

US EPA ARCHIVE DOCUMENT

Environmental Fate & Effects Division
PESTICIDE ENVIRONMENTAL FATE ONE LINE SUMMARY

PROPAZINE

Last Update on August 9, 1993

[V] = Validated Study [S] = Supplemental Study [U] = USDA Data

LOGOUT	Reviewer:	Section Head:	Date:
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Common Name:PROPAZINE

Smiles Code:Cl-c(nc(n1)NC(C)C)nc1NC(C)C

PC Code # : 80808

CAS #:139-40-2

Caswell #:

Chem. Name :2-CHLORO-4,6-BIS(ISOPROPYLAMINO)-s-TRIAZINE

Action Type:Herbicide

Trade Names:MILOGARD

(Formul'tn): WP; FlC; SC/L

Physical State:

Use : TO CONTROL BROADLEAF AND A FEW GRASSY WEEDS IN SORGHUM,
Patterns :NON-CROP AREAS, AND LILY BULBS
(% Usage) :
:

Empirical Form: C₉H₁₆N₅Cl

Molecular Wgt.: 229.71

Vapor Pressure: 2.90E -8 Torr

Melting Point : °C

Boiling Point: °C

Log Kow :

pKa: @ °C

Henry's :

E Atm. M3/Mol (Measured) 1.02E -9 (calc'd)

Solubility in ...

Comments

Water	8.60E	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)

[S] pH 5.0:STABLE

[S] pH 7.0:STABLE

[S] pH 9.0:STABLE

[S] pH 1.0: 3 DAYS

[S] pH 13.0: 1.3-2 DAYS

[] pH :

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

[V] Water: STABLE IN NATURAL SUN; ONLY
[] : 5% DEGRADED AFTER 17 DAYS.
[V] : IN ART. LT., WITH 2.5 PPM.
[] : T1/2= 24 HRS

[] Soil :
[] Air :

Aerobic Soil Metabolism (162-1)

[V] NON-STERILE LmSd, IN DARK AT
[] 25 C, T1/2= ABOUT 15 WEEKS
[]
[V] ssc= 85,6,9, %OC=2.2, pH=5.6:
[] T1/2=12-24 WKS, AND 92% DEGRAD
[] ED AT 360 DAYS
[]

Anaerobic Soil Metabolism (162-2)

[V] 8 WKS IN NON-STERILE LmSd IN
[] DARK AT 25 C
[]
[V] ssc=85,6,9, T1/2=12 WEEKS
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Anaerobic Aquatic Metabolism (162-3)

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Aerobic Aquatic Metabolism (162-4)

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Soil Partition Coefficient (Kd) (163-1)

[V]	Sd	Si	Cl	%OM	pH	Kads	Kdes
[]	82	14	4	0.7	8.0	.34	6.09
[]	64	28	8	1.4	7.4	1.14	3.78
[]	50	33	17	2.9	6.1	2.69	16.8
[]	37	32	31	8.3	6.4	3.19	44.7

[V] Kd USUALLY LESS THAN 1 OR 2

Soil Rf Factors (163-1)

[V] VERY MOBILE IN LmSd AND Lm;
[] MOBILE IN SdLM AND Si SOILS.
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Laboratory Volatility (163-2)

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Field Volatility (163-3)

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Terrestrial Field Dissipation (164-1)

[S] PROFILE OF PROPAZINE IN SdLm SOIL, NY, 1 YR AFTER 2.4LB AIA
[] DEPTH PPM
[] 0-6" .06-1.3 T1/2= <30-149 DAYS
[] 6-12" <.36
[] 12-18" .149
[S] IN SdLm IN CA, PROPAZ. WAS NOT DETECTED AT 0-6" AFTER 64 DA
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Aquatic Dissipation (164-2)

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Forestry Dissipation (164-3)

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Long-Term Soil Dissipation (164-5)

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Accumulation in Rotational Crops, Confined (165-1)

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Accumulation in Rotational Crops, Field (165-2)

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Accumulation in Irrigated Crops (165-3)

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Bioaccumulation in Fish (165-4)

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Bioaccumulation in Non-Target Organisms (165-5)

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Ground Water Monitoring, Prospective (166-1)

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

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

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Ground Water Monitoring, Miscellaneous Data (158.75)

[] Study was proposed before compound was canceled. Detected in
[] ground water in CT, KS, NE, PA, and TX at levels up to 0.20 ppb.
[]

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Field Runoff (167-1)

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Surface Water Monitoring (167-2)

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Spray Drift, Droplet Spectrum (201-1)

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Spray Drift, Field Evaluation (202-1)

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Degradation Products

2-hydroxy-4,6-bis(isopropylamino)-s- triazine (GS-11526), acctd.
for 13.8% of applied after 12 weeks; major component = 13.8% of
applied at 12 weeks.

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Comments

Relatively stable to photolysis in aq solns exposed to natural sunlight.

Propazine is very mobile; >69% in leachate of 20" of water in 12" length of LmSd and Lm.

Soil Koc = 154.

In soils containing montmorillonite type clays, little or no leaching would be expected.

pKb = 12.15

References: EPA REVIEWS

Writer : PJH, EW