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

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: PA-870001 Zineb 75 WP on Mushrooms
Micro-Flo 24(c) Application
EPA Reg No. 51036-62
[No MRID No., RCB No. 3251]

FROM: Susan V. Hummel, Chemist
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THRU: Edward Zager, Section Head
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TO: Lois Rossi/M. Fiol, PM #21
Herbicide Fungicide Branch
Registration Division (TS-767C)

Micro-Flo has requested a 24(c) Special Local Needs registration for the use of Zineb 75 WP on mushrooms. Zineb 75 WP (EPA Reg. No. 51036-62) is a Wettable Powder containing 75% zineb (zinc ethylenebisdithiocarbamate).

Tolerances have been established for residues of zineb, per se, on a number of raw agricultural commodities including mushrooms at 7 ppm, calculated as zineb. (40 CFR 180.115). An interim tolerance was established for residues of zineb in potatoes (40 CFR 180.319). No food and feed additive tolerances have been established. No tolerances have been established for any animal commodities.

Available Product and Residue Chemistry data for zineb were reviewed by D. Edwards (2/27/87). Available Product and Residue Chemistry data were insufficient to support any uses of zineb. A Comprehensive Data Call In for Zineb was issued April 21, 1987. Micro-Flo has agreed to produce data to support uses of zineb, including the use of zineb on mushrooms. EPA has also announced the initiation of a Special Review of the ethylene bisdithiocarbamate pesticides, including zineb (52 FR 137, 7/17/87). An earlier Special Review (RPAR) of EBDC pesticides was concluded 10/14/82. No Registration Standard is planned for Zineb at this time (D. Edwards, personal communication, 2/10/88).

Registered use

According to the draft Index (10/84), Zineb is currently registered for use on mushrooms. (We note that the registrant states in their 24(c) application, that zineb is not currently registered for use on mushrooms.) The application rate for wettable powder formulations is 0.75 lb/100 gal and 10 gal/4000 sq. feet of seed bed. Dust formulations are also registered for use at the rate of up to 1.5 lb ai/4000 sq. feet. Applications are begun shortly after casing soil is applied, and continued at 3 to 7 day intervals until buttons begin to form. (The maximum number of treatments per season is not currently specified on the label.)

Proposed Use

Zineb 75 WP is to be used at the rate of 1 lb/100 gal with 10 gal/4000 sq. feet of bed. Applications are to begin shortly after casing soil is applied, and continued at 3 to 7 day intervals until buttons begin to form. Applications may also be made between breaks. (The maximum number of treatments per season is not currently specified on the label.)

Nature of the Residue

The nature of the residue in plants and animals is not adequately understood. Metabolism data have been required in the Zineb Comprehensive Data Call In (4/21/87). Data on plant metabolism must be supplied in the time frames given in the Zineb Comprehensive Data Call In (4/21/87).

The current tolerance for zineb on mushrooms is expressed in terms of the parent compound only. The Special Review for zineb (and other EBDC fungicides) was initiated because of the presence of ethylene thiourea (ETU) as an impurity, metabolite, and degradation product of EBDC fungicides.

Analytical Methodology

No analytical methodology was submitted with this 24(c) application. Additional analytical methodology has been required in the Zineb Comprehensive Data Call In (4/21/87). Available methodology in PAM II are colorimetric methods based on CS₂ evolution. PAM II methodology will be considered adequate for the purpose of this 24(c) request. Data on analytical methodology must be supplied in the time frames given in the Zineb Comprehensive Data Call In (4/21/87). Methodology for ETU includes the Onley and Yip and the Onley, et. al. GLC methods described in the Registration Standard.

Residue Data

No residue data were submitted with this request. Residue data to support this use were required by the Zineb Comprehensive Data Call In Notice of 4/21/87. Micro-Flo has agreed to supply residue data to support the use of zineb on mushrooms (D. Edwards, 9/17/87, RCB No. 2738). The existing 7 ppm tolerance for zineb on mushrooms will not be exceeded as a result of this proposed use.

Meat, Milk, Poultry, and Eggs

Mushrooms are not animal feed items. Consequently, there are no problems with meat, milk, poultry, and eggs as a result of this 24(c) request.

CONCLUSIONS

1. The existing 7 ppm tolerance for zineb on mushrooms will not be exceeded as a result of this proposed use.
2. For the purposes of this 24(c) request, we will consider the PAM II methodology for zineb adequate to enforce the existing tolerance of 7 ppm. Methodology for determining ETU, a metabolite of mancozeb, is also available (Onley and Yip, and Onley, et. al., discussed in the Mancozebn Registration Standard.
3. No animal feed items are associated with this 24(c) request.
4. All data gaps for metabolism, analytical methodology, storage stability data, and residue data on mushrooms must be filled in the time frames given in the Zineb Comprehensive Data Call In Notice of 4/21/87.

RECOMMENDATIONS

Tox considerations permitting, we have no objections to the issuance of this 24(c) registration. The registrant should be reminded that all data gaps for metabolism, analytical methodology, storage stability data, and residue data on mushrooms must be filled in the time frames given in the Zineb Comprehensive Data Call In Notice of 4/21/87.

cc:R.F., circu, S. Hummel, V. Bael (SRB/RD), TOX, Zineb S.F.,
Zineb 24(c) File, Zineb S.R.F. (Hummel), PMSD/ISB
RDI:EZ:02/10/88RDS:02/11/88:
TS-769:RCB:SVH:svh:RM#810:CM#2:557-7324:02/11/88