

US EPA ARCHIVE DOCUMENT

109701

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EEE BRANCH REVIEW

DATE: IN _____ OUT _____ IN 3/21/78 OUT 5/15/78 IN _____ OUT _____
FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

FILE OR REG. NO. 10182- RT

PETITION OR EXP. PERMIT NO. 8F2044

DATE DIV. RECEIVED 3/21/78

DATE OF SUBMISSION _____

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCT(S): I, D, H, F, N, R, S

PRODUCT MGR. NO. 17

PRODUCT NAME(S) Permethrin Technical

COMPANY NAME ICI,

SUBMISSION PURPOSE Registration of Technical

CHEMICAL & FORMULATION Permethrin Technical

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1. Introduction

Applicant proposes the registration of the technical product named Permethrin Technical Insecticide For Manufacturing Use Only in Formulating Insecticides. The technical product contains 91% of the insecticidally active ingredient. The common name of the active ingredient is either proposed or accepted as "Permethrin" and the active ingredient is a mixture of the cis and trans isomers of the chemical (3-phenoxyphenyl) methyl (+) cis-trans-3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate with a specified minimum 35% of the cis isomer and a maximum 65% of the trans isomer.

No crops or insects are mentioned on the label. The directions for use are "See Formulators Manual GFM001/77 for directions for use". This formulators manual was not submitted for review.

The label for another product was submitted along with the technical product label. The other product is called Ambush Insecticide, and is intended for use on lepidopterous pests.

Reviewer notes that the terms 'pyrethroid' or 'synthetic pyrethroid' do not appear upon the technical product label or upon the formulated product label.

2. Directions for Use

For Manufacturing Use Only in Formulating Insecticides.
See Formulators Manual GFM001/77 for directions for use.

3. Discussion of Data: EPA File Symbol 10182-RT.

Applicant does not submit separate data for the technical product; applicant references all the submitted environmental chemistry data in support of the technical product.

4. Conclusions

The environmental chemistry data requirements for the registration of a technical product are hydrolysis data and the activated sludge metabolism data to determine if the technical material can have an adverse effect on the environment as a result of discharge of manufacturing wastes.

The applicant has submitted the hydrolysis data, which will be reviewed under the request for registration of the formulated product Ambush Insecticide EPA File Symbol 10182-RI, which see.

The applicant has not submitted any data by title pursuant to the activated sludge metabolism of the technical material. Certain of the references or citations may contain information relative to the activated sludge data, when reviewed by title only. These references or citations will also be reviewed under the request for registration of the formulated product Ambush Insecticide.

5. Recommendations

No recommendations can be made at this time, since there is inadequate data upon which to base a recommendation.

The environmental chemistry data requirements for the registration of a technical product are hydrolysis and activated sludge metabolism data. The references pertaining to hydrolysis data will be evaluated in our consideration of EPA File Symbol 10182- RI Ambush Insecticide.

Here is an example of an adequate activated sludge metabolism protocol:

An activated sludge metabolism study using radiolabeled chemical or comparable techniques is required. Add synthetic sewage (nutrients) and radioisotopic material to activated sludge and aerate in a closed system for 23 hours; allow the sludge to settle for 30 minutes. Remove a liter of supernatant (effluent) for pesticide residue analysis including material balance. Add fresh synthetic sewage and test compound to the remaining sludge and repeat the cycle. Dosage should start at 0.1 ppm and increase by increments to 100 ppm. Effects on microbial population must be determined by daily total counts of viable organisms in sludge.

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Environmental Chemistry Section
Efficacy and Ecological Effects Branch