Chemical Factsheet

Fipronil

General Information

- Fact Sheet: Fipronil.pdf
- Product Names:
  Combat 12 Month (Clorox)
  Termidor (Bayer/BASF)
  Maxforce Ant Bait F1 (Maxforce Insect Control Systems)
  Maxforce Large Roach Bait (Maxforce Insect Control Systems)
  Combat Quick Roach Killing Gel (Combat Insect Control Systems)
  Fuse (Control Solutions, Inc.)
  Taurus (Control Solutions, Inc.)
- Chemical Class: Phenyl pyrazole insecticide
- Uses: Residential baits and gels, agriculture, golf courses
- Alternatives: Least Toxic Baits and Gels, Organic Agriculture, Golf Courses
- Beyond Pesticides rating: Toxic

Health and Environmental Effects

See citations at end of document.

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

Residential Uses as Found in the ManageSafe™ Database

- Carpenter Ants
- Fleas
- Termites
- Ants
- Cockroaches

Additional Information

- Regulatory Status:
  - EPA Regulatory Documents

    - BP Comments to CDPR (February 2026)
- Supporting information:
    - Daily News Blog Entries (Beyond Pesticides)
    - NCAP Fipronil Factsheet (Northwest Coalition for Alternatives to Pesticides)
    - NPIC Fipronil Factsheet (National Pesticide Information Center)
    - PAN Pesticides Database: Fipronil (Pesticide Action Network)
- Studies [compiled from the Pesticide-Induced Diseases Database]
    - Effects of neonicotinoids and fipronil on non-target invertebrates. [Pisa,LW, Amaral-Rogers, V et al. 2015. Environ SCi and Poll Res. 22(1):68-102]
    - Fipronil-induced disruption of thyroid function in rats is mediated by increased total and free thyroxine clearances concomitantly to increased activity of hepatic enzymes. Leghait J, et al. 2009. *Toxicology*
    - Reproductive adverse effects of fipronil in Wistar rats. Ohi et al. 2004. *Toxicology Letters*
    - Human exposure to fipronil from dogs treated with frontline. Jennings, K.A. 2002. *Vet Hum Toxicol*
    - Diverse neurotoxicants target the differentiation of embryonic neural stem cells into neuronal and glial phenotypes.. Slotkin TA, Skavicus S, Card J, et al. 2016. Toxicology. 372:42-51
    - Pesticides are the dominant stressors for vulnerable insects in lowland streams. Liess, M., Liebmann, L., Vormeier, P., Weisner, O., Altenburger, R., Borchardt, D., Brack, W., Chatzinotas, A., Escher, B., Foit, K. and Gunold, R. Water Research, 201, p.117262.
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    - Impact of Endocrine Disrupting Pesticide Use on Obesity: A Systematic Review. Pérez-Bermejo, M. et al. (2024) Impact of Endocrine Disrupting Pesticide Use on Obesity: A Systematic Review, Biomedicines. Available at: https://www.mdpi.com/2227-9059/12/12/2677.
    - Pesticide-Induced Inflammation at a Glance. Lopes-Ferreira, M. et al. (2023) 'Pesticide-induced inflammation at a glance', Toxics, 11(11), p. 896. doi:10.3390/toxics11110896.
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Girolami, V. et al. Environmental fate and exposure; neonicotinoids and fipronil. Environ Sci Pollut Res 22, 35–67 (2015). https://doi.org/10.1007/s11356-014-3332-7
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Gateway Health and Environmental Effects Citations

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