

US EPA ARCHIVE DOCUMENT

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

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

FEB - 6 1987

MEMORANDUM

SUBJECT: EPA File Symbol 279-GNTR
Command 4EC Herbicide

FROM: Deloris F. Graham *DJG 2/12/87*
Technical Support Section
Fungicide-Herbicide Branch
Registration Division (TS-767C)

TO: Robert J. Taylor, PM 25
Fungicide-Herbicide Branch
Registration Division (TS-767C)

APPLICANT: FMC Corporation
Agricultural Chemical Group
2000 Market Street
Philadelphia, PA 19103

ACTIVE INGREDIENT:

2-(2-Chlorophenyl)methyl-4,4-
dimethyl-3-isoxazolidinone 47.1%

INERT INGREDIENTS: 52.9%

BACKGROUND:

Submitted Acute Oral, Acute Dermal, Eye Irritation,
Primary Skin Irritation, and Skin Sensitization Studies.
Studies conducted by FMC Toxicology Laboratory. Studies
under EPA Accession Nos. 265605, 265606, 265607, 265608,
and 265609. Method of support not indicated.

RECOMMENDATION:

1. FHB/TSS finds these data acceptable to support
conditional registration of this product.

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2. An Acute Inhalation Study was not submitted and one must be submitted and/or cited or data to support waiver.
3. The appropriate signal word is DANGER.

LABEL:

1. The signal word DANGER must appear on center front panel of label.
2. Precautionary must be revised to include "Causes skin burns."
3. The statement "This product contains petroleum distillates" must appear in close proximity to ingredient statement.
4. The subheading "Special Precautions" should appear under the heading "Directions For Use."

REVIEW:

- (1) Acute Oral Toxicity Study: FMC Toxicology Laboratory; FMC Study No. A86-2155; October 16, 1986. EPA Accession No. 265605.

PROCEDURE:

Four groups consisting of ten male rats each were dosed with one of the following concentrations: 2500, 3000, 3300, and 3500 mg/kg. Three groups consisting of ten female rats each were dosed with one of the following concentrations: 2100, 2500, and 3000 mg/kg.

RESULTS:

At 2100 mg/kg, 3/10 F rats died; at 2500 mg/kg, 4/10 F died; at 3000 mg/kg, 6/10 F and 4/10 M died; at 3300 mg/kg, 2/10 M died; at 3500 mg/kg, 8/10 M died. At 3000 mg/kg, nine animals instead of ten reported to have be evaluated because one animal died within the first 6 hours after dosing. Toxic signs reported included abdominogenital staining, ataxia, chromodacryorrhea, chromorhinorrhea, decreased locomotion, lacrimation, oral discharge, prostration, recumbency, cyanosis, alopecia, rales, dyspnea, nasal discharge and hematuria. Necropsy report revealed: intestines-blood; stomach-blood; liver-white foci throughout; liver-herniated. LD₅₀ for males

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reported to be 3321 mg/kg with 95 percent confidence limits between (3032 and 3610 mg/kg). LD₅₀ for females reported to be 2717 (2075-3359) mg/kg. LD₅₀ for males and females combined reported to be 3240 (2283-4196) mg/kg.

STUDY CLASSIFICATION: Core Guideline Data.

TOXICITY CATEGORY: III - CAUTION.

(2) Acute Dermal Toxicity Study: FMC Toxicology Laboratory; FMC Study No. A86-2154; October 16, 1986; EPA Accession No. 265606.

PROCEDURE:

Five male and five female rabbits with intact skin sites each received 2000 mg/kg of the test material. The treated sites were placed under occlusive wrap for 24-hour exposure. Observations made for 14 days postdosing. Necropsy performed on all animals.

RESULTS:

No mortalities or abnormalities at necropsy reported. Toxic signs reported included dehydration, edema, atonia, erythema, eschar, exfoliation, and fissuring. LD₅₀ reported to be greater than 2000 mg/kg.

STUDY CLASSIFICATION: Core Guideline Data.

TOXICITY CATEGORY: III - CAUTION.

