

5-4-87

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TDMS

DATA EVALUATION RECORD

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CASE GS

PM

CHEM Diazinon

BRANCH EEB

DISC

FORMULATION Technical

FICHE/MASTER ID HC05TA01

CITATION: Hudson, R.H.; Tucker, R.K; Haegele, M.A. (1984)
Handbook of Toxicity of Pesticides to Wildlife.
2nd edition USDI, FWS Resource Publication 153.
Washington, DC.

SUBST. CLASS=

OTHER SUBJECT DESCRIPTORS
PRIM:

DIRECT REVIEW TIME= 1 day (MH) START DATE Dec 1985 END DATE Dec 1985

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This is a summary paper but is sound and useful in hazard assessment. The paper shows that 89 percent ai diazinon (technical) has an LD₅₀ = 3.54 mg/kg for Mallards, LD₅₀ > 2000 mg/kg for Bullfrogs and LD₅₀ = 4.33 mg/kg for Pheasant.

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except bullfrogs, for which 2 days were used.
 Sample Purity: 89%

Toxicity Data: The 30-day EMLD² for mallards is 185.0 mg/kg per day for both sexes (n = 12). The resulting cumulative toxicity index is 7.19/2.5-5.0 = 4-2.9, indicating little cumulative action for mallards.

The calculated percutaneous LD50¹ for 10-month-old mallard drakes (n = 8) after a 24-h dermal foot exposure was 24.0 (CL 6.00-96.0) mg/kg. Signs observed after percutaneous treatment included, in addition to several of the above, running and falling, hyporeactivity, myasthenia, slowness, ataxia, asthenia, and sitting. Signs appeared as soon as 1 h and mortalities usually occurred from 5 to 20.5 h after the initiation of treatment; however, one mortality occurred between 6 and 7 days after treatment. Mild dermal irritation occurred after percutaneous exposure to demeton. Dead mallards exhibited penile extrusion. When the percutaneous LD50 is compared with the acute oral LD50, demeton appears to have a moderate degree of dermal hazard in mallards.

Notes: For a discussion of the comparative toxicity of demeton, see Tucker and Haegele (1971).

For a discussion of the effects of age on the sensitivity of mallards to demeton, see Hudson et al. (1972).

For further discussion of the percutaneous toxicity data, see Hudson et al. (1979).

Demeton methyl: see oxydemetonmethyl
 Demeton O + demeton S: see demeton
 Demeton-S-methyl sulfoxide: see oxydemetonmethyl
 Demeton-L40: see dimethoate
 Demeton: see demeton
 Demeton: see rotenone
 Demeton: see rotenone
 Demeton extracts: see rotenone
 Demeton resins: see rotenone
 Demeton-Cate: see endothall
 Demeton: see diquat dibromide
 Demeton X: see paraquat dichloride
 Dimethyltrichloroethane: see methoxychlor
 Diazajet: see Diazinon
 Diazide: see Diazinon

DIAZINON

Alternative Names: AG-500, Alfa-tox, Basudin, Dazzel, Diazajet, Diazide, Diazol, ENT 19507, G-24480, Garden-tox, Neocidol, Nucidol, Sarolex, Spectracide

Chemical Name: Phosphorothioic acid, O,O-diethyl O-[6-methyl-2-(1-methylethyl)-4-pyrimidinyl] ester (CAS 333-41-5)

Primary Use: Insecticide, nematocide

Acute Oral Toxicity Summary

Test animal	No.	Sex	Age (months)	LD50 95%CL (mg/kg)
Bullfrog	4	F	—	>2,000
Mallard	16	M	3-4	3.54 (2.37-5.27)
Pheasant	12	M	3-4	4.33 (3.02-6.22)

Signs of Intoxication: Goose-stepping ataxia, wing spasms, wing-drop, hunched back, dyspnea, tenesmus, diarrhea, salivation, lacrimation, ptosis, prostration, opisthotonos-like seizures or wing-beat convulsions.

Diazol: see Diazinon

Dibrom: see naled

Dibromochloropropane: see Nemagon

DICHLLOBENIL

Alternative Names: Casoron, Casoron 133, 2,6-DBN, Duprex, ENT 26665, NIA 5996

Chemical Name: 2,6-Dichlorobenzonitrile (CAS 1194-65-6)

Primary Use: Herbicide

Sample Purity: 98.7%

Acute Oral Toxicity Summary

Test animal	No.	Sex	Age (months)	LD50 95%CL (mg/kg)
Mallard	9	F	3	>2,000
Pheasant	9	M	8-9	1,189 (446-3,165)

Signs of Intoxication: In both species ataxia and fluffed feathers with the neck pulled in were typical at levels as low as 500 mg/kg. Birds tended to stand in place for prolonged periods with the eyes closed. Mortalities typically occurred 10 to 16 days after single oral administration. Survivors suffered extreme weight losses in the first few weeks after treatment.

Note: Hemorrhaging of the intestinal mucous membrane was noted at necropsy.

DICHLONE

Alternative Names: Compound 604, ENT 3776, Phygon, Phygon XL, Phygon Seed Protectant