7-23-92

Environmental Fate & Effects Division
PESTICIDE ENVIRONMENTAL FATE ONE LINE SUMMARY
CHLOROTHALONIL
Last Update on July 23, 1992
[V] = Validated Study [S] = Supplemental Study [U] = USDA Data

LOGOUT	Reviewer: JKW	Section Head: DW 7/24/92	Date: 7/23/92

Common Name:CHLOROTHALONIL
PC Code # : 81901 CAS #:1897-45-6 Caswell #:

Chem. Name :TETRACHLOROISOPHTHALONITRILE

Action Type:Fungicide

Trade Names: BRAVO; CLORTOCAFFARO; CLORTOSIP; DACONIL 2787
(Formul'tn):WP;G; PELLET; L; SOLUBLE CONC.
Physical State: COLORLESS ODORLESS CRYST.

Use :FRUITS/VEGETABLES/PEANUTS/TURF/ORNAMENTALS
Patterns :
(% Usage) :
:

Empirical Form: $C_8Cl_4N_2$
Molecular Wgt.: 265.91 Vapor Pressure: 2.00E -6 Torr
Melting Point : 250 °C Boiling Point: 350 °C
Log Kow : 2.88 pKa: @ °C
Henry's : 5.83E -7 Atm. M3/Mol (Measured) 5.83E -7 (calc'd)

Solubility in ...				Comments
Water	1.20E	ppm	@20.0 °C	
Acetone	E	ppm	@ °C	
Acetonitrile	E	ppm	@ °C	
Benzene	E	ppm	@ °C	?
Chloroform	E	ppm	@ °C	
Ethanol	E	ppm	@ °C	
Methanol	E	ppm	@ °C	
Toluene	E	ppm	@ °C	
Xylene	E	ppm	@ °C	
	E	ppm	@ °C	
	E	ppm	@ °C	

Hydrolysis (161-1)
[V] pH 5.0: STABLE
[V] pH 7.0: STABLE
[V] pH 9.0:10% DEGRADED IN 30 DAYS
[ ] pH :
[ ] pH :
[ ] pH :

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Photolysis (161-2, -3, -4)

[ ] Water:STABLE
[ ] :
[ ] :
[ ] :

[ ] Soil :STABLE
[ ] Air :

Aerobic Soil Metabolism (162-1)

	SOIL	NONSTERILE	STERILE
[ ]			
[S]	SiLm	36.5 DAYS	213.8 DAY
[S]	LOAM	14.7 "	31.3 "
[S]	SdLm	12.8 "	18.0 "
[S]	SdLm	10.3 "	21.9 "
[ ]			
[ ]			

Anaerobic Soil Metabolism (162-2)

[ ]
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]

Anaerobic Aquatic Metabolism (162-3)

[V] SiLm 9 DAYS
[V] SdLm 10 DAYS (LOG PLOT IS NON-LINEAR FOR BOTH)
[ ]
[ ]
[ ]
[ ]
[ ]

Aerobic Aquatic Metabolism (162-4)

[ ]
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]

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Soil Partition Coefficient (Kd) (163-1)
[ ] 20 SANDY LM 3.5%OM
[ ] 3 SAND 0.6%OM
[ ] 29 SILT 0.8%OM
[ ] 26 SILTY CL LM 3.2%OM
[ ]
[ ]

Soil Rf Factors (163-1)
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]

Laboratory Volatility (163-2)
[ ]
[ ]

Field Volatility (163-3)
[ ]
[ ]

Terrestrial Field Dissipation (164-1)
[ ] 26-56 DA (SOIL?)
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]

Aquatic Dissipation (164-2)
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]

Forestry Dissipation (164-3)
[ ]
[ ]

Long-Term Soil Dissipation (164-5)
[ ]
[ ]

Accumulation in Rotational Crops, Confined (165-1)
[V] RESIDUES DETECTED
[ ]

Accumulation in Rotational Crops, Field (165-2)
[V] RESIDUES DETECTED, TOLERANCE SETTING REQUIRED
[ ]

Accumulation in Irrigated Crops (165-3)
[ ]
[ ]

Bioaccumulation in Fish (165-4)
[ ] BLUEGILL 200X EDIBLE; 3000X VISCERA
[ ] CATFISH 9.4X EDIBLE;25X VISCERA; 16X WHOLE

Bioaccumulation in Non-Target Organisms (165-5)
[ ]
[ ]

Ground Water Monitoring, Prospective (166-1)
[ ] Protocol has been submitted and reviewed. Most likely a study
[ ] will conducted in North Carolina on peanuts.
[ ]
[ ]

Ground Water Monitoring, Small Scale Retrospective (166-2)
[ ]
[ ]
[ ]
[ ]

Ground Water Monitoring, Large Scale Retrospective (166-3)
[ ]
[ ]
[ ]
[ ]

Ground Water Monitoring, Miscellaneous Data (158.75)
[V] DETECTED IN ONLY TWO LOCATIONS - - LONG ISLAND AND CAPE COD
[ ]
[ ]

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Field Runoff (167-1)
[ ]
[ ]
[ ]
[ ]

Surface Water Monitoring (167-2)
[ ]
[ ]
[ ]
[ ]

Spray Drift, Droplet Spectrum (201-1)
[ ]
[ ]
[ ]
[ ]

Spray Drift, Field Evaluation (202-1)
[ ]
[ ]
[ ]
[ ]

Degradation Products

4-hydroxy-2,5,6-trichloro-isophthalonitrile
2,4,5,6-tetrachloroisophthalimide (only degradate in hydrolysis)
3-cyano-2,4,5,6-tetrachlorobenzamide
2-hydroxy-5-cyano-3,4,6-trichlorobenzamide
3-carboxy-2,5,6-trichlorobenzamide

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Comments

Koc = 1380 (U)

References: Wauchope et al. 1992 Reviews of Env. Contam Tox.
Writer : PJH, JKW 123:1-164