

US EPA ARCHIVE DOCUMENT

CRITICAL REVIEW

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TYPE PRODUCT(S): (1) I, E, I, E, E, E

DATE ACCESSION NO(S). \_\_\_\_\_

PRODUCT NO. NO. 15

PRODUCT NAME(S) Ortho Diazinon Granular Fire Ant Killer

COMPANY NAME Chevron Chemical Co.

SUBMISSION PURPOSE Label amendments.

CHEMICAL & FORMULATION: Diazinon \_\_\_\_\_ 5%  
Inert Ingredients \_\_\_\_\_ 95%

CONCLUSIONS & RECOMMENDATIONS

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Introduction - The submitted data are intended to support a claim for control of imported fire ants. The present label claims aid in control of this pest. The data are also intended to support change of the dosage of 0.5 cup in a 3 ft. radius <sup>circle</sup> over and around each fire ant mound to a dosage rate of 0.5 cup in a 3 ft. diameter circle over and around each fire ant mound.

Data summary - The submitted data consist of 6 reports. Ortho Diazinon Soil & Turf Insect Control was tested instead of the subject product (Ortho Diazinon Granular Fire Ant Killer). These two formulations are the same according to the confidential statements of formula.

Report No. 1789-11 - Texas - Chevron Chemical Co. test. This test was conducted over 8 weeks. A 3 ft diameter circle was treated around each mound at 0.5 cup / 3 ft. circle. There was 1 mound / replicate and 10 replicates / treatment. Mean mound size was 7" diameter.

Test results are summarized as follows.

Treatment	Dosage	Percent Colonies heading by treatment at 4 weeks	Percent Control at 4 weeks	Total New Colonies thru 8 weeks	Percent Colony Control at 8 weeks
Ortho Diazinon SG	0.5 cup / 3 ft. Diam.	0	100	15	100
Yield	" "	0	100	32	100
TC water	—	30	30	26	40
TC no water	—	10	10	25	60

Report No. 1789-12 - Texas - Chevron Chemical Co. Test.

This test was conducted over 8 weeks. A 3ft. diameter circle was treated around each mound at 0.5 cup / 3ft circle. There was 1 mound / replicate and 10 replicates / treatment. Mean mound size was 30" in diameter. Test results are summarized as follows.

Treatment	Dosage	Percent Colonies heading by treatment at 4 weeks	Percent Control at 4 weeks	Total MW Colonies thru 8 weeks	Percent overall Colony Control at 8 weeks
ortho Digzinon SG	0.5 cup / 3ft. dia	10	100	22	98
Hi-yield	" "	0	100	28	100
TC-water	_____	50	50	22	48
TC-No water	_____	50	50	13	52

Report No. 1845-21 - Georgia - University of Georgia Test.

This test was conducted over 99 days. A 3ft. diameter circle was treated around each mound at 0.5 cup / 3ft. circle. There was ~~one~~ plot of 0.1 acres / replicate with 4 replicates / treatment. Mean mound size was 27.5" in diameter. Test results are summarized as follows.

Treatment	Dosage	Percent Reduction in Sq. cm Ft of mounds / acre		Percent Reduction in Mound Activity	
		63 days	99 days	63 days	99 days
ortho Digzinon SG	0.5 cup	60.6	37.2	14.3	5.9
ortho 755 (Drench)	1.5 TSP / gal / ft <sup>2</sup>	93.4	79.1	59.7	77.0
ortho 755 (Dry)	1-2 TSP / ft <sup>2</sup>	74.4	26.5	39.6	5.1
TC		0	0	0	0

Report No. 684-27 - Florida - Chevron Chemical Co. Test.

This test was conducted over 5 weeks. A 3 ft. radius circle was treated around each mound at the rate of 0.5 cup. There was 1 mound/replicate and 10 replicates/treatment. Mean mound size was 14" in diameter. Test results are summarized as follows.

