Chemical Factsheet

Flumethrin

General Information

- Product Names:
  Flumethrin Technical
  SAS Flumethrin Technical
- Chemical Class: Synthetic Pyrethroid Insecticide
- Uses: As an ectoparasite for ticks, mites, and lice on cattle, sheep, goats, horses, and dogs, and in some cases, to treat parasitic mites in honeybee colonies.
- Alternatives: Essential Oils (like lemongrass, eucalyptus, geranium, lavender, peppermint, and citronella)
- Beyond Pesticides rating: Toxic

Health and Environmental Effects

See citations at end of document.

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

Additional Information

- Regulatory Status:
  - EPA Office of Pesticide Programs Database
  - EPA Flumethrin: Human Health Risk Assessment (2012)
- Supporting information:
  - PAN Pesticides Database: Flumethrin (Pesticide Action Network)
  - *Daily News* Archive
  - "EPA Orders Warning Labels on Seresto Flea Collars Linked to Thousands of Pet Injuries, Deaths" (Center for Biological Diversity)
- Studies [compiled from the Pesticide-Induced Diseases Database]
  - Acaricide flumethrin-induced sublethal risks in honeybees are associated with gut symbiotic bacterium Gilliamella apicola through microbe-host metabolic interactions. Qi, S., Al Naggar, Y., Li, J., Liu, Z., Xue, X., Wu, L., El-Seedi, H.R. and Wang, K., 2022. Chemosphere, 307, p.136030.
  - The negative effect of flumethrin stress on honey bee (Apis mellifera) worker from larvae

to adults. Zhen Li, Heyan Yang, Longtao Yu, Chen Liu, Xiaobo Wu, The negative effect of flumethrin stress on honey bee (Apis mellifera) worker from larvae to adults, Pesticide Biochemistry and Physiology, Volume 188, 2022, 105289, ISSN 0048-3575, https://doi.org/10.1016/j.pestbp.2022.105289.
- The synergistic action of imidacloprid and flumethrin and their release kinetics from collars applied for ectoparasite control in dogs and cats . Stanneck, D. et al. (2012) 'The synergistic action of imidacloprid and flumethrin and their release kinetics from collars applied for ectoparasite control in dogs and cats', Parasites & Vectors, 5(1). doi:10.1186/1756-3305-5-73.
- Urinary pesticide biomarkers from adolescence to young adulthood in an agricultural setting in Ecuador: Study of secondary exposure to pesticides among children, adolescents, and adults (ESPINA) 2016 and 2022 examination data. Parajuli, R. et al. (2025) Urinary pesticide biomarkers from adolescence to young adulthood in an agricultural setting in Ecuador: Study of secondary exposure to pesticides among children, adolescents, and adults (ESPINA) 2016 and 2022 examination data, Data in Brief. Available at: https://www.sciencedirect.com/science/article/pii/S2352340925006067.
- Prenatal Insecticide Exposure and Adverse Birth Outcomes: Evidence for Mediation via Disruptions in Amino Acid and Acylcarnitine Metabolism. Ma, Y. et al. (2025) Prenatal Insecticide Exposure and Adverse Birth Outcomes: Evidence for Mediation via Disruptions in Amino Acid and Acylcarnitine Metabolism, Environmental Science & Technology. Available at: https://pubs.acs.org/doi/10.1021/acs.est.5c13454.

Gateway Health and Environmental Effects Citations

1. National Library of Medicine. PubChem Hazardous Substances Database. PubChem (nih.gov)

2. US EPA, Office of Prevention, Pesticides and Toxic Substances, Reregistration Eligibility Decisions (REDs), Interim REDS (iREDs) and RED Factsheets. https://archive.epa.gov/pesticides/reregistration/web/html/status.html.

Factsheet generated on June 3, 2026