TXR-1249

DATE: June 18, 1991

SUBJECT: DuPont Krenite S. Brush Control Agent
EPA Registration No.: 352-395

FROM: Sherrell A. Sterling
FHB/TSS

TO: Richard Mountfort
Product Manager (23)

Applicant: E. I. du Pont de Nemours & Company
Legal Department
Wilmington, DE 19898

Active Ingredient:
Ammonium salt of fosamine.....41.5%
Inert Ingredients.....58.5%

Background:

Acute Oral, Acute Dermal, Eye and Skin Irritation studies were previously submitted and reviewed (Sterling, January 9, 1980). An Acute Inhalation study was submitted and reviewed (Sterling, March 12, 1980); it was found to be Core Supplementary. This review is based on the most recently submitted Acute Inhalation which is to satisfy a condition of registration. The method of support is "cite-all."

Recommendations:

1. The Acute Inhalation (Haskell #241-81) is adequate and acceptable for conditional registration purposes.

2. A recent change in eye irritation categorization criteria allows for the change in signal word from WARNING to CAUTION. Based on the Acute Inhalation study reviewed here and the Acute Oral, Acute Dermal, Eye and Skin Irritation studies previously reviewed (see Sterling, January 9, 1980), FHB/TSS recommends a change in signal word from WARNING to CAUTION.

Labeling Recommendations:

1. The heading "Hazards to Humans" must be expanded to "Hazards to Humans and Domestic Animals" and preceded by the heading "Precautionary Statements." Preceding the heading "Precautionary Statements" must appear the appropriate signal word - CAUTION for this product.

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2. The "Hazards to Humans and Domestic Animals" section must be revised as follows:

Causes moderate eye injury. Harmful if inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing vapors or spray mist. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Statement of Practical Treatment:

If in eyes: Flush with plenty of water. Get medical attention if irritation persists.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

If inhaled: Remove to fresh air.

3. The "Environmental Hazards" section must be revised as follows:

Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of wastes.

4. The "Storage and Disposal" section must be revised in accordance with the enclosed "Storage and Disposal" information sheets.

Review:

1. Inhalation LC_{50}: Head-Only, Modified EPA Proposed Guidelines; Haskell Lab #241-81; July 1, 1980; Acc. No. 245116.

Procedure: M (225-330g) and F (173-230g) Crl:CD rats were exposed to varying concentrations of "Krenite S" for 4 hours head only. Animals were exposed in a 50 L glass chamber; substance was pumped into a Spraying Systems nebulizer with FMI Lab. pumps at a rate of 15.7 - 16.7 L/min. Concentrations were determined gravimetrically; the wet weight was determined, a dry weight was obtained after drying overnight in dessicator. Animals were observed for 14 days. Selected animals were subject to necropsies.

Results: Mortalities were: at 1.22 mg/L (dry) 0/10M and 0/10F; 2/10M and 4/10F; 2/10M and 4/10F at 2.56 mg/L (dry); 8/10M (no F tested) at 3.49 mg/L (dry); 5/10M and 9/10F at 3.92 mg/L (dry). The LC_{50}M (dry) was 3.30 mg/L with a 95% confidence range of 2.57-4.43 mg/L; LC50M (wet) 4.79 mg/L. The LC50F (dry) 2.75 mg/L with a 95% confidence range of 1.93-3.36 mg/L; LC50F

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(wet) was 3.92 mg/L. Observations included: red nasal and ocular discharge; wet faces and whiskers; eyes closed; labored respiration; clear bubbles from mouth and nose; corneal opacity; lung noise; weakness; loss of equilibrium; cold to touch; moderate to severe weight loss; alopecia around eyes and head. Necropsies revealed: red, moist and heavy lungs; pink brains; corneal opacity; pink, hemorrhaged thymuses; congestion in lungs, liver, kidneys; occasional effects in trachea, liver, spleen and GI tract. Corneal opacity was attributed to primary interstitial keratitis. Deaths were attributed to cardio-pulmonary arrest.

Study Classification: Core Guideline Data.

Toxicity Category: III - CAUTION

GENERAL INFORMATION

Du Pont "Krenite" S Brush Control Agent is a water soluble liquid to be diluted with water and applied as a foliar spray for control and/or growth suppression of many woody species on non cropland areas, including land adjacent to and surrounding domestic water supply reservoirs, supply streams, lakes and ponds. It is non flammable and non volatile.

