

9-29-77
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EEE BRANCH REVIEW

DATE: IN _____ OUT _____ IN 1/24/77 OUT 9/29/77 IN _____ OUT _____
FISH & WILDLIFE ENVIRONMENTAL CHEMISTRY EFFICACY

FILE OR REG. NO. 2548-AG, AE

PETITION OR EXP. PERMIT NO. _____

DATE DIV. RECEIVED _____

DATE OF SUBMISSION _____

DATE SUBMISSION ACCEPTED 3 CID-2A-yes

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

PRODUCT MGR. NO. 11 Miller

PRODUCT NAME(S) Detia (peflets; Gas ext)

COMPANY NAME Research Products Company

SUBMISSION PURPOSE Registration (grain silos) and waiver request
of EC data

CHEMICAL & FORMULATION Aluminum phosphide (A¹P)

- 1.0 Introduction
- 1.1 Detia (gas and pellets). Aluminum phosphide
- 1.2 Percent active: 57
- 2.0 Directions for Use

Directions/Pellets: Pellets are designed for use in automatic dispensers.

1. Determine dosage and pour the required number of pellets into the dispenser reservoir.
2. Start transfer of the commodity.
3. Allow the bin to fill for a minute or so and then activate the dispenser.
4. Check the calibration to see that the proper addition rate has been achieved.
5. Upon completion of the transfer the dispenser should be empty. If a few pellets remain place them back in the pellet flask.
6. Close and seal the fill opening and post a danger sign.

Directions/Tablets: Tablets are designed for the fumigation of commodities stored in flat storage. The procedure is more complicated than that for pellets and calls for more planning, organization and in practically every case several workers under the supervision of a coordinator. The basic procedure is to uniformly insert, or probe, the required number of tablets into the commodity pile with especially designed probes. It is essential that a pre-fumigation plan be adopted and followed.

Suggested Dosage Schedule

	Per 1000 cu.ft.	Per 1000 Bu.	Per Ton (2000 bbls.)
Pellets.....	165-240.....	210-300.....	8-10
Tablets.....	75-145.....	90-180.....	3-6

The tablet dosage will appear high when compared to that for pellets as one tablet is the equivalent of 5 pellets.

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Exposure Guide

Pellets

<u>Commodity Temperature</u>		<u>Required Exposure Period</u>
C°	F°	
4° & below	Below 40°	Do Not Fumigate
5°-11°	40°-53°	8 days (192 hrs.)
12°-15°	54°-59°	4 days (96 hrs.)
16°-20°	60°-68°	3 days (72 hrs.)
Above 20°	Above 68°	2 days (48 hrs.)

Tablets

4° & Below	Below 40°	Do not Fumigate
5°-11°	40°-53°	10 days (240 hrs.)
12°-15°	54°-59°	5 days (120 hrs.)
16°-20°	60°-68°	4 days (96 hrs.)
Above 20°	Above 68°	3 days (72 hrs.)

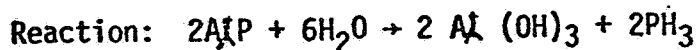
1. As a precautionary measure test working areas before work begins for phosphine using appropriate testing devices.
If detected, workers should wear appropriate respiratory protection equipment until all traces of gas have vanished.

2.1 Disposal

Flush empty containers several times with water, crush and bury. Bury closures.

3.0 Discussion of Data

No Environmental Chemistry data submitted (see sect. 4.0).
Label states pellets reacts with air and releases phosphine in one hr. Tablets react with air to release phosphine in 3 hrs.



4.0 Conclusions

Registrant has asked for a waiver of Environmental Chemistry Data (namely, Soil Metabolism and Effect of Pesticide on Microbes).

5.0 Recommendations

5.1 We give no opinion.

5.2 We believe use inside grain elevators does not fall under our environmental chemistry as it is an indoor use.

Ronald E. Ney, Jr. 10/4/77

Robert F. Carsel 10/4/77

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Environmental Chemistry Section

Efficacy and Ecological Effects Branch