

Propoxur is a carbamate insecticide. It inhibits cholinesterase, but unlike organophosphates, the inhibition is reversible.

### Acute toxicity

Propoxur is highly toxic to many mammalian species, birds, aquatic invertebrates, and honey bees. It is apparently not highly toxic to fish.

### Chronic toxicity

EPA has classified propoxur as a B2 carcinogen (sufficient animal evidence).

Mutagenic studies have mixed results. However, the positive tests included those in mammalian systems, generally given more weight in evaluating potential mutagenicity, while the negative tests were bacterial.

Developmental studies also have mixed results. A rabbit study was negative, but the highest dose tested was only 10 mg/kg. Rat and mouse studies have been positive, with effects such as developmental abnormalities, changes in growth statistics, behavioral, and decreased weight of fetuses.

A rat reproductive study found decreased pup numbers at 37.5 mg/kg.

### Environmental fate

Lab and field data indicate leaching would be expected. Propoxur is highly persistent in neutral and acid soils. In water, the rate of degradation increases with temperature, microbial populations, mud, biota, and pH. Half-lives in water range from 1 day to 1 week. Propoxur is not expected to bioaccumulate.

### Other

Changes in learning ability in rats have been observed at lower concentrations than changes in cholinesterase inhibition. Yet propoxur has caused cholinesterase inhibition in humans at relatively low levels -- 0.36 mg/kg.

## Conclusions

Although few references were reviewed, there seemed little need for additional research. Based on available information, propoxur would fail the review criteria for carcinogenicity, mutagenicity, reproductive toxicity, and possibly developmental toxicity. For outside broadcast applications, persistence, mobility, and nontarget effects would also be concerns.