. Never give anything by mouth to an unconscious person. If on skin, wash with plenty of soap and water. Get medical attention if irritation persists.

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(3) Under the heading "ENVIRONMENTAL HAZARDS," the following statement must appear:

> This product is toxic to fish. Treated effluent should not be discharged where it will drain into lakes, streams, ponds or public water.

(4) The referral statement must be revised to read "See additional precautionary statements on side of panel."

(5) Please see enclosed copy of labeling procedures and format.

Review

(1) Acute Oral Toxicity Study: BioSafe Systems, Inc.; Study #202; November 20, 1980.

Procedure: Five groups, consisting of 5M and 5F Spague-Dawley rats weighing between 200 and 300g, received one of the following doses: 1.25, 2.5, 3.0, 5.3 and 6.2g/kg. Observations were made twice daily for 14 day. Necropsies were performed on all animals.

Results: At 1.25 g/kg, 1/5 F died; at 2.5 g/kg, 1/5 M and 2/5 F died; at 3 g/kg, 3/5 M and 4/5 F died; at 5.3 g/kg, 3/5 M and 5/5 F; at 6.2 g/kg, 2/5 M and 5/5 F died.

All animals showed signs of toxicity referrable to central nervous system involvement.

Necropsy revealed stomach and intestines filled with green fluid; red focus on left lobe of lung; intestines flaccid, diarrhea, green fluid in GI tract; green anal discharge; stomach and intestines filled with blue liquid.

LD50 for males was ~~3.4~~ 3.11 g/kg with 95% confidence limits between 2.55 and 5.38 g/kg. LD50 for females was 2.14 g/kg with 95% confidence limits between 1.38 and 3.31 g/kg.

Study Classification: Core Guideline Data

Toxicity Category: III-CAUTION

(2) Acute Dermal Toxicity Study: BioSafe Systems, Inc.; Study #203; November 4, 1980.

Procedure: Five M and 5F New Zealand white rabbits received 2 g/kg of the test material at abraded skin sites under occlusive wrap for 24-hour exposure. Observations made frequently on the 1st day after exposure, then twice daily for 13 more days. Necropsy performed on all animals.

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Results: No mortalities. All rabbits had ulcerations and necrosis at and around the abrasion lines. No other signs of toxicity. No gross abnormalities at necropsy. LD50 greater than 2 g/kg.

Study Classification: Core Guideline Data.

Toxicity Category: III-CAUTION

(3) Acute Inhalation Toxicity Study: BioSafe Systems, Inc.; Study #205; November 7, 1980.

Procedure: Five M and 5F Sprague-Dawley rats weighing between 200 and 300 g were placed into a whole body inhalation exposure chamber, equilibrated to provide a dose of 5 mg/L of the test substance. After a 4-hour exposure period, animals were returned to their cages and observed frequently on 1st day, then twice daily for 13 more days. Necropsy performed on all animals.

Test apparatus included a 173.4L plexiglass chamber with wire mesh suspended floor. Test substance was pumped from flask via Buchler peristaltic pump set at 2 ml/minute. Air pump input set at 10L/minute as metered by airflow meter. Actual volume consumed in 4 hours was measured. Particle size was measured by light scattering and direct reading using a Bausch and Lomb Aerosal Counter 40-1A. Vapor pressure continuously determined via chamber port directly to U tube manometer reading in mm water.

Results: Airflow, 10L/min.; temperature, 79°F; humidity, 85; vapor pressure, (-0.15); median particle size, 1.6 (0.3-10.01); nominal concentration, 50.4 mg/min.; actual concentration, 5 mg/L. No mortalities. No signs of toxicity. No gross abnormalities at necropsy. LC50 greater than 5 mg/L.

Study Classification: Core Guideline Data.

Toxicity Category: IV-CAUTION

(4) Eye Irritation Study: BioSafe Systems, Inc.; Study #208, October 28, 1980.

Procedure: Nine New Zealand rabbits received 0.1 ml of test substance in one eye each. The eyes of 3 of the rabbits were washed for one minute, 30 seconds after treatment. Observations were made at 24, 48, 72 hours and at 4 and 7 days.

Results: No corneal opacity or iris irritation in washed or unwashed group. At day 1, 6/6 of the unwashed group had conjunctive redness (5/6=1, 1/6=2); 5/6 chemosis (5/6=1); 6/6 discharge (6/6=2). All irritation clear by day 7. No conjunctive irritation in washed group.

Study Classification: Core Guideline Data.

Toxicity Category: III-CAUTION.

(5) Skin Corrosivity Study: BioSafe Systems, Inc.; Study #311; December 18, 1980.

Procedure: Six New Zealand white rabbits received 0.5 ml of the test substance at intact skin sites under occlusive wrap for 24-hour exposure. Observations made at 4, 24 and 48 hours.

Results: At 4 hours, mild erythema in 1/6 animals. At 24 hours, 1/6 mild erythema and edema and 1/6 moderate erythema. At 48 hours, 2/6 mild erythema.

Study Classification: Core Minimum Data. Four skin sites (2 abraded and 2 intact) must be used. Observations must be made at 24 and 72 hours.

Toxicity Category: III-CAUTION.

DIRECTIONS FOR USE

Swim Free is concentrated. Consult the chart below for the correct dosage. Mix the correct amount of Swim Free with 1 gallon of water and distribute around the edge of the pool. Apply initial treatment dosage to a freshly filled pool or at first visible signs of algae. Thereafter apply maintenance dose once every 2 weeks.

Rinse empty container thoroughly with water and discard it.

SWIMMING POOL DOSAGE

Pool Capacity Gallons	Initial Dosage Swim Free	Maintenance Dosage Swim Free
5,000	2 ounces	1 ounce
10,000	4 ounces	2 ounces
15,000	6 ounces	3 ounces
20,000	8 ounces	4 ounces
25,000	10 ounces	5 ounces
30,000	12 ounces	6 ounces
35,000	14 ounces	7 ounces
40,000	16 ounces	8 ounces
45,000	18 ounces	9 ounces
50,000	20 ounces	10 ounces

E.P.A. REG. NO. 32460-1

E.P.A. Est. 32460-NY-1

Swim Free™

ALGAECIDE

for SWIMMING POOLS

ACTIVE INGREDIENTS:
Copper as elemental 7.1%
INERT INGREDIENTS: 92.9%

Swim Free contains 0.76 lbs. of elemental copper per gallon from Copper Triethanolamine Complex.

CAUTION

KEEP OUT OF REACH OF CHILDREN
See additional warning on side panel.

NET CONTENTS 1 QT. (32 FL. OZ.)

Manufactured by
HYDROLOGY LABORATORIES, INC.
Smithtown, N.Y. 11787

Swim Free is especially made to control algae growth in all types of swimming pools. Water treated with Swim Free can be used immediately—NO WAITING. Its long lasting action controls existing algae and maintenance dosages control algae regrowth. Swim Free will not cause the water to foam and will not alter the pH or chlorine of the water.

CAUTION

Swim Free may cause skin damage. Avoid getting on skin, eyes, or clothing. In case of contact, wash thoroughly with water. For eye contact—wash thoroughly with water and seek medical attention. If taken internally, seek immediate medical attention.

NOTICE

This product is toxic to fish. Treated effluent should not be discharged where it will drain into lakes, streams, ponds, or public water. Apply this product only as specified on this label.

Seller's guarantee shall be limited to the terms of the label, and subject thereto, the buyer assumes any risk to persons or property arising out of use or handling, and accepts the product on these conditions.

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