

# Chemical Factsheet

## Epoxiconazole

### General Information

- Product Names:  
**No Currently Registered Products**
- Chemical Class: Triazole fungicide
- Uses: Not registered for use in the US. Important tolerances established for coffee and bananas.
- Alternatives: [Organic Agriculture](#)
- Beyond Pesticides rating: [Toxic](#)

### Health and Environmental Effects

*See citations at end of document.*

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

### Additional Information

- Regulatory Status:
  - [EPA Pesticide Fact Sheet](#) 9/2006
- Supporting information:
  - [PAN Pesticides Database: Epoxiconazole](#) (Pesticide Action Network)
  - [FAN Factsheet: Epoxiconazole](#) (Fluoride Action Network)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
  - [Adverse effects on sexual development in rat offspring after low dose exposure to a mixture of endocrine-disrupting pesticides.](#) Hass U, Boberg J, Christiansen S, Jacobsen PR, et al. 2012. *Reprod Toxicol.*34(2):261-74
  - [Organic farming reduces pesticide load in a bird of prey.](#) Fuentes, E. et al. (2024) Organic farming reduces pesticide load in a bird of prey, *Science of The Total Environment*. Available at: <https://www.sciencedirect.com/science/article/pii/S0048969724029255>.
  - [Major Pesticides Are More Toxic to Human Cells Than Their Declared Active Principles.](#) Mesnage, R. et al. (2014) Major pesticides are more toxic to human cells than their declared active principles, *BioMed Research International*. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3955666/>.
  - [The influence of polyethylene microplastics on pesticide residue and degradation in the](#)

- [aquatic environment](#). Wang, F., Gao, J., Zhai, W., Liu, D., Zhou, Z., & Wang, P. (2020). The influence of polyethylene microplastics on pesticide residue and degradation in the aquatic environment. *Journal of hazardous materials*, 394, 122517.  
<https://doi.org/10.1016/j.jhazmat.2020.122517>
- [Triazole pesticides exposure impaired steroidogenesis associated to an increase in AHR and CAR expression in testis and altered sperm parameters in chicken](#). Serra, L., Bourdon, G., Estienne, A., Fréville, M., Ramé, C., Chevaleyre, C., Didier, P., Chahnamian, M., Ganier, P., Pinault, F., Froment, P., & Dupont, J. (2023). Triazole pesticides exposure impaired steroidogenesis associated to an increase in AHR and CAR expression in testis and altered sperm parameters in chicken. *Toxicology reports*, 10, 409–427.  
<https://doi.org/10.1016/j.toxrep.2023.03.005>
  - [Transport and interaction mechanism of four pesticide residues from \*Chaenomeles speciosa\* across Caco-2 cells](#). Xiao, J., Li, M., Zhang, M., Dai, K., Ju, X., Liu, Y., Liu, Z., Cao, H., & Shi, Y. (2024). Transport and interaction mechanism of four pesticide residues from *Chaenomeles speciosa* across Caco-2 cells. *Food chemistry*, 431, 137156.  
<https://doi.org/10.1016/j.foodchem.2023.137156>
  - [Fate of pesticide residues in beer and its by-products](#). Hakme, E., Kallehauge Nielsen, I., Fermina Madsen, J., Storkehave, L. M., Skjold Elmelund Pedersen, M., Schulz, B. L., ... Duedahl-Olesen, L. (2023). Fate of pesticide residues in beer and its by-products. *Food Additives & Contaminants: Part A*, 41(1), 45–59.  
<https://doi.org/10.1080/19440049.2023.2282557>
  - [Pesticide residues in European agricultural soils - A hidden reality unfolded](#). Silva, Vera et al. "Pesticide residues in European agricultural soils - A hidden reality unfolded." *The Science of the total environment* vol. 653 (2019): 1532-1545.  
doi:10.1016/j.scitotenv.2018.10.441

## 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>
2. European Commission. Endocrine Disruptors: Study on Gathering Information on 435 Substances with Insufficient Data. Final Report. EU DG Environment: B4-3040/2001/325850/MAR/C2. BKH Consulting Engineers: M0355037. November 2002.  
[http://ec.europa.eu/environment/chemicals/endocrine/pdf/bkh\\_report.pdf#page=76](http://ec.europa.eu/environment/chemicals/endocrine/pdf/bkh_report.pdf#page=76).
3. Fluoride Action Alert Pesticide Project Factsheets. <http://www.fluoridealert.org/f-pesticides.htm>

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