(3) Eye Irritation Study: FMC Toxicology Laboratory; FMC Study No. A86-2157; October 16, 1986; EPA Accession No. 265607.

PROCEDURE:

Nine rabbits received 0.1 ml of the test material in one eye each. The treated eyes of three of the rabbits were washed with tap water 20 to 30 seconds after treatment. Observations made for 7 days posttreatment.

RESULTS:

At 24 hours, 6/6 rabbits of the unwashed group and 2/3 rabbits of the washed group had corneal opacity (4/6 = 20, 2/6 = 40) (2/3 = 5); 3/6 iris irritation (3/6 = 5), 6/6 + 3/3 conjunctive redness (2/6 = 2, 4/6 = 3) (3/3 = 2), chemosis (3/6 = 1, 3/6 = 2), and discharge (2/6 = 2, 4/6 = 3) (1/3 = 1, 1/3 = 2, 1/3 = 3). Corneal opacity and all other irritation had cleared by day 7.

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STUDY CLASSIFICATION: Core Guideline Data.

TOXICITY CATEGORY: III - CAUTION.

- (4) Primary Skin Irritation Study: FMC Toxicology Laboratory;
FMC Study No. A86-2153; October 16, 1986; EPA Accession
No. 265608.

PROCEDURE:

Six rabbits with two intact skin sites each received 0.5 ml of the test material per site. Treated sites placed under occlusive wrap for 4-hour exposure. Observations made for 14 days posttreatment.

RESULTS:

At 24 hours posttreatment, 6/6 rabbits had slight to well-defined erythema (scores of 1 and 2). At 72 hours, 6/6 rabbits had slight to severe erythema (scores of 1, 2, 3, and 4); skin thickening, and fissuring also noted. Erythema persisted throughout increasing in severity from day 4 through 7, then decreasing in severity somewhat through day 13. Erythema had cleared at day 14. Test site bleeding, fissuring, skin thickening, desquamation and eschar formation noted at day 4 and persisted through day 14 with some dermal irritation subsiding.

STUDY CLASSIFICATION: Core Guideline Data.

TOXICITY CATEGORY: I - DANGER.

- (5) Skin Sensitization Study: FMC Toxicology Laboratory;
FMC Study No. A86-2156; October 16, 1986; EPA Accession
No. 265609.

PROCEDURE:

Twenty male guinea pigs received three topical applications (0.40 ml) of the test material once a week for 3 weeks during induction phase. A similar positive control group was treated with a 0.15 percent w/v dinitrochlorobenzene (DNCB). Fourteen days after third induction phase application a challenge dose using a 25 percent solution of test material in saline and DNCB were applied to animals in appropriate group at virgin skin sites. Also at challenge a group of ten guinea pigs were treated with 0.4 ml of the test material and served as naive control. Observations made at 24 and 48 hours after each application.

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RESULTS:

At 24 and 48 hours after first induction phase application animals had slight to well-defined erythema; after second application; slight to severe erythema; slight to well-defined edema, desquamation and eschar; after third application, severe erythema, slight to well-defined edema, eschar and exfoliation. At challenge with a non-irritating concentration no irritation was produced in test group or naive control group.

DNCB produced slight to severe erythema through induction phase period with desquamation, eschar, exfoliation and fissuring. At challenge slight to moderate erythema and edema indicating a sensitizing reaction.

STUDY CLASSIFICATION: Core Guideline Data.

TOXICITY CATEGORY: Nonsensitizing.

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Command tox review

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Pages 6 through 7 are not included in this copy.

The material not included contains the following type of information:

- Identity of product inert ingredients
 - Identity of product impurities
 - Description of the product manufacturing process
 - Description of product quality control procedures
 - Identity of the source of product ingredients
 - Sales or other commercial/financial information
 - A draft product label
 - The product confidential statement of formula
 - Information about a pending registration action
 - FIFRA registration data
 - The document is a duplicate of page(s) _____
 - The document is not responsive to the request
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The information not included is generally considered confidential by product registrants. If you have any questions, please contact the individual who prepared the response to your request.

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