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

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OFFICE OF  
PESTICIDES AND TOXIC  
SUBSTANCES

MEMORANDUM

SUBJECT: ID #059639-TL: Registration for Orthene®15 Granular (Acephate) on Cotton In-Furrow Application (CBTS #9490, D #175178).

FROM: W. T. Chin, Ph.D., Chemist  
Tolerance Petition Section III  
Chemistry Branch, Tolerance Support  
Health Effects Division (H7509C)

*W.T. Chin*

THRU: P. V. Errico, Section Head  
Tolerance Petition Section III  
Chemistry Branch, Tolerance Support  
Health Effects Division (H7509C)

*P.V. Errico*

TO: Robert Forrest, PM #14  
Insecticide-Rodenticide Branch  
Registration Division (H7505C)

Valent U.S.A. Corp. requests for waiver from residue data requirements for the registration of Orthene®15 Granular (EPA Reg. #59639-pending) a new granular formulation of acephate, for an at-plant use on cotton in-furrow application complementing the currently registered Orthene®90 S.

Under 40 CFR 180.108, tolerances are established for the combined residues of acephate (O,S-dimethyl acetyl phosphoramidothioate) and its cholinesterase inhibiting metabolite methamidophos (O,S-dimethyl phosphoramidothioate) at 0.1 to 15 ppm in or on numerous commodities, including cottonseed at 2 ppm, eggs, milk, meat and meat by-products of cattle, goats, hogs, horses, poultry and sheep at 0.1 ppm.

Under 40 CFR 186.100, tolerances are established for the combined residues of acephate and methamidophos at 8.0 ppm on cottonseed meal and 4 ppm on cottonseed hulls.

A registration standard has been issued for acephate which is a List A chemical. The Residue Chemistry Chapter is dated 1/22/82. The Guidance Document to the Acephate Registration Standard is dated September, 1987.

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DETAILED CONSIDERATIONS

Orthene®15 Granular is a new granular formulation containing 15% of acephate by weight. The proposed use is given below:

<u>Crop</u>	<u>Insects</u>	<u>Rate/A</u>	<u>Use Instructions</u>
Cotton	Thrips aphids cutworms	6-6.67 lbs (1 lb ai/A)	Apply with in-furrow granular application equipment at planting. Minimize surface application by ensuring adequate application depth (2" minimum) and immediate coverage of furrow with soil. Calibrate and adjust application equipment to insure proper rate and accurate placement. Soil incorporate (disc) any surface material present in turn-rows immediately after application.

The petitioner's request for waiver from the magnitude of the residue data requirements is based on the following reasons:

1. The use pattern for Orthene®15 Granular on cotton at planting is identical to that for the in-furrow application currently registered for Orthene® 90 S with the exception that application is by granular rather than liquid spray. The cotton farmers who apply Orthene®15 Granular at planting will obtain the same protection as applying Orthene® 90 S.
2. Since the rate of 1.0 ai/A is proposed for both Orthene®15 Granular and Orthene® 90 S, identical exposure should be expected.
3. Orthene® is currently registered on cotton for seed treatment uses, in-furrow spray at planting and foliar sprays at up to 1 lb acephate per acre with a PHI of 21 days. The proposed in-furrow granular use occurs only at planting which is 100 to 110 days before harvest. The residues, if any, should be adequately covered by the established tolerances of 2 ppm in cottonseed, 8 ppm on cottonseed meal, and 4 ppm on cottonseed hulls.

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CBTS's Comment/Conclusion

Since the proposed maximum rate (1 lb ai/A) for Orthene®15 Granular remains unchanged compared with other Orthene® uses on cotton, but the PHI (100-110 days) for the proposed in-furrow granular use on cotton at planting is much longer than the 21 day PHI by which foliar sprays of Orthene® are currently registered on cotton, CBTS does not expect that the combined residues of acephate and its metabolite methamidophos in/on cottonseed, cottonseed meat, and cottonseed hulls will exceed the established tolerances, if a restriction is added to the proposed label not to use acephate of methamidophos formulations foliarly in conjunction with the at-plant use. CBTS, with a restriction against foliar use of acephate and methamidophos, has no objections to this registration for Orthene® 15 Granular on cotton at-plant in-furrow application. If it is the registrant's intention to use both the proposed at-plant use and the registered foliar sprays of acephate and methamidophos formulations, field residue data reflecting both at-plant and foliar applications at maximum rate and minimum PHI's will be needed. Such data should reflect use of the granular formulation for the in-furrow application. Based on our past experiences, we will not translate data from liquid formulations to a granular.

Our conclusion is based on an at-plant use only. Any changes from an at-plant use for the granular formulation may require additional field residue data.

We did not review the inerts for the granular formulation. Clearance of inerts is now under the preview of Registration Division.

cc: Circu, RF, W.T.Chin, Acephate SF.

RDI: P.V.Errico (8/12/92), R.Loranger(8/12/92)  
H7509C: CBTS: CM#2, RM812, 305-5352, W.T.Chin,wc(8/12/92)