Chemical Factsheet

Lambda-cyhalothrin

General Information

- Product Names:
  Karate (Syngenta)
  Impasse (Syngenta)
  Demand (Syngenta)
  Wasp & Hornet Killer (Chemsico), formulated with Prallethrin
  Saber (Schering-Plough Animal Health), formulated with Piperonyl butoxide (some formulations)
  Cyzmic (Control Solutions, Inc.)
- Chemical Class: Synthetic pyrethroid insecticide
- Uses: Agriculture, residential, mosquitoes
- Alternatives: Organic agriculture, Least toxic residential products, Least toxic mosquito products
- Beyond Pesticides rating: Toxic

Health and Environmental Effects

See citations at end of document.

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

Residential Uses as Found in the ManageSafe™ Database

- Bagworms
- Bed Bugs
- Carpenter Bees
- Centipedes
- Chiggers
- Chinch Bugs
- Gypsy Moths
- Spiders
- Carpenter Ants
- Grubs
- Ticks

- Wasps and Yellowjackets

Additional Information

- Regulatory Status:
  - EPA Office of Pesticide Programs
  - EPA Lambda-cyhalothrin classification and endpoints (2022)
- Supporting information:
  - NPIC Factsheet (National Pesticide Information Center)
  - Asthma, Children and Pesticides (Beyond Pesticides)
  - Children & Lawn Chemicals Don't Mix (Beyond Pesticides)
  - The Safer Choice (Beyond Pesticides)
  - Extoxnet Pesticide Factsheet (Extension Toxicology Network)
  - PAN Pesticides Database: Cyhalothrin, Lambda (Pesticide Action Network)
- Studies [compiled from the Pesticide-Induced Diseases Database]
  - Use and Toxicity of Pyrethroid Pesticides in the Central Valley,California, USA. Amweg, E. et. al. 2004.*Environmental Toxicology and Chemistry* 24(4):966-972
  - Indoor spraying with the pyrethroid insecticide lambda-cyhalothrin: effects on spraymen and inhabitants of sprayed houses.. Moretto A. 1991.Bull WHO 69 (5): 591-594
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  - Pesticides and prostate cancer incidence and mortality: An environment-wide association study. Soerensen, S. et al. (2024) Pesticides and prostate cancer incidence and mortality: An environment-wide association study, Cancer. Available at: https://acsjournals.onlinelibrary.wiley.com/doi/10.1002/cncr.35572.
  - Lambda-cyhalothrin alters locomotion, mood and memory abilities in Swiss mice. Assmaa Tali, Nadra Lekouch, Samir Ahboucha, Lambda-cyhalothrin alters locomotion, mood and memory abilities in Swiss mice, Food and Chemical Toxicology, Volume 188, 2024, 114680, ISSN 0278-6915, https://doi.org/10.1016/j.fct.2024.114680.
  - 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.
  - Assessing pesticide residue occurrence and risks in the environment across Europe and Argentina. Alaoui, A., Christ, F., Abrantes, N., Silva, V., González, N., Gai, L., Harkes, P., Navarro, I., Torre, A., Martínez, M. Á., Norgaard, T., Vested, A., Schlünssen, V., Aparicio, V. C., Campos, I., Pasković, I., Pasković, M. P., Glavan, M., Ritsema, C., & Geissen, V. (2024).

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Gateway Health and Environmental Effects Citations

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2. Extension Toxicology Network (EXTOXNET) Pesticide Information Profiles. http://extoxnet.orst.edu/pips/ghindex.html

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Factsheet generated on May 1, 2026