"Krenite" S is applied to brush in late summer or early fall and response is usually not observed until the following spring except for pines which may show a response soon after application. Susceptible treated plants fail to refoliate and subsequently die.

A spray directed to only part of a susceptible plant will provide control of only the portion sprayed, resulting in a trimming effect.

NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials or the manner of use or application, all of which are beyond the control of Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

DIRECTIONS FOR USE

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

"Krenite" S Brush Control Agent should be used only in accordance with recommendations on this label, or in separate published Du Pont recommendations available through local dealers.

Non-Cropland Areas — Railroad, pipeline, utility and highway rights of ways, drainage ditch banks, storage areas, industrial plant sites, reforestation areas prior to planting, and other similar areas.

For control of birch, blackberry, black locust, bracken (fern), loblolly pine, pin cherry, quaking aspen, red alder, red oak, salmonberry,

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DU PONT

KRENITE® S

BRUSH CONTROL AGENT

Water Soluble Liquid
Contains 4 Lbs. Active [illegible]

ACCEPTED
1 MAY 1980

ACTIVE INGREDIENT:
Ammonium salt of fosamine
[ethyl hydrogen (aminocarbonyl) phosphonate] 41.5%
INERT INGREDIENTS 58.5%
US Pat. 3627507 & 3846512 EPA [illegible]

HAZARDS TO HUMANS

Keep out of reach of children.

WARNING! CAUSES EYE IRRITATION.

Do not get in eyes, on skin, or on clothing. Harmful if swallowed. Avoid breathing spray or mist.

If contact in eyes, flush eyes with water for at least 15 minutes.

ENVIRONMENTAL HAZARDS

Keep out of lakes, streams, or ponds. Do not contaminate water by cleaning of equipment or disposal of wastes.

IMPORTANT — Do not use on food crops. Do not allow drift or spray mist to contact desirable trees, shrubs, or other plants, as injury may result. Do not apply to brush in standing water. Do not contaminate any body of water. Keep from contact with fertilizers, insecticides, fungicides, and seeds. Thoroughly clean all traces of "Krenite" S from application equipment after use. Flush tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately).

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sumac, sweet gum, thimbleberry, vine maple, water oak, white oak, and Virginia pine, make a single foliar application using 1½ to 3 gals of "Krenite" S per acre during the 2 month period prior to fall leaf coloration. Application also provides partial control and growth suppression of other brush plants such as bigleaf maple, black cherry, blackgum, chokecherry, elm, hawthorn, hickory, persimmon, red maple, sassafras, sourwood, tulip tree (yellow poplar), willow, and white ash.

For control of American elder, eastern cottonwood, eastern white pine, multiflora rose, slippery elm, sycamore, tree of heaven, wild grape, and wild plum, make a single foliar application of 2 to 3 gals "Krenite" S per acre during the 2 month period prior to fall leaf coloration. Application at this rate also provides partial control and growth suppression of basswood and winged elm.

For control of field bindweed, apply 2 to 3 gals per acre after plants begin to bloom.

Use the highest rate of the recommended rate range on dense brush stands and on stands in which species partially controlled and suppressed are dominant.

Before applying, calibrate equipment to determine quantity of water necessary to thoroughly and uniformly cover the plants without drenching in a measured area to be treated. For ground equipment, use 50 to 300 gals of spray per acre, gallonage required depends on height, density and type of brush, and on type of equipment used. Measure the proper amount of "Krenite" S and use agitation to thoroughly mix into the necessary volume of water. After "Krenite" S has been thoroughly mixed in the spray tank, agitation of the spray solution is not required.

For control of only a portion of a plant, as in trimming, direct the spray to thoroughly cover only the section of the plant to be controlled.

Note: Effectiveness may be reduced if, following treatment, rainfall occurs the same day.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not re-use container. Bury empty container or product that cannot be used in a safe place away from water supplies, or dispose of by alternative procedures recommended by federal, state or local authorities. Open dumping is prohibited.

NOTICE TO BUYER: purchase of this material does not confer any rights under patents of countries outside of the United States.

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