Treatment	Dosage Rate	Mean Percent Control of original mounds at 5 wks	No. New Mounds during treatment	Mean Percent Control of new mounds at 5 wks.
Ortho Diazinon 5G	0.5 cup/3 ft radius	100	1	100
SMC Bait	" "	100	8	100
UTC	_____	20	8	0

Report No. 1845-36 - North Carolina - North Carolina State University Test.

This test was conducted over 14 days. A 3 ft. circle around each mound was treated at 1.5 tbs/mound. The report does not state if this is 3 ft in diameter or radius. There was one replicate of 10-30 mounds/treatment. Mean mound size was not specified. Results are summarized as follows.

Treatment	Percent Colony Reduction at Indicated days				
	1	2	4	7	14
Ortho Diazinon 5G	33.3	59.3	59.3	81.3	85.2

Report No. 1846-22 - Florida - Chevron Chemical Co. Test.

This test was conducted over 6 weeks. An area of 1 sq. yd. over each mound was treated at 0.5 cup/mound. There was 1 mound/replicate and 10 replicates/treatment. Mean mound size was 25" in diameter. Test results are summarized as follows.

Original Mounds

Treatment	Dosage Rate	Mean percent control at 6 weeks
Ortho Diazinon 5G treated	0.5 cup/4d <sup>2</sup>	85
Ortho Diazinon 5G untreated	" "	93
UTC	—	14

New or Relocated Mounds

Treatment	Dosage Rate	<sup>1</sup> New Number of Mounds on 9-25	<sup>2</sup> Mound Activity on 10-23	<sup>3</sup> Number of New Mounds on 10-9	<sup>3</sup> Mound Activity on 10-23
Ortho Diazinon 5G treated	0.5 cup/4d <sup>2</sup>	10	1.0	8	1.0
Ortho Diazinon 5G untreated	" "	11	1.0	7	1.0
UTC	—	2	4.0	6	4.0

- 1) Treated on 9-25
- 2) Treated on 10-9
- 3) 1.0 - no activity
- 4.0 - high activity

Results for Report No. 1789-11 indicated 100% control of original colonies for the ortho Diazinon SG at 4 weeks with no colonies needing re-treatment during the 4 weeks. There were 15 new colonies thru 8 weeks with 100% control at 8 weeks.

Results for Report No. 1789-12 indicated 100% control of original colonies for the ortho Diazinon SG at 4 weeks with 10% of the colonies needing re-treatment during the 4 weeks. There were 22 new colonies thru 8 weeks with 100% control at 8 weeks.

Results for Report No. 1845-21 indicated poor activity for the ortho Diazinon SG. The report states "control of active mound numbers was poor or non-existent for the other treatments", meaning other than the ortho 755 drench (a 0.17% acetate solution).

Results for Report No. 684-27 indicated 100% control of original and new colonies at 5 weeks, with only one new mound for the ortho Diazinon SG during the 5 week test period.

Results for Report No. 1845-36 indicated 85.2% control for the ortho Diazinon SG at the end of the 14 day test period.

Results for Report No. 1846-22 indicated 85% control for watered in ortho Diazinon SG at 6 weeks. Unwatered in ortho Diazinon SG showed 93% control at 6 weeks. Results for

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New colonies indicated treatment of new mounds appearing on 9-25 and 10-9 resulted in ratings for the Ortho Brazinon 56 showing no mound activity in the mounds after treatment.

Conclusions - Based on results for Report Nos. 1789-11, 1789-12, 1845-36, 1846-22 and 684-27, the data support a claim for imported fine ant control.

The proposed change in directions to a 3 ft. diameter overband around a fine ant mound is supported by Report Nos.

1789-11, 1789-12, 1845-36 and 1846-22.

Report No. 1845-36 specifies a 3 ft circle. It should be confirmed that this is a 3 ft diameter for the record. Report No. 1845-21 does not support the 3 ft diameter rate.

Report No. 684-27 is for a rate of 0.5 cup / 3 ft radius, not 3 ft. diameter. This report cannot be used in support of the 3 ft. diameter. Based on Report Nos.

1789-11, 1789-12, 1845-36, and 1846-22 the 3 ft. diameter change would be acceptable.

R. S. Van Oenburgh 7-23-85