

Chemical Factsheet

Formetanate hydrochloride

General Information

- Product Names:
 - **Carzol** (Gowan)
- Chemical Class: Carbamate insecticide/ miticide
- Uses: Alfalfa grown for seed, apples, pears, nectarines, peaches, grapefruit, lemon, lime, orange, tangelo, and tangerine
- Alternatives: [Organic agriculture](#)
- Beyond Pesticides rating: [Toxic](#)

Health and Environmental Effects

See citations at end of document.

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

Additional Information

- Regulatory Status:
 - [Reregistration Eligibility Decision](#) (RED) signed 9/2007
- Supporting information:
 - [PAN Pesticides Database](#): (Pesticide Action Network)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
 - [Pre-Conception And First Trimester Exposure To Pesticides And Associations With Stillbirth](#). Furlong, M. et al. (2024) Pre-conception and first trimester exposure to pesticides and associations with stillbirth, American Journal of Epidemiology. Available at: <https://academic.oup.com/aje/advance-article-abstract/doi/10.1093/aje/kwae198/7714541>
 - [Residential proximity to agricultural pesticide exposures during preconception and pregnancy and associations with Apgar scores in the Az-PEAR study \(2006-2020\)](#). Yang, A. et al. (2026) Residential proximity to agricultural pesticide exposures during preconception and pregnancy and associations with Apgar scores in the Az-PEAR study (2006-2020), Journal of Exposure Science & Environmental Epidemiology. Available at: <https://www.nature.com/articles/s41370-026-00849-8>.

- [Preconception and first trimester exposure to pesticides and associations with stillbirth.](#) Furlong, M. A., Paul, K. C., Parra, K. L., Fournier, A. J., Ellsworth, P. C., Cockburn, M. G., Arellano, A. F., Bedrick, E. J., Beamer, P. I., & Ritz, B. (2025). Preconception and first trimester exposure to pesticides and associations with stillbirth. *American journal of epidemiology*, 194(1), 44–55. <https://doi.org/10.1093/aje/kwae198>

Gateway Health and Environmental Effects Citations

1. 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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