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NOV 7 1984

Chevron Chemical Co.
Ortho Agricultural Chemicals Div.
940 Hensley St.
Richmond, CA 94804

Attention: L. R. Stelzer

Gentlemen:

Subject: Chevron Folpat Technical
EPA Registration No. 239-1763
Your Letters dated November 3, 1983, October 2, 1984,
August 17, 1984 and May 1, 1984

It is the Registration Division's understanding that your company has been contacted by the Toxicology Branch concerning further data requirements. To this end, the October 25, 1984, meeting has been postponed as it is no longer necessary.

The chemistry data submitted on May 1, 1984, on the Confidential Statement of Formula are acceptable.

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, is acceptable subject to the comments listed below. Five copies of the finished labeling must be submitted.

1. Add "Do not apply directly to water" in the Environmental Hazard Statement.

A stamped copy of the label is enclosed for your records.

The aerobic and anaerobic soil metabolic studies have been reviewed by our scientific staff.

The following deficiencies must be addressed:

SYNOPSIS							
SUBSTANCE							
DATE							

For the anaerobic study:

While degradation of ^{14}C -folpet occurred during the study, a number of deficiencies, questions, and comments must be addressed:

1. For use in a soil metabolism study, folpet should have been uniformly radiolabeled in the phenyl ring. The carbonyl carbons are probably the most labile in the molecule.
2. Very poor precision between replicates was evident in 50% of the aqueous supernatant extract samples (days 7, 31, 112, 187, and 256 of Table 4). The large discrepancy between the replicates contributed to the low total recoveries. Ascribing the low recoveries to the conditions becoming aerobic seems very implausible considering the system (Mason jars) and the efforts taken to establish and maintain anaerobicity.
3. The GC/MS analysis used to confirm the identity of the major metabolite (PA1) should have been applied to all the degradates to provide unequivocal identification.
4. A couple of our requirements have been left out: half-life estimates and residue decline curves.
5. It was stated that ^{14}C -folpet "undergoes extensive autoradiolysis in storage." If that is so, to what extent is it occurring during the year incubation of the soil in doing the study?

For the aerobic study:

Folpet was observed to degrade rapidly for about the first 34 days and then level off.

The study was set up and run very similarly to the anaerobic study, thereby generating some of the same comments that must be addressed.

1. Folpet should have been uniformly radiolabeled in the phenyl ring.
2. GC/MS analysis would have been useful in confirming the identification of the degradates.
3. Determination of $^{14}\text{CO}_2$ evolution should have been done using the same experimental set-up as for folpet degradation.
4. Soil moisture content should be maintained at 75% of 0.33 per bar moisture. Moisture level of soil was not mentioned.
5. The half-life of folpet was given as being about 2 days. How was the life-life calculated or determined? Using the average of the replicates of the ethyl acetate soil extraction of Table 5, we did a regression analysis of this decline data and obtained half-lives of 65.7 days for all the values and 10.2 days for 5 of the values. The discrepancy must be addressed. The statistics are attached.

6. Figure 13 of the study (not included in review) shows a proposed degradation scheme for folpet. The three identified degradates are shown with 4 arrows beyond them leading to CO_2 , indicating complete mineralization. Since radiolabeling of folpet was only in the carbonyl carbons, a scheme leading to mineralization does not seem to be valid. There are not enough data to make that assumption.
7. The LSC efficiency for determination of evolved $^{14}\text{CO}_2$ was 70-75%. Were the values in Table 4 corrected for this efficiency? Why were different LSC systems used for $^{14}\text{CO}_2$ work and ethyl acetate extractions? Were the ethyl acetate values in Table 5 corrected? What was the counting efficiency of LSC system used for the ethyl acetate extractions?

Sincerely yours,



Henry M. Jacoby
Product Manager (21)
Fungicide-Herbicide Branch
Registration Division (TS-767)

Job-32923:Jacobys;Kendrick & Co.;R&D-1770:RD-11:tar:10/31/84:del:11 E/84

PRECAUTIONARY STATEMENTS - 12 pt

HAZARDS TO HUMANS & DOMESTIC ANIMALS - 12 pt

WARNING - 12 pt

Causes reversible eye damage. May cause allergic skin reactions. Do not get in eyes, on skin or clothing. Wear goggles or face shield when handling. Wash thoroughly after handling.

STATEMENT OF PRACTICAL TREATMENT

In case of eye contact, wash eyes immediately with fresh water for at least 15 minutes and see a doctor. If on skin, wash thoroughly with soap and water. Note to Physicians: Emergency Information - call (415) 233-3737.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not contaminate water by cleaning of equipment or disposal of wastes.

INSTRUCTIONS FOR FORMULATION

This product is a Federal law to use this product in a manner consistent with its labeling.

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

STORAGE AND DISPOSAL - 12 pt

PROHIBITIONS - 12 pt

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment.

STORAGE - 12 pt

Keep product in original container. Store in a cool, dry place.

Protect from excessive heat.

Do not store or transport near food or feed.

For help with a spill, leak, fire or emergency involving this product, call (415) 233-3737.

FUNGICIDE DISPOSAL - 12 pt

Fungicides are highly toxic to fish, birds, and other animals. Do not pour or dump into water, food, or feed. Do not use in areas where water, food, or feed is present. Do not use in areas where water, food, or feed is present. Do not use in areas where water, food, or feed is present.

CONTAINER DISPOSAL - 12 pt

Do not reuse empty container. Do not reuse container for any other purpose. Do not use container for any other purpose. Do not use container for any other purpose.



ORTHO

CHEVRON® Folpet Technical

Active ingredient

Folpet

Inert ingredients

75% Trichloromethylthio phthalimide

By Wt.

100%

12%

Expiration Date: _____

Lot No.: _____

KEEP OUT OF REACH OF CHILDREN

WARNING - 12 pt

SEE SIDE PANEL FOR ADDITIONAL
PRECAUTIONARY STATEMENTS

NET WEIGHT 25 KGS.

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CHEVRON CHEMICAL COMPANY © 1994
Ortho Agricultural Chemicals Division
San Francisco, CA 94120-1194 Richmond, CA 94804-0036
Product 2623 - Made in France
EPA Reg. No. 239-1263-AA
EPA Est. 37373-FR-01

A FUNGICIDE FOR FORMULA

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USE FOR ANY OTHER PURPOSE
agricultural fungicide.
Folpet Technical will be
Environmental Protection

CONFIDENTIAL

PROPRIETARY

CHEVRON CHEMICAL

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This product is sold
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