



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

006177

MEMORANDUM

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MAY 01 1986

SUBJECT: EPA File Symbol 53707-R
Supercide

FROM: Deloris F. Graham *098 5113185*
Technical Support Section
Fungicide-Herbicide Branch
Registration Division (TS-767C) *E-113185*

TO: Henry M. Jacoby, PM 21
Fungicide-Herbicide Branch
Registration Division (TS-767C)

Applicant: Excalibur, Inc.
P.O. Box 1178
Scarborough, ME 04074

Active Ingredient:

Zinc 2-pyridinethiol 3.0%

Inert Ingredients: 97.0%

Background:

Submitted Acute Inhalation, Eye Irritation, Primary Dermal Irritation, and Acute Oral Studies. Studies conducted by Leberco Testing Inc. Method of support not indicated. Data under Accession Number 250075.

Recommendation:

1. FHB/TSS finds all data except Acute Inhalation acceptable to support conditional registration of this product. In the Acute Inhalation Study actual measured concentration must be submitted. For future submissions please note, in the Acute Oral Study LD50 and 95 percent confidence limits for males and females individually must be submitted.
2. Acute Dermal and Dermal Sensitization Studies were not submitted and these studies must be submitted or data to support waiver.

File

3. Based on the Eye Irritation Study the appropriate signal word is DANGER.

Label:

1. The signal word DANGER must appear on center front panel of label.
2. Precautionary statements must be revised to include "DANGER. Causes irreversible eye damage. If in eyes flush with plenty of water and seek immediate medical attention."
3. Upon submission of acute inhalation data, acute dermal study, and dermal sensitization study, additional precautionary labeling may be necessary.

Review:

- (1) Acute Inhalation Toxicity Study: Leberco Laboratories, Assay No. 41692; July 6, 1984.

Procedure:

Five male and five female rats were exposed to 40.83 g of a 33 percent dilution of the test material aerosolized over a 4-hour period at an airflow of 10 liters per minute which resulted in a sample concentration of 5.6 mg per liter. Observations made for 14 days postexposure. Necropsy performed on all animals.

Results:

No mortalities or toxic signs reported. One animal with slightly hemorrhagic lungs at necropsy reported. LC₅₀ reported to be greater than 5.6 mg/L.

Study Classification:

Core Supplementary Data. Actual measured concentration must be submitted.

- (2) Eye Irritation Study: Leberco Testing, Inc.; Assay No. 41691; April 16, 1984.

Procedure:

Nine rabbits received 100 mg of the test material in one eye each. The treated eyes of three of the rabbits were washed with lukewarm water for 1 minute 20 to 30 seconds after treatment. Observations were made for 21 days posttreatment.

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Results:

At day 1, 6/6 animals of the unwashed group (6/6 = 60) and 1/3 of the washed group (1/3 = 20) had corneal opacity, iris irritation (6/6 = 10) (1/3 = 5); 6/6 + 3/3 conjunctive redness (6/6 = 3) (2/3 = 2, 1/3 = 3), chemosis (1/6 = 3, 5/6 = 4) (2/3 = 2, 1/3 = 4) and discharge (6/6 = 3) (1/3 = 2, 2/3 = 3).

At day 7, 6/6 + 1/3 corneal opacity (5/6 = 60, 1/6 = 80) (1/3 = 5); 6/6 iris irritation (6/6 = 10); 6/6 + 1/3 redness (5/6 = 2, 1/6 = 3) (1/3 = 1); 6/6 chemosis (5/6 = 2, 1/6 = 3) and discharge (3/6 = 2, 3/6 = 3).

At day 21, 6/6 corneal opacity (2/6 = 40, 4/6 = 80), iris irritation (1/6 = 5, 5/6 = 10), redness (6/6 = 1); 4/6 chemosis (2/6 = 1, 2/6 = 2) and discharge (2/6 = 1, 2/6 = 2).

Study Classification: Core Guideline Data.

Toxicity Category: I - DANGER.

