Common Name: ATRAZINE
Chem. Name: 2-CHLORO-4-(ETHYLAMINO)-6-(ISOPROPYLAMINO)-s-TRIAZINE
Shaugh. #: 80803
Type Pest.: Herbicide
Formulation: G/P/T;WP;DF;EC;FC;SC/L
Uses: TERRESTRIAL FOOD, TERRESTRIAL NON-FOOD, FORESTRY

Empir. Form: C_{9}H_{14}ClN_{5}
Mol. Weight: 215.68
Solub.(ppm): 33 PPM @ 20°C
Hydrolysis (161-1)

pH 5:[*] STABLE
pH 7:[*] STABLE
pH 9:[*] STABLE

Hydrolysis (161-1) Photolysis (161-2, -3, -4)

Air : [ ]
Soil :[#] 64-88 HRS ARTIFIC. LIGHT
Water:[*] 1 DAY, pH6.8, 15 C

pH 5-10: 42 - >1000 DAYS

MOBILITY STUDIES (163-1)

<table>
<thead>
<tr>
<th>Soil Partition (Kd)</th>
<th>Rf Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. [ ] Sd Si Cl %OM pH Kads Kdes</td>
<td>1. [ ] SOIL ATRAZ G-28279 G-28273</td>
</tr>
<tr>
<td>2.[*] 25 33 42 4.8 5.9 2.46 9.12</td>
<td>2.[#] SAND 1.0 .98 1.0</td>
</tr>
<tr>
<td>3.[*] 96 2 2 0.9 6.5 0.20 1.51</td>
<td>3.[#] SdLm .57 .16 .72</td>
</tr>
<tr>
<td>4.[*] 63 20 17 1.9 7.5 0.79 7.27</td>
<td>4.[#] SiLm .67 .18 .39</td>
</tr>
<tr>
<td>5.[*] 44 47 9 0.8 6.7 0.73 4.76</td>
<td>5.[#] SiClLm .51 . ? .43</td>
</tr>
</tbody>
</table>

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

Aerobic Soil (162-1)
1.[#] 140 DAYS, CALIFORNIA LOAM
2.[*] 21 DAYS SiLm, 9% OM, pH 5.5
3.[#] PERCENT VS TIME IN TENV. SOIL
4.[ ] DAYS; 25 100 180
5.[ ] CO2 .7 9.3 12.1
6.[ ] EXTRACT. 72.6 42.5 28.8
7.[ ] ATR+METAB.50.3 9.9 5.4

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

Anaerobic Soil (162-2)
1.[#] 159 DAYS IN SANDY LOAM
2.[ ]
3.[ ]
4.[ ]

Anaerobic Aquatic (162-3)
1.[*] 608 DAYS FOR COMBINED WATER/
2.[ ] SEDIMENT (330 DAYS IN SEDIMENT
3.[ ] AND 578 DAYS IN WATER ALONE).
4.[ ]

[*] - Acceptable Study. [#] = Supplemental Study.
ENVIRONMENTAL FATE & GROUND WATER BRANCH
PESTICIDE ENVIRONMENTAL FATE ONE LINE SUMMARY

Common Name: ATRAZINE

Date: 03/15/90

VOLATILITY STUDIES (163-2,3)

[  ] Laboratory:
[  ] Field:

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

Terrestrial Field (164-1)
1.[#] IN THE 0-6" DEPTH, ATRAZINE DECREASED WITH TIME BUT AT
2.[  ] GREATER DEPTHS IT GRADUALLY INCREASED.
3.[  ]
4.[  ]
5.[  ]
6.[  ]

Aquatic (164-2)
1.[  ]
2.[  ]
3.[  ]
4.[  ]
5.[  ]
6.[  ]

Forestry (164-3)
1.[#] Leaf Foliage 13d  Leaf Litter 66d
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.[*] Max BCF 7.7x (edible), 12x (inedible), 15x (whole fish)
2.[*] Depuration 74% (edible), 76%(inedible) 78% (whole fish)

Non-Target Organisms (165-5)
1.[  ]
2.[  ]
Common Name: ATRAZINE

DATE: 03/15/90

GROUND WATER STUDIES (158.75)
1. 14 OF 18 STATES TESTED POSITIVE; HIGH POTENTIAL FOR LEACHING
2. MAX WAS 550 PPB FROM WELL NEAR GREEN BAY. NON-POINT SOURCE
3. CONTAMINATION OF SOME WELLS.

DEGRADATION PRODUCTS

1. ADSORPTION AND DESORPTION VALUES OF PRINCIPAL DEGRADATES:
   2. G-28273  G-28279  G-30033
   3. SOIL  %OM  pH  Kads  Kdes  Kads  Kdes  Kads  Kdes
   4. CLAY  4.8  5.9  1.56  7.80  2.73  12.36  1.10  8.14
   5. SAND  0.9  6.5  0.16  ?  0.16  ?  0.06  ?
   6. SANDY LM  1.9  7.5  0.65  8.06  0.51  15.28  0.36  11.19
   7. LOAM  0.8  6.7  0.36  6.87  0.27  6.98  0.21  3.92

9. (Sd, Si. AND Cl PERCENTAGES FOR THE ABOVE SOILS ARE LISTED IN
10. MOBILITY STUDIES, 163-1)

COMMENTS

IT IS LIKELY THAT ATRAZINE IS MORE PERSISTENT IN GROUND WATER THAN
IN MOST SOILS UNDER TYPICAL CONDITIONS.

Koc VALUES FOR ATRAZINE IN CLAY = 87
   SAND = 39
   SANDY LOAM = 70
   LOAM = 155

References: EFGWB SRR Science Chapter; EPA REVIEWS
Writer: S.C. Termes  J. HANNAN

[*] - Acceptable Study. [#] = Supplemental Study
1. **CHEMICAL**:

Chemical name: 2-chloro-4-ethylamino-6-isopropylamino-s-triazine

Chemical Abstracts #: 1912-24-9

Common name: ATRAZINE

Trade name: AATREX® NINE-0®

Structure(s):

![Chemical Structure](image)

ATRAZINE

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2-amino-4-chloro-6-isopropylamino-s-triazine

G-30033

2-amino-4-chloro-6-ethylamino-s-triazine

G-28279

2,4-diamino-6-chloro-triazine

G-28273

2-ethylamino-4-hydroxy-6-isopropylamino-s-triazine

G-34048

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DEGRADATES OF ATRAZINE