

# Chemical Factsheet

## Esfenvalerate

### General Information

- Fact Sheet: [Synthetic Pyrethroids.pdf](#)
- Product Names:
  - Asana** (Du Pont)
  - Tribute II** (Bayer)
  - Silent** (Reckitt Benckiser)
- Chemical Class: Pyrethroid insecticide
- Uses: Residential and commercial lawns; agriculture including apricots, artichokes, hazelnuts, and potatoes
- Alternatives: [Agriculture](#), [Christmas trees](#), [home and garden](#), [mosquito repellent](#)
- Beyond Pesticides rating: [Toxic](#)

### Health and Environmental Effects

*See citations at end of document.*

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

### Residential Uses as Found in the ManageSafe™ Database

- [Bagworms](#)
- [Cockroaches](#)
- [Bed Bugs](#)
- [Chiggers](#)
- [Fleas](#)
- [Termites](#)
- [Wasps and Yellowjackets](#)

### Additional Information

- Supporting information:
  - [Daily News Blog entries](#) (Beyond Pesticides)
  - [Asthma, Children and Pesticides](#) (Beyond Pesticides)

- [Extoxnet Esfenvalerate Factsheet](#) (Extension Toxicology Network)
- [PAN Pesticide Database Information: Esfenvalerate](#) (Pesticide Action Network)
- [Scorecard Esfenvalerate Factsheet](#) (The Pollution Information Site)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
  - [Exposure to pesticides and risk of Hodgkin lymphoma in an international consortium of agricultural cohorts \(AGRICOH\)](#). Kim, J., Leon, M.E., Schinasi, L.H., Baldi, I., Lebailly, P., Freeman, L.E.B., Nordby, K.C., Ferro, G., Monnereau, A., Brouwer, M. and Kjaerheim, K., 2023. *Cancer Causes & Control*, pp.1-9.
  - [Mixture effects of thiamethoxam and seven pesticides with different modes of action on honey bees \(\*Apis mellifera\*\)](#). Li, W. et al. (2023) Mixture effects of thiamethoxam and seven pesticides with different modes of action on honey bees (*Apis mellifera*), *Scientific Reports*. Available at: <https://www.nature.com/articles/s41598-023-29837-w#ref-CR30>.
  - [Honey Bee \(\*Apis mellifera\*\) Exposure to Pesticide Residues in Nectar and Pollen in Urban and Suburban Environments from Four Regions of the United States](#). Démares, F.J. et al. (2022) Honey Bee (*Apis mellifera*) Exposure to Pesticide Residues in Nectar and Pollen in Urban and Suburban Environments from Four Regions of the United States, *Environmental Toxicology and Chemistry*. Available at: <https://setac.onlinelibrary.wiley.com/doi/10.1002/etc.5298>.
  - [Synergistic interaction between a toxicant and food stress is further exacerbated by temperature](#). Shahid, N., Siddique, A. and Liess, M. (2024) Synergistic interaction between a toxicant and food stress is further exacerbated by temperature, *Environmental Pollution*. Available at: <https://www.sciencedirect.com/science/article/pii/S0269749124018268>.
  - [Environmental Stress Increases Synergistic Effects of Pesticide Mixtures on \*Daphnia magna\*](#). Shahid, N., Liess, M. and Knillmann, S. (2019) Environmental Stress Increases Synergistic Effects of Pesticide Mixtures on *Daphnia magna*, *Environmental Science & Technology*. Available at: <https://pubs.acs.org/doi/10.1021/acs.est.9b04293>.
  - [Double trouble: The synergistic threat of environmental stressors and pesticide mixtures](#). Shahid, N., Siddique, A., Krauss, M., Böhme, A., Brack, W., Jahnke, A., & Liess, M. (2025). Double trouble: The synergistic threat of environmental stressors and pesticide mixtures. *Journal of hazardous materials*, 500, 140293. <https://doi.org/10.1016/j.jhazmat.2025.140293>

## Gateway Health and Environmental Effects Citations

1. Illinois EPA, Endocrine Disruptors Strategy, February 1997.  
<https://nepis.epa.gov/Exe/ZyNET.exe/910140ZK.txt>
2. US EPA, 2000. Table 1: Toxicity Data by Category for Chemicals Listed under EPCRA Section 313. Toxic Release Inventory (TRI) Program.  
[https://www.epa.gov/sites/production/files/documents/hazard\\_categories.pdf](https://www.epa.gov/sites/production/files/documents/hazard_categories.pdf)
3. Extension Toxicology Network (EXTOXNET) Pesticide Information Profiles.  
<http://extoxnet.orst.edu/pips/ghindex.html>

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