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EEE BRANCH REVIEW

DATE: IN 2/2/78 OUT 7/6/78 IN \_\_\_\_\_ OUT \_\_\_\_\_ IN \_\_\_\_\_ OUT \_\_\_\_\_

FISH & WILDLIFE

ENVIRONMENTAL CHEMISTRY

EFFICACY

FILE OR REG. NO. 359-00AIU

PETITION OR EXP. PERMIT NO. \_\_\_\_\_

DATE DIV. RECEIVED 1/13/78

DATE OF SUBMISSION \_\_\_\_\_

DATE SUBMISSION ACCEPTED \_\_\_\_\_

TYPE PRODUCTS(S): I, D, H, (S) N, R, S Fungicide

DATA ACCESSION NO(S). 232711, 232703

PRODUCT MGR. NO. 21, E. Wilson

PRODUCT NAME(S) Iprodione, Chipco 26019, RP 26019

COMPANY NAME Rhodia, Incorporated

SUBMISSION PURPOSE Manufacturing use

CHEMICAL & FORMULATION [3-3, 5 dichlorophenyl-N-(1-methylethyl)-2,

4-dioxo-1-imidazolidinecarboxamide] 95.0%

Inert ingredients 5.0%

100.0      Pesticide Use

Active ingredient for manufacturing use only.  
The product is a foliar applied fungicide for the prevention and control of diseases of turfgrass.

100.1      Application method/Directions/Rates

Begin applications when conditions favor disease or when the disease first appears and repeat at recommended interval. Under severe conditions the higher rate and/or shorter interval of application are recommended. Do not cut treated areas or irrigate until foliage is completely dry.

On all diseases apply as a foliar spray, using 2 to 10 gallons of water per 1000 square feet as indicated in the following table.

<u>Disease</u>	<u>Interval of Application</u>	<u>Rate oz.ai/acre</u>
Dollar Spot	14-21 days	.75 - 1.0
Brown Patch	14-21 days	.75 - 1.0
Helmin thosporium	14-21 days	1.0
Leaf Spot	14-21 days	1.0
Melting out	14-21 days	1.0

100.3      Precautionary Labeling

Environmental Hazards:  
Permits may be required for discharges containing this pesticide into lakes, streams, ponds, or public waters. For guidance contact your regional office of the EPA.

Storage and Disposal, Prohibitions:  
Do not contaminate feed and foodstuffs.

101.0      Chemical and Physical Properties

1. Common name:                      Iprodione (Anfor, BSI)

2. Chemical name: 3-(3,5-dichlorophenyl)-N-(1-methylethyl)-2,4-dioxo-1-imidazolidine-carboxamide
3. Structural formula:
4. Molecular formula:  $C_{13}H_{13}Cl_2N_3O_3$
5. Molecular weight: 330.17
6. Appearance: Non-hygroscopic, off-white, cream colored powder.
7. Odor: Odorless
8. Melting point:  $136^{\circ}C$
9. Solubility at  $20^{\circ}C$ :
 

	Grams RP26019 (approx.) in 1 liter solvent
water	0.013
Ethanol	25
Acetone	25
Methyl chloride	500
10. Stability: Stable under normal conditions
11. Density: 1.4 gm/cc

102.0 Behavior in the Environment

See the Chipco 26019 review by G.L. Gavin dated 3/21/77.

## 103.0 Toxicological Properties

### 103.1 Acute Toxicity

1. Mammal

Rat Acute Oral LD<sub>50</sub> 3,700 mg/kg (Technical)

Rat Acute Oral LD<sub>50</sub> 12,500 mg/kg (50% WP)

2. Bird, Avian Acute LD<sub>50</sub>

Bobwhite Quail	930 mg/kg	(Core)
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Mallard Duck	10,400 mg/kg	(Supplemental)
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3. Fish, Fish Acute 96 Hour LC<sub>50</sub>

Rainbow Trout	6.70 ppm	(Core)
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Bluegill Sunfish      2.25 ppm      (Core)

Channel Catfish	2.63 ppm	(Core)
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See appendix for study validation.

