

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

003530

DATE: November 22, 1977

SUBJECT: TRIOX Liquid Vegetation Killer EPA Registration #239-1369
Caswell (#63, 184, 37, 740)

FROM: J. L. Doherty

TO: R. J. Taylor, P.M. #25

Action Type: Submission of additional Toxicology Data

Product Manager: R. J. Taylor, PM #25

Recommendation:

The active ingredients of this product contains TRAMITOL, a triazine, and this chemical appears on the list of products suspected of containing nitrosamine. According to the memo from Dr. Rogoff (10-20-77) registration should be temporarily suspended.

In addition, the skin irritation score was 6.5 and the erythema and edema were barely reversible in 7 days. On this basis the product should be put into category I and not in category III as indicated. The label should read "Danger" and the appropriate first aid for corrosive materials included.

Review:

1. Oral LD₅₀ determination (Std. Oil Co. of California). CORE Minimal Study. Groups of 5 male and 5 female rats per dose (Dose 10.0 gm/kg) were administered ORTHO TRIOX Liquid Vegetation Killer and observed for 14 days. The LD₅₀'s determined were

Male 3.9 (2.2 - 7.3) g/kg

Female 3.0 (1.3 - 5.7) g/kg

No signs of toxicity were observed in animals treated with 2.0 gm/kg. Lacrimation, salivation, ataxia, and collapse were observed within five hours of dosing in some animals treated with 3.0 to 10.0 g/kg. All survivors appeared normal two days after dosing. At autopsy, no gross pathological changes attributable to the test material were noted.

2. Acute Dermal Toxicity (Std. Oil Co. of California) CORE Minimal Study. Six adult albino rabbits were treated with a single dermal application of 5.0 ml/kg of test material. The skin of three rabbits was abraded with a hypodermic needle in addition to being shaved prior to application. No signs of toxicity or death were observed during the 14 day observation period except for severe skin irritation at the point of application.

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3. Eye irritation potential (Std. Oil of California.) CORE Minimal. 1/10 ml of test material (ORTHO TRIOX Liquid Vegetation Killer, undiluted formulation) was placed in the conjunctival sac of one eye in each of six rabbits. No corneal opacity or iritis was noted. Moderate conjunctiva irritation was observed in all test animals one hour after treatment, this irritation completely cleared up by seven days.
4. Skin Irritation potential (Std. Oil of California). CORE Minimal 0.5 ml of the test material (ORTHO TRIOX Liquid Vegetation Killer, undiluted formulation) was applied to an intact and to an abraded area on the back of each of six rabbits. Eschar and moderate to severe edema were observed in both the intact and abraded treated areas. The primary irritation score was 6.5. The erythema was not reversed in 7 days and there were still signs of edema as:

7 days following treatment

Rabbit	Intact Skin Erythema	Edema	Abraded Skin Erythema	Edema
1	4	2	4	2
2	4	1	4	2
3	4	2	4	2
4	4	2	4	2
5	4	1	4	1
6	4	1	4	1

Scoring 1 = very slight, 2 = slight, 4 = severe

These results are the basis for classifying the product in category I and not in category III as requested by the manufacturer.

5. Acute Inhalation (Std. Oil of California) CORE Minimal. Five rats of each sex were exposed for 1 hour to either vapor generated from the undiluted material or to aerosol generated from the diluted material. No death or signs of toxicity were observed during the exposure or subsequent 14 day observation period, except that a rapid diaphragmatic respiration was observed during the exposure to the aerosol preparation. At autopsy, no gross pathological changes attributable to the test material were observed.

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