Shaughnessy No.: 107901

Date out of EAB: SEP 9 1987

To: Lois Rossi
Product Manager 21
Registration Division (TS 767C)

From: Emil Regelman, Supervisory Chemist
Review Section #3
Exposure Assessment Branch
Hazard Evaluation Division (TS 769C)

Attached, please find the EAB review of...

Reg./File # 21137-4

Chemical Name: Triforine

N,N'[1,4-piperazinediylbis(2,2,2-trichloroethylidene)bis formamide]

Type Product: fungicide

Product Name: Funginex

Company Name: EM Industries, Inc., representing CELAMERCK GMBH

Purpose: label changes -- additional uses

Date Received: 6/17/87 Action Code: 335

Date Completed: EAB # (s): 70752

Monitoring Study Requested: Total Reviewing Time:

Monitoring Study Volunteered:

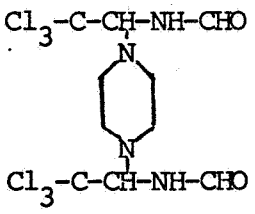
Deferrals to: _____ Ecological Effects Branch

_____ Residue Chemistry Branch

_____ Toxicology Branch

1. CHEMICAL:

chemical name: N,N'[1,4-piperazinediylbis(2,2,2-trichloroethylidene)bis formamide]
common name: triforine
trade name: Funginex
structure:



CAS #: 26644-46-2
Shaughnessy #: 107901

2. TEST MATERIAL: n.a.

3. STUDY/ACTION TYPE:

label changes -- additional uses -- in connection with tolerance petitions

4. STUDY IDENTIFICATION: n.a.

5. REVIEWED BY:

Typed Name: E. Brinson Conerly
Title: Chemist, Review Section 3
Organization: EAB/HED/OPP

E. B Conerly 9/8/87

6. APPROVED BY:

Typed Name: Emil Regelman
Title: Supervisory Chemist, Review Section 3
Organization: EAB/HED/OPP

SEP 9 1987

7. CONCLUSIONS:

EAB cannot concur with granting these additional uses at this time. These crops may entail a sizeable increase in the acreage treated, as well as a substantial increase in allowable application rates for apples, a not insignificant food. The registrant should supply relevant information on this issue.

Data EAB has reviewed are the following:

hydrolysis -- rapid in unbuffered solution, no half life calculated, no degradates identified
aerobic soil metabolism -- degradation occurs in aerobic, anaerobic, and sterile soils, apparently through chemical rather than microbial processes. The degradates were largly soil bound.
leaching -- parent is not a leacher, aged residues are
fish accumulation -- no accumulation in edible tissue

These studies, the most recent of which are from 1978, would not satisfy current standards.

We have no information on the following:

aqueous photolysis
soil photolysis
adsorption/desorption

8. RECOMMENDATIONS:

The additional uses should be denied until the information requested on expected increased use is received and evaluated. We further strongly recommend that the registrant begin at least laboratory environmental fate studies which would conform to current standards.

9. BACKGROUND:

Labelling for apple use calls for ca. 4.8 - 15 oz a.i./A/application with a 10 application maximum [48 - 150 oz/season]. The old labelling calls for 7.2 - 10 oz a.i./A/application with a 5 application maximum [36 - 50 oz/season]. For tomatoes, the labelling calls for ca. 0.17 oz a.i./A. Current uses allow up to 16 oz a.i./A.

The environmental fate data base is marginal, due to its age, the most recent study dated 1978. No registration standard is currently scheduled for this compound.

The acute toxicity of triforine appears to be low (in the gm/kg range), and due to its apparent lack of persistence, is not an obvious ground water problem.

10. DISCUSSION OF INDIVIDUAL TESTS OR STUDIES: n.a.

11. COMPLETION OF ONE-LINER: n.a.

12. CBI APPENDIX: n.a.