

# 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 Nagggar, 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>.

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