



ENVIRONMENTAL FATE & GROUND WATER BRANCH
 PESTICIDE ENVIRONMENTAL FATE ONE LINE SUMMARY

Common Name: **DIALLATE** Date: 07/13/89
 Chem. Name : S-(2,3-DICHLOROALLYL)DIISOPROPYLTHIOCARBAMATE
 :
 Shaugh. # : 78801 CAS Number: 2303-16-4
 Type Pest. : Herbicide
 Formulation: EC 4 LBS/GAL; GRANULAR 10% (SUGAR BEETS ONLY)
 Uses : CONTROL OF WILD OATS
 :
 :

Empir. Form: C₁₀H₁₇Cl₂NOS VP (Torr): 1.5E-4
 Mol. Weight: 270.2 Log Kow :
 Solub.(ppm): 14 @ 25 C Henry's :

Hydrolysis (161-1) Photolysis (161-2, -3, -4)
 pH 5:[] Air :[]
 pH 7:[] Soil :[#] >8 DAYS,UV;>16 DA ART.SUN
 pH 9:[] Water:[]
 pH :[] :[]
 pH :[] :[]
 pH :[] :[]

MOBILITY STUDIES (163-1)

Soil Partition (Kd)	Rf Factors
1.[#] 1080 ON PEAT MOSS	1.[]
2.[]	2.[]
3.[]	3.[]
4.[]	4.[]
5.[]	5.[]
6.[]	6.[]

METABOLISM STUDIES (162-1,2,3,4)

Aerobic Soil (162-1)	Anaerobic Soil (162-2)
1.[] sd si cl %OM pH T1/2	1.[]
2.[#] 4 23 74 4.0 7.5 5-6WKS	2.[]
3.[#] 45 37 18 6.5 7.0 4 WKS	3.[]
4.[]	4.[]
5.[#] <2 WKS IN RAY SILT LOAM; AFTER	5.[]
6.[] 2 WKA, 7% RECOVERED AS CO2,	6.[]
7.[] 26% AS VOL. ORG.,20% SOILBOUND	7.[]

Aerobic Aquatic (162-4)	Anaerobic Aquatic (162-3)
1.[]	1.[]
2.[]	2.[]
3.[]	3.[]
4.[]	4.[]

[*] - Acceptable Study. [#] = Supplemental Study

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VOLATILITY STUDIES (163-2,3)

- [#] Laboratory. 2-11% VOLATILIZED IN 30 WKS INCUBATION AT 22 C.
[] Field:

DISSIPATION STUDIES (164-1,2,3,5)

Terrestrial Field (164-1)

- 1.[#] PHYTOTOXIC RESIDUES PERSISTED FOR 2-4 MONTHS IN TWO AUSTRIAN
- 2.[] SOILS TREATED AT 4 KG/HA.
- 3.[]
- 4.[]
- 5.[]
- 6.[]

Aquatic (164-2)

- 1.[]
- 2.[]
- 3.[]
- 4.[]
- 5.[]
- 6.[]

Forestry (164-3)

- 1.[]
- 2.[]

Other (164-5)

- 1.[]
- 2.[]

ACCUMULATION STUDIES (165-1,2,3,4,5)

Confined Rotational Crops (165-1)

- 1.[]
- 2.[]

Field Rotational Crops (165-2)

- 1.[]
- 2.[]

Irrigated Crops (165-3)

- 1.[]
- 2.[]

Fish (165-4)

- 1.[]
- 2.[]

Non-Target Organisms (165-5)

- 1.[]
- 2.[]

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GROUND WATER STUDIES (158.75)

1. []
2. []
3. []

DEGRADATION PRODUCTS

1. DIISOPROPYLAMINE IS THE ONLY KNOWN METABOLITE
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

COMMENTS

SOIL STERILIZATION GREATLY REDUCED THE DEGRADATION RATE; <10% OF THE APPLIED WAS DEGRADED IN 4 WEEKS.

MOBILITY OF DIALLATE PHYTOXIC RESIDUES APPEARS TO DECREASE AS SOIL ORGANIC MATTER AND CEC INCREASE.

WHEN TAKEN UP BY ROOTS, DIALLATE WAS RAPIDLY METABOLIZED.

References: WSSA 83; EPA REVIEWS

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