4. Aquatic Invertebrate Acute Toxicity--LC<sub>50</sub>

Daphnia pulex            4.0 ppm            (Supplemental)

D. magna .43 ppm (Core)

D. magna	7.2 ppm	(Core)
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## 5. Phytotoxicity

## 6. Beneficial Insects

### 103.3.0 Subacute Toxicity

Avian Subacute Dietary LC<sub>50</sub>

Bobwhite Quail      9,200 ppm      (Core)

Mallard Ducks >20,000 ppm (Core)

103.4.0 Chronic Toxicity

Avian reproduction study--Bobwhite Quail. Treatment did not appear to have detrimental effect on body weight, feed consumption, mortality, egg production, fertility or hatchability in Bobwhite Quail. NOTE: Treatment did not follow acceptable protocol, study invalid. See appendix for study validation.

104.0 Hazard Assessment

No hazard assessment will be made--manufacturing use only.

104.1.3 Adequacy of Toxicity Data

The following studies are considered adequate to support registration of the product.

a. Bird Studies:

The avian subacute dietary studies for waterfowl and upland gamebird are acceptable. The acute oral toxicity study on Mallard Ducks was unacceptable at this time because the number of birds dosed was not reported. The study on Bobwhite Quail will be accepted, however studies in the future must be conducted on 16 week old birds with an observation period of 14 days and bird weights and food consumption reported.

b. Fish Studies:

The requirement for an acute toxicity test on both warm water and cold water fish has been satisfied. The test on channel catfish, rainbow trout and bluegill are acceptable.

c. Aquatic Invertebrate:

The requirement for an acute toxicity study for an aquatic invertebrate has been satisfied. Two studies (one by Cannon Laboratories dated October 11, 1977 and one by Union Carbide E.S. dated November 23, 1977) are acceptable. The studies by

D. Ambrosi et al., dated June 3, 1977 is not acceptable.

107.0

Conclusions

No conclusion regarding environmental safety will be made for technical material. The Environmental Safety Section notes that minimum data required for registration of the product is ~~not~~ adequate.

107.4

Data Adequacy:

The following studies have been determined adequate to support registration.

1. The determination of the acute Oral LD<sub>50</sub> in Bobwhite Quail for 26019 R.P., dated December 13, 1973.
2. Four-day static fish toxicity studies with RP 26019 technical in Rainbow Trout, Bluegills and Channel Catfish; dated June 12, 1974.
3. The effects of dietary 26019' R.P. and Technical Dieldrin on young Mallard Ducks. An 8 day subacute toxicity study, conducted June 3, 1974.
4. The effects of dietary 26019 R.P. and Technical Dieldrin on young Bobwhite Quail. A 12 day subacute toxicity test.
5. The acute toxicity of R.P. 26019 technical to the water flea Daphnia magna. Straus; by A.G. Vilkas, dated November 23, 1977.
6. 48 hour static LC<sub>50</sub> of R.P. 26019 technical Daphnia magna; by S. Roberts dated October 11, 1977.

The following studies have been determined inadequate to support registration of R.P. 26019.

1. The determination of the acute oral LD<sub>50</sub> in Mallard Ducks for 26019 R.P., dated April 29, 1974. This study may satisfy

minimum requirements if the number of birds tested per trial is reported.

2. Toxicity of R.P. 26019 to Daphnia (Daphnia Pulex), dated June 3, 1977.
3. The effect of dietary 26019 R.P. on body weight, feed consumption, reproduction and the production of 26019 R.P. residues in body tissues and eggs of Bobwhite Quail, dated October 29, 1974.

107.5 Data Requests

The Mallard avian acute oral study may be acceptable to support registration if the number of birds tested per dose level in all three trials is submitted. When the information is received the test will be reevaluated.

107.7 Recommendations

The minimum study requirements necessary for registration has been met. Since this evaluation is concerned with the technical material and not a specific use pattern, a hazard evaluation was not made.

John T. Tice  
Environmental Safety Section  
EEEB-RD WH-567  
July 6, 1978

