UNITE STATES ENVIRONMENTAL PROTE TION AGENCY

TOX

(34)

2,4-D/TOX

316

Releasable

DATE: June 6, 1980

SUBJECT: Reed Brush Killer
EPA File Symbol: 17058-E

FROM: Sherell A. Sterling 6-13-80
FHB/TSS

TO: James Stone
Product Manager, Acting (23)

Applicant: Reed Manufacturing and Supply Co.
300 South Third Street
Kansas City, Kansas 66118

Active Ingredients:

Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid	24.6%
Dimethylamine salt of 2-(2-methyl-4-chlorophenoxy) propionic acid	24.7%
Dimethylamine salt of Dicamba	6.18%
Inert Ingredients	44.52%

Background: This submission included Acute Oral, Acute Dermal, Primary Dermal and Eye Irritation studies. These studies were conducted by Hill Top Research, Inc. of Miamiville, Ohio and are in Accession Number 240898. Each study was conducted on the formulation "823" produced by PBI/Gordon Corporation. PBI/Gordon submitted a letter on May 13, 1980 which states that the acute toxicity tests were conducted using the 17058-E formulation; therefore, "823" is the same as Reed Brush Killer. The "alternate" method of support has been chosen to support the conditional registration of this product.

Recommendations:

1. Based on the Eye Irritation study, the appropriate signal word for this product is DANGER.

2. The Acute Oral, Acute Dermal, Eye and Skin Irritation studies are considered adequate and acceptable for the conditional registration of this product.

3. An Acute Inhalation study was not submitted in support of this registration. Under the alternate method of support, data must be available on this exact formulation.

4. FHB/TSS has no objection to the conditional registration of this product provided that an acceptable Acute Inhalation study is submitted and the following labeling revisions are made.

5. A copy of the "Proposed Guidelines for Human Hazard Evaluation" has been enclosed. Please see §163.81-3 for acceptable testing and reporting procedures for the Acute Inhalation test.

Labeling Recommendations:

1. The signal word must be changed to DANGER on both the front and side panels.

2. The precautionary statements under the subheading "Hazards to Humans and Domestic Animals" must be changed to the following or a similar statement:

> "DANGER. Corrosive, causes eye damage. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling. If eye exposure occurs, get immediate medical attention. Harmful or fatal if swallowed. Avoid breathing vapors."

3. Please note that additional revisions may be necessary when the Acute Inhalation study is submitted.

Review:

1. Acute Oral Administration - Rats; July 19, 1979; Accession Number 240898.

   Procedure: Groups of 5M (212 - 251 g) and 5F (175 - 205 g) Sprague-Dawley rats received oral dosages at levels of 0.5, 1.0, 2.0, 4.0 and 8.0 g/kg of "823." Animals were observed for 14 days, survivors were sacrificed, and all animals were subjected to gross pathological examinations.

Results: No deaths at 0.5 g/kg. At 1.0 g/kg, 2/5 M and 2/5F died. At 2.0 g/kg, 3/5 M and 4/5 F died. At 4.0 g/kg and 8.0 g/kg, all animals died. Symptoms included diarrhea, depression, comotose appearance, labored respiration. Necropsy of survivors showed small quantity of stored fat in 2M, 6F rats; these rats had least weight gains over 2-week observation period. Animals which died during study showed congestion in lungs, adrenals and kidneys; hemorrhagic areas in stomach and intestines; autolysis; mottled and pale liver. LD_{50} for M was 1.41 g/kg with a 95% confidence range of 0.87 - 2.29 g/kg. LD_{50} for F was 1.23 g/kg with a 95% confidence range of 0.79 - 1.91 g/kg.

Study Classification: Core Guideline Data.

Toxicity Category: III - CAUTION.

2. Acute Dermal Toxicity - Rabbits; July 19, 1979; Accession Number 240898.

Procedure: 5M, 5F (2352 - 2948 g) New Zealand white rabbits with abraded skin received an application of 2 g/kg of "823" with 24 hours occluded exposure. Animals were observed for 14 days post-treatment, sacrificed and subjected to necropsies.

Results: No mortalities. Symptoms included erythema, desquamation, coriaceousness, edema, atonia; no systemic effects were observed. At necropsy 1/10 showed "pitted" kidneys.

Study Classification: Core Guideline Data.

Toxicity Category: III - CAUTION.

3. Acute Eye Irritation - Rabbits; July 17, 1979; Accession Number 240898.

Procedure: 0.1 ml of "823" was applied into one eye of each of 9 New Zealand white rabbits. Three rabbits had the treated eye flushed with lukewarm tap water, 30 seconds post treatment, for 60 seconds. Draize scoring at 24, 48, 72 hours and 4, 7, 10, 13, 16, 19 and 21 days.

Results: Corneal opacity exhibited in 8/9 through day 21. Erythema, edema and discharge observed in all animals through day 7. Other symptoms included blisters under eyelid (9/9), vascularization (8/9), loss of hair around eyes (5/9), animal vocalized at application (4/9), conjunctivae closing in [illegible] around eye (1/9). Eye irritation, permanent damage, more pronounced in eyes which had been washed.

