Common Name: CHLOROTHALONIL
FC Code #: 31901    CAS #: 1897-45-6

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 CRYS.

Use: FRUITS/VEGETABLES/PEANUTS/TURF/ORNAMENTALS

Patterns:
(% Usage):

Empirical Form: C₈Cl₄N₂
Molecular Wgt.: 265.91
Vapor Pressure: 2.00E-6 Torr
Melting Point: 250 °C
Boiling Point: 350 °C
Log Kow: 2.88
pKa: 
Henry's: 5.83E-7 Atm. M3/Mol (Measured) 5.83E-7 (calc'd)

Solubility in ...

<table>
<thead>
<tr>
<th>Substance</th>
<th>ppm @ 20.0 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>1.20E</td>
</tr>
<tr>
<td>Acetone</td>
<td>E</td>
</tr>
<tr>
<td>Acetonitrile</td>
<td>E</td>
</tr>
<tr>
<td>Benzene</td>
<td>E</td>
</tr>
<tr>
<td>Chloroform</td>
<td>E</td>
</tr>
<tr>
<td>Ethanol</td>
<td>E</td>
</tr>
<tr>
<td>Methanol</td>
<td>E</td>
</tr>
<tr>
<td>Toluene</td>
<td>E</td>
</tr>
<tr>
<td>Xylene</td>
<td>E</td>
</tr>
</tbody>
</table>

Comments

Hydrolysis (161-1)
[V] pH 5.0: STABLE
[V] pH 7.0: STABLE
[V] pH 9.0: 10% DEGRADED IN 30 DAYS
[ ] pH :
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] SiLM 12.8 " 18.0 "
[S] SiLM 10.3 " 21.9 "

Anaerobic Soil Metabolism (162-2)
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]

Anaerobic Aquatic Metabolism (162-3)
[V] SiLm 9 DAYS
[V] SiLm 10 DAYS (LOG PLOT IS NON-LINEAR FOR BOTH)
[ ]
[ ]
[ ]
[ ]

Aerobic Aquatic Metabolism (162-4)
[ ]
[ ]
[ ]
[ ]
[ ]
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
[ ]
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

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
Comments

Koc = 1380 (U)

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