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:

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: $C_9H_{16}N_5Cl$
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
[ ]
[ ]
[ ]

Anaerobic Aquatic Metabolism (162-3)
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]
[ ]

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

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Soil Partition Coefficient (Kd) (163-1)

	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.
[ ]
[ ]
[ ]
[ ]

Laboratory Volatility (163-2)
[ ]
[ ]

Field Volatility (163-3)
[ ]
[ ]

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
[ ]
[ ]
[ ]
[ ]

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

Forestry Dissipation (164-3)
[ ]
[ ]

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

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

Accumulation in Rotational Crops, Field (165-2)
[ ]
[ ]

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

Bioaccumulation in Fish (165-4)
[ ]
[ ]

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

Ground Water Monitoring, Prospective (166-1)
[ ]
[ ]
[ ]
[ ]

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

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

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.
[ ]

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

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

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

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

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