



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

9-17-92

SEP 17 1992

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

MEMORANDUM:

SUBJECT: REVIEW OF THE REENTRY STATEMENT FOR A NEW REGISTRATION OF A
GRANULAR ACEPHATE PRODUCT

FROM: Radamés Lozada, Chemist

TO: Albin Kocialski, Acting Section Head
Registration Section
Chemical Coordination Branch
Health Effects Division (H7509C)

THRU: Mark I. Dow, Ph.D., Section Head
Special Review and Registration Section II

Larry C. Dorsey, Acting Chief
Occupational and Residential Exposure Branch
Health Effects Division (H7509C)

Please find below, the OREB review of:

DP Barcode: D175184

Pesticide Chemical Code: 103301

EPA Reg. No.: 059639-TL

EPA MRID No.: none

Review Time: 1 day

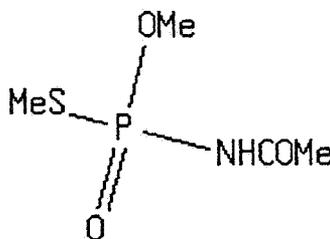
PHED: no

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I. INTRODUCTION:

A. Background:

Orthene® 15 Granular is a new granular formulation for in-furrow application to cotton to control aphids, thrips and cutworms. Acephate is the common name of the active ingredient (AI) found in Orthene® 15 Granular. The chemical structure of the AI is shown below.



Additional identifying characteristics of acephate include:

Chemical Names:	O,S-dimethylacetylphosphoramidothioate
Molecular Formula:	C ₄ H ₁₀ NO ₃ PS
Molecular Weight:	183.16
CAS Registry No.:	30560-19-1

The following table summarizes the toxicological information, for acephate, found in the Tox Oneliners database, dated 09/10/92, provided by Krystyne K. Locke RS-I/TB-I/HED.

Study	Acephate Technical	Acephate 23.7 %
Acute Oral	LD ₅₀ = 1.4 g/kg (Male)	LD ₅₀ = 1.90 g/kg (Male)
	LD ₅₀ = 1.0 g/kg (Female)	LD ₅₀ = 0.97 g/kg (Female)
	Toxicity Category 3	Toxicity Category 3

Study	Acephate Technical	Acephate 23.7 %
Acute Dermal	LD ₅₀ > 10 g/kg (Male) Toxicity Category 3	LD ₅₀ = 3.2 g/kg (Male) Toxicity Category 3
Acute Inhalation	LD ₅₀ > 61.7 mg/L/4 hr Toxicity Category 4	LD ₅₀ > 42 mg/L/hr Toxicity Category 4

B. Purpose:

OREB has been requested to review the proposed reentry statement of this new acephate product. The registrant has requested that this product not be subject to any of the reentry data requirements and has proposed a reentry interval statement of "until dusts have settled" in lieu of the 24 hour interval stated in the registration standard for then-registered formulations of acephate products on agricultural crops.

II. DETAILED CONSIDERATIONS:

The registrant requested a waiver of the conditional requirement for Reentry Protection Studies (40 CFR 158.390). The registrant stated the following:

- ✓ This new formulation results in soil incorporation of the granular material at planting.
- ✓ No plants are present at the time of application.
- ✓ After germination, the active ingredient, is taken up by plants through the roots and no dislodgeable residues would be available.
- ✓ The product is applied at planting at least 2 inches deep in the furrow. Turn rows and any spills are to be soil incorporated and there would be minimal soil availability of the product.

The registrant then concluded that setting a reentry following the completion of planter-application and settling of any dust associated with the application process would be adequate and as such is written on the proposed label.

III. CONCLUSIONS:

OREB agrees with the registrant that due to the type of application of this new product no dislodgeable residues are expected and the reentry exposure should be minimum or negligible. Therefore OREB believes that the waiver of the conditional requirement for Reentry Protection Studies (40 CFR 158.390) should be granted. However, the recently instituted Worker Protection Standard for Agricultural Pesticides (40 CFR 156) indicates that any pesticide product of Toxicity Category of 3 or 4 should have a restricted-entry interval of 12 hours. Therefore OREB recommends that the Reentry Statement for Orthene® 15 Granular should read as follow: "Do not enter treated areas for 12 hours after application".

IV. REFERENCES:

1. The Royal Society of Chemistry. 1988. The Agrochemical Handbook.
2. Krystyne K. Locke, Personal Communication with Radamés Lozada, September 15, 1992.
3. Tox Oneliners Database, dated 09/10/92.

cc: R. Lozada, OREB
Rob Forrest, PM 14 IRB/RD (H7505C)
Correspondence File
Chemical File (Acephate)
Circulation