(3) Primary Skin Irritation Study: Leberco Testing, Inc.; Assay No. 41690; March 27, 1984.

Procedure:

Six rabbits with two abraded and two intact skin sites on backs were treated with 0.5 g of the test material under occlusive wrap for 24-hour exposure period. Backs were reported to have been moistened with water prior to application of test material. Observations made immediately after wrappings were removed, then on 1, 3, and 6 days after treatment.

Results:

At day 1, 5/6 animals had slight erythema at intact and abraded skin sites (scores of 1). At day 3, 1/6 had slight erythema at intact and abraded skin sites (scores of 1) and 2/6 had slight erythema at abraded sites only (scores of 1). Irritation had cleared by day 6.

Study Classification: Core Guideline Data.

Toxicity Category: IV - CAUTION.

(4) Acute Oral Toxicity Study: Leberco Testing, Inc.; Assay No. 41689; June 22, 1984.

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Procedure:

Four groups consisting of five male and five female rats each were dosed with one of the following doses of test material: 4.0, 5.0, 6.0, or 6.5 g/kg. Observations made for 14 days posttreatment. Necropsy reported to have been performed if autolysis had not occurred.

Results:

At 4.0 g/kg, 1/5 F died; at 5.0 g/kg, 3/5 M and 3/5 F died; at 6.0 g/kg, 3/5 M and 4/5 F died; at 6.5 g/kg, 5/5 M and 4/5 F died. Toxic signs reported included lethargy, diarrhea, eating and drinking stopped. No necropsy report submitted. LD₅₀ for males and females combined reported to be 5.2 g/kg with 95 percent confidence limits between 4.5 and 6.0 g/kg.

Study Classification:

Core Minimum Data. LD₅₀ and 95 percent confidence limits for males and females individually must be submitted.

Toxicity Category: IV - CAUTION.

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Front Panel

SUPERCIDE

A Bacteriostatic and Fungistatic/Heat Stabilizer
Formulation Designed to Help Protect Polymer Systems
such as Flexible Polyvinyl Chloride from Embrittlement
and Staining Caused by Microbiological Growth

Active Ingredient:

Zinc 2-pyridinethiol 1-oxide 3.0%

Inert Ingredients: 97.0%

Weight per Gallon 8.91 lbs.

WARNING

(18 pt)

Keep Out of Reach of Children

(12 pt)

See Other Precautionary Statements on Side Panel

EPA Reg. No. _____

EPA Est. No. _____

Net Contents: 450 lbs.

Excalibur Inc.
Scarborough, ME 04074

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Left Side Panel

006177

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS (AND
DOMESTIC ANIMALS)

WARNING

(16 pt)

May be harmful if swallowed. Causes severe eye irritation.
Do not get in eyes, on skin or on clothing.

First Aid: If swallowed, drink plenty of water.

If in eyes; wash eyes with plenty of water for
15 minutes. Seek medical attention.

If on skin, wash thoroughly with soap and water.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not add directly to water.
Do not contaminate water by cleaning of equipment or disposal
of wastes.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a
manner inconsistent with its labeling.

STORAGE AND DISPOSAL

(12 pt)

Do not contaminate water, food, or feed by storage or disposal.
Wastes resulting from the use of this product may be disposed
of on site or at an approved waste disposal facility.

Container Disposal: Triple rinse (or equivalent). Then offer
for recycling or reconditioning, or puncture and dispose of in
a sanitary landfill, or by other procedures approved by state
and local authorities.

Recommended Levels of Use:

Most flexible PVC systems will not require the addition of a
heat stabilizer beyond that provided by Supercide.

A level of 2% Supercide, based on the total weight of plastic, will give excellent control against bacteria and mold organisms on vinyls used indoors such as shower curtains, wall coverings or vinyl sheeting.

A level of 4% Supercide should be considered for vinyls that will be used outdoors. These include vinyl tarpaulins, awnings, siding, tents, stadium cushions and swimming pool liners.

Supercide should be added to the system at the same time as other resin additives are added in the initial stages of processing.