Study Classification: Core Guideline Data.

Toxicity Category: I - DANGER.

4. Primary Dermal Irritation - Rabbits; July 17, 1979; Accession Number 240898.

Procedure: 0.5 ml of "823" was applied to each of 4 sites (2 abraded, 2 intact) on each of 6 rabbits. Exposure was for 24 hours under occlusive wrap. Scoring at 24, 72 hours and daily from day 4 through day 11.

Results: At 24 hours, all sites showed slight to moderate erythema and edema, necrosis on one spot due to clipping cut. At 72 hours, erythema exhibited in 23/24, edema in 2/24. By day 7, all animals appeared normal except animal with clipper cut. Primary Irritation Index was 2.67.

Study Classification: Core Guideline Data.

Toxicity Category: III - CAUTION.

REED BRUSH KILLER

KILLS:
Ash
Aspen
Brambles
Kudzu
Oak
Willows
and many other species of weeds & brush.

Contains: 2,4-D, Mecoprop and Dicamba

ACTIVE INGREDIENTS:

*Dimethylamine Salt of 2,4-Dichloro-phenoxyacetic acid.....	24.60%
**Dimethylamine Salt of 2-(2-methyl-4-chlorophenoxy) propionic acid.....	24.70%
***Dimethylamine Salt of Dicamba (3,6-dichloro-o-anisic acid).....	6.18%
INERT INGREDIENTS.....	44.52%
Total	100.00%

This Product Contains:
*2.0 lbs. 2,4-Dichlorophenoxyacetic acid per gallon or 20.40%.
**2.0 lbs. 2-(2-methyl-4-chlorophenoxy) propionic acid per gallon or 20.40%.
***0.5 lbs. 3,6-dichloro-o-anisic acid per gallon or 5.13%.

KEEP OUT OF REACH OF CHILDREN

CAUTION

Statement of Practical Treatment

In case of contact wash skin with plenty of soap and water. For eyes, flush with water for 15 minutes and get medical attention.

See side panel for additional precautionary statements.

NET CONTENTS ONE U.S. GALLON

READ THE ENTIRE LABEL FIRST. OBSERVE ALL CAUTIONS AND FOLLOW DIRECTIONS CAREFULLY.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS & DOMESTIC ANIMALS: CAUTION—Harmful if swallowed. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly after handling

ENVIRONMENTAL HAZARD:
Keep out of lakes, streams, or ponds. Do not apply when weather conditions favor drift from target area.

DIRECTIONS FOR USE
It is a violation of federal law to use this product in a manner inconsistent with its labeling

STORAGE & DISPOSAL:
Prohibitions—Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. Do not store near other pesticides or seeds.

Pesticide Disposal—Pesticide, spray, mixture, or rinsate that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides or buried in a safe place away from water supplies.

Container Disposal—Triple rinse (or equivalent) and offer for recycling, reconditioning, or disposal in approved landfill, or bury in a safe place

General—Consult federal, state, or local disposal authorities for approved alternative procedures

Other Use Precautions:
Avoid drift of spray mist to vegetables, flowers, ornamental plants, shrubs, trees, and other desirable plants. Do not pour spray solution near these plants. Do not apply to areas underlaid by roots of desirable trees and shrubs. Coarse sprays are less likely to drift away from target area. Clover present will be damaged if sprayed. Do not contaminate domestic or irrigation water.

(Continued on right side panel)

GENERAL WEED AND BRUSH CONTROL: For control of brush and broadleaf weeds along roads, rights-of-ways, irrigation and drainage ditch banks, and other similar non-crop areas, mix 4 to 8 gallons in sufficient water to obtain adequate coverage of 1 acre of brush. Use higher rates for larger or more dense stands. Best results are obtained when plants are young and actively growing. Do not cut brush or weeds until the herbicide has translocated throughout the plant causing root death. Do not contaminate lakes, streams, or ponds.

Note: MECOPROP is not cleared for use on food crops, and care should be taken not to make applications where runoff could contaminate bodies of water or spray drift would carry the chemical to food crops or grazing land where cattle, sheep, goats, swine, or poultry would be exposed.

BRUSH & WEEDS CONTROLLED:

Brush:
Ash
Aspen
Birches
Brambles
Cedar
Cherry
Dogwood
Elms
Gooseberry
Honeylocust
Multiflora Rose
Oak
Poplar
Shortleaf Pine
Sumac
Wild Plum
Willows

Weeds:
Bedstraw
Burdock
Chickory
Dock
Kudzu
Morningglory
Poison Ivy
Poison Oak
Thistles
Trumpet Vine

Notice:
Seller warrants that this product conforms to the ingredient statement on the label. Since conditions of use, such as weather, compatibility with other chemicals, and condition of application equipment will vary, Seller makes no claims other than those stated on this label.

EPA REG. NO.
EPA EST. NO. 3217-KS-1

823/879