

Handwritten: *NO 212*  
*TRC-1249*

DATE: June 18, 1981

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

FROM: Sheffrell A. Sterling  
FHB/TSS

Handwritten: *File 6-23-81*

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 LC50: 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 LC50M (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

