Chemical Factsheet

Pymetrozine

General Information

- Product Names:
  Fulfill (Syngenta)
  Endeavor (Syngenta)
- Chemical Class: Pyridine azomethines
- Uses: Control whiteflies and aphids
- Alternatives: Organic agriculture
- Beyond Pesticides rating: Toxic

Health and Environmental Effects

See citations at end of document.

- Cancer: Likely (**1**)
- Endocrine Disruption: No
- Reproductive Effects: Yes (**1**)
- Neurotoxicity: Yes (**1**)
- Kidney/Liver Damage: Yes (**1**)
- 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: Not documented
- Toxic to Bees: Not documented

Additional Information

- Regulatory Status:
  - EPA Factsheet (2000)
- Supporting information:
  - PAN Pesticides Database: Pymetrozine
- Studies [compiled from the Pesticide-Induced Diseases Database]
  - Immune response of Brazilian farmers exposed to multiple pesticides . Jacobsen-Pereira, C.H. et al. (2020) 'Immune response of Brazilian farmers exposed to multiple pesticides', Ecotoxicology and Environmental Safety, 202, p. 110912. doi:10.1016/j.ecoenv.2020.110912.
  - Lethal, sublethal, and combined effects of pesticides on bees: A meta-analysis and new risk assessment tools. Tosi, S., Sfeir, C., Carnesecchi, E., vanEngelsdorp, D., & Chauzat, M. P. (2022). Lethal, sublethal, and combined effects of pesticides on bees: A meta-analysis and new risk assessment tools. The Science of the total environment, 844, 156857. https://doi.org/10.1016/j.scitotenv.2022.156857
  - Characterization of aggregated exposure to multiple pesticides near agricultural fields: an application of silicone wristbands. Ottenbros, Ilse & Vermeulen, R & Krop, E & Beeltje,

Henry & Fuhrimann, Samuel & Figueiredo, Daniel. (2025). Characterization of aggregated exposure to multiple pesticides near agricultural fields: an application of silicone wristbands. Environmental Research Communications. 7. 10.1088/2515-7620/adc547.
- Pesticides in Cannabis: The Need for Evidence to Inform Policy and Protect Patients. Watson, T. D., Glodosky, N. C., Johnson, T. J., Poolman, N., Mistretta, A., & Okey, S. A. (2026). Pesticides in Cannabis: The Need for Evidence to Inform Policy and Protect Patients. Clinical therapeutics, S0149-2918(26)00037-8. Advance online publication. https://doi.org/10.1016/j.clinthera.2026.02.003

Gateway Health and Environmental Effects Citations

1. U.S. EPA, Office of Prevention, Pesticides and Toxic Substances, New Active Ingredients Factsheets: http://web.archive.org/web/20120107215849/http://www.epa.gov/opprd001/factsheets/index.htm

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