



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

MAY 8 1989

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OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: 89-MI-01. Section 18 Exemption for the use of Pendimethalin Herbicide (Prowl® 4E) on Onions to Control Weeds. EPA Reg. No. 241-243-ZA. (No MRID #, DEB # 5288).

From: Freshteh Toghrol Ph.D., Chemist
Special Registration Section II
Dietary Exposure Branch
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THRU: Francis B. Suhre, Acting Section Head
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To: D. Stubbs/Jim Tompkins, PM 41
Emergency Response Section
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and
Toxicology Branch
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The Michigan Department of Agriculture requests a Section 18 exemption for the use of pendimethalin (trade name: Prowl) on bulb onions for weed control.

Prowl® 4E pre-emergence Herbicide (EPA Reg. No. 241-243-ZA) is a registered pesticide of American Cyanamid Corporation; the product contains 4 lbs/gallon pendimethalin, [N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine] as its active ingredient.

A maximum of 8,000 acres(estimated) of bulb onions will be treated with 32,000 lbs of active ingredient.

Tolerances are established (40 CFR 180.361(a)) for combined residues of pendimethalin and its metabolite 4-[(1-ethyl-propyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol in or on several raw agricultural commodities (RAC), as follow: beans (lima, forage, and hay) at 0.1 ppm; corn (grains, fresh, fodder, and forage) at 0.1 ppm; cottonseed, peanuts (nut meats, forage, and hay) at 0.1 ppm; rice grain at 0.05 ppm; soybeans (beans, hay, and forage), and sunflower seeds at 0.1 ppm.

Tolerances are also established (40 CFR 180.361(b)) for combined residues of pendimethalin and its metabolites 4-[(1-ethyl-propyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol and 3-[(1-ethyl-propyl)amino]-6-methyl-2,4-dinitrobenzyl alcohol in or on peanut hulls at 0.25 ppm.

No plant or animal metabolism studies were submitted with this request. According to the Pendimethalin Registration Standard, issued on 5/10/84, there are Residue Chemistry data gaps, including plant and animal metabolism. However, for the purpose of this section 18 request only, we will consider the residue of concern in plants and animals to be pendimethalin and its metabolite 4-[(1-ethylpropyl)amino]-2-methyl-3,5-dinitrobenzyl alcohol.

89-MI-01 calls for up to 2 applications (ground) broadcast of Prowl 4E at 2.0 lb ai/acre in 10-30 gallons of water; the applications will be made after seedling or transplanting of the onions, (the application interval was not stated) and before weeds emerge. A PHI of 40 days is proposed and a grazing restriction is stipulated.

Adequate analytical methods are available for enforcement purposes see PAM vol. II Section 180.361.

Residue data on bulb onions, grown in New York during 1988, were provided in support of this Section 18 request. In this study bulb onions were treated with 2 or 4 lbs. pendimethalin ai/A and harvested 21 to 111 days after treatment; no residues of pendimethalin were detected (ND <0.02 ppm). Residue data were also submitted in connection with PP#3G2857, these data reflect a single application of pendimethalin to bulb onions at 1.0 to 2.0 lb ai/A with a PHI 106 to 189 days; no residues of pendimethalin were detected (<0.05 ppm).

Meat, Milk, Poultry and Eggs:

There are no feed items involved in this proposed use, therefore no secondary residues are expected to occur in meat, milk, poultry, and eggs as a result of this Section 18 request.

Conclusions:

1. For the purpose of this section 18 only, residues of concern to be pendimethalin and its metabolites containing the 3,5-dinitrobenzyl alcohol moiety.
2. The analytical method described in PAM II, Section 180.361, is adequate for enforcement purposes. Analytical reference standards of pendimethalin and its metabolite are available from the EPA Repository, at RTP, NC.
3. Based on available residue data, we do not expect combined residues of pendimethalin /metabolite to exceed 0.1 ppm as a result of this Section 18 request.
4. No secondary residues of pendimethalin and its metabolite should appear in meat, milk, poultry and eggs since no feed items are involved with this use.

Recommendations:

TOX considerations permitting, DEB has no objections to this Section 18. An agreement should be made with the FDA regarding the legal status of the treated onions in commerce.

cc: Pendimethalin S.F., R.F., Section 18 S.F., Circ., F. Toghrol,
PMSD/ISB, TAS (S. Stanton).
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TS-H7509C:DEB:F.Toghrol:F.T.:RM:802:CM#2:5/8/89.