Chemical Factsheet

Diazinon

General Information

- Fact Sheet: Diazinon.pdf
- Product Names:
  Scotts Turf Builder with Insect Control 28-4-6 (Scotts Company)
  Ortho Hornet & Wasp Killer 2 (Solaris Group), formulated with Pyrethrins, Petroleum distillates
  Real Kill Diazinon Soil/Turf Insect Control (Realex)
  Bug B Gon Insect Killer (Solaris Group)
  Diazinon 25E Lawn and Garden Insect Control (C.J. Martin Company), formulated with Petroleum distillates
- Chemical Class: Organophosphate insecticide
- Uses: Agriculture almonds, apples, apricots, bananas, beets (red, table), blackberries, blueberries, cabbage, carrots, cauliflower, celery, cherries, collards, sweet corn, cranberries, cucumbers, endive (escarole), figs, filberts, ginseng, grapes, hops, kale, lettuce, loganberries, melons, mushrooms, nectarines, onions, parsley, parsnips, peaches, pears, peas, peppers, pineapples, plums, Irish potatoes, prunes, radishes, radishes (Chinese), raspberries, rutabagas, squash, spinach, strawberries, sugar beets, sweet potatoes, Swiss chard, tomatoes, turnips, walnuts, and watercress, seed treatment on beans (except soybeans), field corn, sweet corn, lima beans, peas, and snap beans; non-lactating cattle.
- Alternatives: Organic agriculture
- Beyond Pesticides rating: Toxic

Health and Environmental Effects

See citations at end of document.

- Cancer: Not documented
- Endocrine Disruption: Yes (**1**)
- Reproductive Effects: Yes (**2**)
- Neurotoxicity: Yes (**3**)
- Kidney/Liver Damage: Yes (**4**)
- Sensitizer/ Irritant: Yes (**5**)
- Birth/Developmental: Yes (**3**)
- Detected in Groundwater: Yes (**5**)
- Potential Leacher: Yes (**5**)
- Toxic to Birds: Yes (**6**)
- Toxic to Fish/Aquatic Organisms: Yes (**6**)
- Toxic to Bees: Yes (**6**)

Residential Uses as Found in the ManageSafe™ Database

- Wasps and Yellowjackets
- Ticks

Additional Information

- Regulatory Status:
  - EPA Reregistration Eligibility Decision (RED) signed (7/2006)
  - Diazinon lawsuit filed against EPA by Beyond Pesticides et. al. (2008)
  - Beyond Pesticides' Revised Risk Assessment comments.
  - Most residential uses phased out 2002
  - Beyond Pesticides' phaseout press release
- Supporting information:
  - Daily News Blog entries (Beyond Pesticides)
  - Asthma, Children and Pesticides (Beyond Pesticides)
  - Children & Lawn Chemicals Don't Mix (Beyond Pesticides)
  - The Safer Choice (Beyond Pesticides)
  - Threatened Waters: Turning the Tide on Pesticide Contamination (Beyond Pesticides)
  - NCAP Diazinon Factsheet (Northwest Coalition for Alternatives to Pesticides)
  - Extoxnet Diazinon Factsheet (Extension Toxicology Network)
  - PAN Pesticides Database:Diazinon (Pesticide Action Network)
  - PAN-UK Diazinon Factsheet (Pesticide Action Network UK)
  - EWG Diazinon Report (Environmental Working Group)
  - NPTN Diazinon Factsheet (National Pesticide Telecommunications Network)
  - ABC Diazinon Factsheet (American Bird Conservancy)
- Studies [compiled from the Pesticide-Induced Diseases Database]
  - Prenatal and infant exposure to ambient pesticides and autism spectrum disorder in children: population based case-control study. von Ehrenstein, et al. 2019. BMJ 2019;364:l962
  - Cancer incidence among male pesticide applicators in the Agricultural Health Study cohort exposed to diazinon. Beane Freeman, L.E., et al. 2005. American Journal of Epidemiology 162(11):1070-1079
  - Cohort mortality and nested case-control study of lung cancer among structural pest control workers in Florida (United States). Pesatori, A.C., et al. 1994. Cancer Causes and Control 5:310-318.
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  - Evidence for diazinon-mediated inhibition of cis-permethrin metabolism and its effects on reproductive toxicity in adult male mice.. Wang D, Kamijima M, Okamura A, et al. 2012. Reprod Toxicol. 34(4):489-97
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- Exposures of 129 Preschool Children to Organochlorines, Organophosphates, Pyrethroids, and Acid Herbicides at Their Homes and Daycares in North Carolina. Morgan, M.K., Wilson, N.K. and Chuang, J.C. (2014) Exposures of 129 Preschool Children to Organochlorines, Organophosphates, Pyrethroids, and Acid Herbicides at Their Homes and Daycares in North Carolina, International Journal of Environmental Research and Public Health. Available at: https://pmc.ncbi.nlm.nih.gov/articles/PMC4025031/.
- Persistent diazinon induced neurotoxicity: The effect on inhibitory avoidance memory performance, amyloid precursor proteins, and TNF-α levels in the prefrontal cortex of rats. Afshari S, Sarailoo M, Asghariazar V, Safarzadeh E, Dadkhah M. Persistent diazinon induced neurotoxicity: The effect on inhibitory avoidance memory performance, amyloid precursor proteins, and TNF-α levels in the prefrontal cortex of rats. Human & Experimental Toxicology. 2024;43. doi:10.1177/09603271241235408
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