

US EPA ARCHIVE DOCUMENT



2,4-D/TOX

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

Releasable

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MEMORANDUM

Date: December 9, 1980

Subject: Gordon's Trimec Weeder Granules
EPA File Symbol: 2217-AUN

From: Sherell A. Sterling
Technical Support Section

12-15-80
E 1/9/81

To: Richard Mountfort
Product Manager (23)

Applicant: PBI/Gordon Corp.
300 South Third Street
P.O. Box 2276
Kansas City, KS 66110

Active Ingredient:

| | |
|-------------------------|---------|
| 2,4-D | 1.455% |
| MCPA | 0.612% |
| Dicamba | 0.129% |
| Inert Ingredients | 97.804% |

Background: Under the "combined alternate and cite-all" method of support, this product was submitted for conditional registration. Acute Oral, Acute Dermal, Eye and Skin Irritation studies were submitted for this product. The studies were conducted by Stillmeadow, Inc. of Houston, Texas. The "DIE #2" test substance was identified as the formulated product by S. Johnson in his letter of October 24, 1980 to Richard Mountfort.

Recommendations:

1. The Acute Oral study is adequate and acceptable support for this conditional registration.
2. The Acute Dermal study is adequate and acceptable support for the conditional registration of this product.
3. An Acute Inhalation study was not submitted. In order for a product to be conditionally registered, data to this effect must be available. Data may consist of results from an Acute Inhalation study or a statement that no respirable vapors or dust will result from this product.
4. The Eye Irritation studies are considered adequate and acceptable support for the conditional registration of this product. Please note that the study with untreated vermiculite was appreciated *as a* supplement, your knowledge; however, this study was not necessary.

5. The Skin Irritation study is considered adequate and acceptable support for the conditional registration of this product.
6. The signal word CAUTION is appropriate for this product. The precautionary labeling is adequate as submitted.

Review:

1. Rat Acute Oral Toxicity: Stillmeadow #1334-79; October 26, 1979; Acc. No. 243058

Procedure: A group of 5M, 5F Sprague-Dawley rats (200-295 g) all received a 5015 mg/kg dosage of the actual test material, "DIB-2." The substance was administered as a 21.43% w/v solution in a 1.0% w/v aqueous methyl cellulose solution. Animals were observed for 14 days. At end of study, survivors were sacrificed; all animals were subjected to necropsies at death.

Results: No deaths were reported; no observable abnormalities were noted. Symptoms observed during test were dilated pupils, ptosis, diarrhea, constricted pupils and piloerection during the first 48 hours. The LD50 was greater than 5015 mg/kg.

Study Classification: Core Guideline Data

Toxicity Category: IV-CAUTION

2. Rabbit Acute Dermal Toxicity; Stillmeadow #1335-79; October 23, 1979 and December 18, 1979; Acc. No. 243058

Procedure: A group of 5M, 5F New Zealand ^{white} rabbits were dermally treated with "DIB #2." A sham control group of 9M, 9F New Zealand white rabbits was run concurrently. All test sites were abraded. Exposure to 2005 mg/kg of the test substance, administered as a slurry in saline, was for 24 hours under occlusive wrap. Animals were observed for 14 days. At termination of study, survivors were sacrificed; all animals were subjected to necropsies at death.

Results: Only death observed was in the control group. Symptoms observed in the test animals were erythema and edema, discoloration of hair around exposure area, few feces, diarrhea and small amount of urination. Necropsies revealed intestines filled with dark brown liquid and sections of intestines distended with gas in 1/10. Histopathology showed 1/10 with scarring at site; 1/10 with focus of epithelial acanthosis, but not enough to be significant. The LD50 was greater than 2005 mg/kg.

Study Classification: Core Guideline Data

Toxicity Category: III-CAUTION

3. Rabbit Eye Irritation; Stillmeadow #1336-79; October 15, 1979;
Acc. No. 243058

Procedure: Nine New Zealand white rabbits each received 100 mg of "DIB #2" in one eye. Subsequent to treatment, 3 of the eyes were rinsed for one minute with room temperature tap water. Scoring was at 1, 24, 48, 72 hours and 4, 7, 10, 13, 16, 19, 21 days.

Results: The unwashed eyes at 24 hours showed iris irritation in 2/6=5, 1/6=10; redness in 6/6=2; chemosis in 5/6=3, 1/6=4; discharge in 2/6=1, 4/6=2; stippling in 6/6 eyes. By day 7, unwashed eyes showed corneal opacity in 1/6=5; iris irritation in 1/6=5; redness in 2/6=1, 1/6=2, 1/6=3; chemosis in 3/6=1, 1/6=2, 2/6=3; discharge in 2/6=2. At day 21, corneal opacity in 2/6=5; conjunctival redness in 1/6=1; chemosis in 1/6=1, 1/6=2; discharge in 1/6=2.

Washed eyes at 24 hours were clear except for chemosis in 1/3=1. All eyes were clear by 72 hours.

Study Classification: Core Guideline Data

Toxicity Category: III-CAUTION. The only corneal opacity seen was very mild in only 2 animals developing 7 days post-treatment.

4. Rabbit Eye Irritation; Stillmeadow #1376-79; October 17, 1979;
Acc. No. 243058

Procedure: Nine New Zealand white rabbits each received 100 mg of untreated vermiculite in one eye. Thirty seconds after treatment, the treated eye of 3 animals was washed with deionized water for one minute. Scoring at 1, 24, 48, 72 hours; 4 and 7 days.

Results: In the unwashed eyes at 24 hours, the only irritation observed was redness in 3/6=1; chemosis in 5/6=1, 1/6=2. All irritation in unwashed eyes was clear by 72 hours. Washed eyes at 24 hours showed only redness in 2/3=1 and chemosis in 3/3=1. By 48 hours, all eyes were clear.

Study Classification: Core Guideline Data

Toxicity Category: IV-CAUTION

5. Rabbit Skin Irritation: Stillmeadow #1337-79; October 10, 1979;
Acc. No. 243058

Procedure: Six New Zealand white rabbits each received an application of "DIB #2" at each of 4 sites, 2 abraded and 2 intact. The test substance was administered at a dose of 0.5 g moistened with 1.5 ml of saline at each test site. Exposure was for 24 hours under occlusive wrap. Animals were observed at 24, 72 hours.

Results: At 24 hours, erythema observed at intact sites in 8/12=1, 4/12=2; abraded sites in 9/12=1, 3/12=2. Edema seen at intact sites in 11/12=1, 1/12=2; abraded sites in 9/12=1, 3/12=2 at 24 hours. By 72 hours intact sites showed erythema in 1/12=1; abraded sites showed erythema in 2/12=1. Edema at 72 hours at intact sites showed 1/12=1; abraded sites showed 2/12=1. All sites were clear by 4 days. The Primary Irritation Index was 1.36.

Study Classification: Core Guideline Data

Toxicity Category: IV-CAUTION