4-18-83

Date: April 18, 1983

Subject: EPA Registration Number: 707-156
Dithane M-45 Flowable Agricultural Fungicide

From: Deloris F. Graham
FHB/HED E 4/19/83

To: Wendy Jacoby
Product Manager (21)

Applicant: Rohm and Haas Company
Independence Mall West
Philadelphia, PA 19105

Active Ingredient:
A coordination product of zinc ion and
manganese ethylene bisdithiocarbamate . . . 37%
In which the ingredients are:
Manganese^{++} 7.4%
Zinc^{++} 0.9%
Ethylene bisdithiocarbamate ($C_4H_6N_2S_4$) 28.7%
Inert Ingredients 63%

Background: Submitted Acute Oral, Acute Dermal Eye Irritation and Skin Irritation studies. Studies conducted by Rohm and Haas Company. Data under accession number 249733. Method of support indicated as not applicable.

Recommendations:
(1) FHB/HED finds the data Core Supplementary Data and unacceptable to support conditional registration of this product
(a) In the Acute Oral and Acute Dermal Studies,

14504

1/4

five animals per sex per dose must be used. LD50 and 95% confidence limits for males and females must be determined.

~~(b)~~ In the Primary Skin Irritation Study at least six animals with two abraded and two intact skin sites per animal must be used.

(c) In the Eye Irritation Study, 9 animals (6 with treated unwashed eyes and 3 with treated washed eyes) must be used. Observations must be made for 21 days post treatment or until all irritation subsides, whichever comes first.

Label:
(1) No label comments until acceptable studies are submitted

Review:
(1) Acute Oral Toxicity Study: Rohm and Haas; Report # 83R 002A; February 22, 1983.

Procedure: 3 groups consisting of 3M and 3F rats received one of the following doses in a range-finding study: 0.0g/kg, 0.375g/kg and 5.0g/kg. Observations made for 14 days. Necropsy performed on all animals.

Results: No mortalities. Alopecia, the only toxic signs noted. No gross changes noted at necropsy. LD50 estimated to be greater than 5.0g/kg.

Study Classification: Core Supplementary Data. Five animals per sex per dose must be used and LD50 and 95% confidence limits must be determined.

15

(2) Acute Dermal Toxicity Study: Rohm and Haas; Report Number: 83R 002A; February 22, 1983.

Procedure: One group consisting of 2M and 2F albino rabbits received 5.0 g/kg of the test material at intact skin sites under occlusive wrap for 24 hour exposure. Observations were made for 14 days. Necropsy performed on all animals.

Results: No mortalities. Scant droppings, the only toxic signs noted. Hair loss on muzzle noted at necropsy. LD50 estimated to be greater than 5.0 g/kg.

Study Classification: Core Supplementary Data. Five animals per sex per dose must be used. LD and 95% confidence limits must be determined.

(3) Skin Irritation Study: Rohm and Haas; Report # 83R 002A; February 22, 1983.

Procedure: Two male New Zealand rabbits received 0.5 ml of the test material at intact skin sites under occlusive wrap for 24 hour exposure period. Observations made at 5, 24 and 72 hours and at 7 days.

Results: No irritation. Test substance stained the application site yellow. The 72-hour mean irritation score was zero.

Study Classification: Core Supplementary Data. Atleast six animals with two intact and two abraded skin sites per animal must be used.

(4) Eye Irritation Study: Rohm and Haas; Report # 83R 002A; February 22, 1983

Procedure: Two New Zealand rabbits received 0.1 ml of the test material in one eye each. Observations made at 24, 48 and 72 hours and at 7 days.

Results: No corneal opacity or iris irritation. At 24 and 48 hours 2/2 rabbits had a cumulative conjunctive score of 3. Irritation had cleared at 72 hours.

Study Classification: Core Supplementary Data. 9 animals (6 with treated unwashed eyes and 3 with treated washed eyes) must be used. Observations must be made for 21 days post-treatment or until all irritation subsides which ever comes first.