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

JUN 5 1987

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

Memorandum

Subject: WA-870011: Section 24(c) Registration
for DES-I-CATE (Endothall) on Hops;
MRID No. 195097; RCB No. 2238.

From: Francis B. Suhre, Chemist *Francis B. Suhre*
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Thru: Edward Zager, Section Head *E. Zager*
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To: Richard Mountford, PM-23
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Washington State, Department of Agriculture, has issued a Section 24 (c) registration for DES-I-CATE on hops; a 28 day PHI is stipulated DES-I-CATE, EPA Reg. No. 4581-206, is currently registered for use on hops with an 85 day PHI.

DES-I-CATE is a (defoliant/desiccant) product of Pennwalt Corp.; it is formulated as an aqueous concentrate containing 15.9% Mono(N,N-dimethylalkylamine) salt of endothall (7-oxabicyclo(2.2.1) heptane-2,3-dicarboxylic acid) as its active ingredient; equivalent to 5.5% (0.52 lbs. a.i./gallon) endothall.

A tolerance is established (40 CFR 180.293) for residues of endothall in or on hops at 0.1 ppm.

The metabolic nature of endothall in plants and animals is adequately understood. The residue of concern is endothall, the parent compound.

DES-I-CATE is registered for use on hops to control "hops sucker" growth. Apply 0.5 to 1.0 lb. a.i./Acre to basal growth of hops 1 or 2 times per season (maximum of 2.0 lbs. a.i. per acre per season). Make first application when main hops shoots are 2 to 3 feet high on string. Repeat 7-14 days later when hops suckers are 1 to 2 feet long. Do not apply within 85 days of harvest. Apply by ground equipment only.

The use called for by the Section 24 (c) Supplemental Label is identical to the registered use on hops with the exception that a 28 day PHI is stipulated as opposed to an 85 day PHI.

Residue data were obtained by a gas-chromatography/nitrogen specific detection method entitled, "Analytical Method for Residues of Endothall in Hops" was previously reviewed in connection with PP#5E3246 (see, M. Firestone, memo of 6-7-85). The method's limit of sensitivity was reported to be 0.1 ppm; recovery of endothall from hops fortified at 0.1 to 0.5 ppm ranged from 62 to 85%. We concluded that the method is adequate for enforcement purposes.

Residue data from a field trial on hops conducted during 1986 in Oregon were provided. Hops were treated with DES-I-CATE at 0, 0.52, 1.04, and 2.08 lbs. a.i./Acre and harvested 27 days after treatment. No finite residues of endothall were found (ND<0.1 ppm).

Conclusions

1. The residue of concern in or on hops is the parent compound, endothall; a tolerance is established (40 CFR 180.293) for residues of endothall in or on hops at 0.1 ppm.
2. Residue data indicate that the established tolerance (0.1 ppm) will not be exceeded as a result of this 24 (c) registration.

Recommendation

We have no objection to this Section 24 (c) Registration.

cc:R.F.,Circu,Reviewer,S.F.,Section 24(c) File, PMSD/ISB
RDI:EZ:6/5/87:KHA:6/5/87
TS-769:RCB:FBS:fbs:557-1889:CM#2:RM:814:6/5/87.