CASE GS0097 CHLOROTHALONIL PM 400 08/03/82

CHEM 081901 Chlorothalonil (tetrachloroisophthalon

BRANCH EEB DISC 40 TOPIC 05050542

FORMULATION 00 - ACTIVE INGREDIENT

FICHE/MASTER ID 00068753 CONTENT CAT 01

Fink, R.; Beavers, J.B.; Brown, R. (1977) Final Report: Acute Oral LD50--Mallard Duck: Project No. 111-109. (Unpublished study, including submitter summary, received Jan 19, 1978 under 677-229; prepared by Wildlife International Ltd. and Washington College, submitted by Diamond Shamrock Agricultural Chemicals, Cleveland, Ohio; CDL:232729-A)

SUBST. CLASS = S.

DIRECT RVW TIME = (MH) START-DATE END DATE

REVIEWED BY: Daniel Rieder
TITLE:
ORG:
LOC/TEL:
SIGNATURE: Daniel Rieder DATE: 6/24/83

APPROVED BY:
TITLE:
ORG:
LOC/TEL:
SIGNATURE: DATE:

FORMULATION:

% a.i.	SC #	CHEMICAL NAME
96% Technical DS-2787		Tetrachloroisophthalonitrile (Chlorothalonil)

Compound Code: TDX-77-0111

IA	IB	T	(FW)	EC	R		

Validator: D. J. Urban

Date: 6/14/78

Test Type: 00068753

Avian Acute Oral LD_{50} - Mallard Duck

Test ID.# ES-C1

CITATION: Accession #232729; Prepared by Joanne B. Beavers, Wildlife International, LTD., East Kennedy St., Easton, Maryland, 21601, Project No. 111-109; Dated : Dec. 7, 1977; Submitted by Diamond Shamrock Corporation, 1100 Superior Avenue, Cleveland, Ohio, 44114.

VALIDATION CATEGORY: Core

RESULTS: The acute oral LD_{50} of Chlorothalonil technical in the Mallard Duck is estimated to be greater than 4640 mg/kg. There were no mortalities at any dosage level tested. At the 4640 mg/kg dose level the birds exhibited symptoms of lethargy and lower limb weakness on Day 1, but appeared asymptomatic by Day 2. One bird at this level developed conjunctivitis which lasted through Day 6. Also, there was a reduction in body weight at this level. Birds at all other dose levels appeared normal throughout the test period.

- Negative Controls - no mortality; normal appearance and behavior.
- Dieldrin Control - LD_{50} is 36 mg/kg (29 to 44 mg/kg).

VALIDATION CATEGORY RATIONALE: This study deviated from accepted standard protocol in two respects: (1) the age of the birds tested was 14 days instead of "not less than 16 weeks old...", and (2) the post dosing observation period was only 8 days, not the "minimum of 14 days.....". This protocol, however, has been and is currently accepted by this Section (see Memo by J. Akerman dated 3/13/78 - Validation of Avian Acute Oral LD_{50} Studies). This protocol is being re-reviewed by the Agency.

CATEGORY REPAIRABILITY/RATIONALE: N/A

The testmaterial is 96% pure chlorothalonil as per telephone conversation with Jerry Lucietta of Diamond Shamrock, 212-694-4784.

Conc.	# tested	mortality
0	50	0
215	10	0
464	10	0
1000	10	0
2150	10	0
4640	10	0

FORMULATION:			IA	IB	T	FW	EC	R		
% a.i.	SC #	CHEMICAL NAME	Validator:					Date:		
96		Chlorothalonil	Larry Turner					6/19/78		
			Test Type: Avian acute oral LD_{50} Mallard duck							
			Test ID.# ES-C1							

CITATION: Beavers, Joann B. and Robert Fink. 1977. Acute oral LD_{50}- Mallard duck, DTX-77-0111, final report. 11p. Study conducted by Wildlife International, Diamond Shamrock Chemical Company (acc. # 232729). Referenced by Chevron Chemical Company, Reg. #239-EUGE and 239-EUGI.

RESULTS: Mallard duck acute oral $LD_{50} > 4640$ mg/kg. No mortality occurred at any dose level, although transient toxic symptioms of lethargy, weakness, and conjunctivitis were noted in two birds at the highest level of 4640 mg/kg. Food consumption and weight gain were somewhat reduced at 4640 mg/kg.

VALIDATION CATEGORY: Core

CATEGORY RATIONALE: Classified as core in accordance with memo by J. Akerman (3/13/78).

ABSTRACT: Fourteen day-old mallard ducks were given single doses of chlorothalonil of 0 (control), 215, 464, 1000, 2150 and 4640 mg/kg. Procedures generally followed the proposed guidelines except as noted:

1. Age of birds was only 14 days.
2. Doses were farther apart than recommended.
3. No mention was made of fasting birds prior to dosing.
4. Percentage of active ingredient was not reported.
5. Observations were only for 8 days rather than 14 days.

No statistical analysis was performed because there was no mortality.