

# Chemical Factsheet

## Chlorfenapyr

### General Information

- Product Names:
  - **Phantom** (BASF)
  - **Pylon** (BASF)
- Chemical Class: Pyrrole Insecticide, Miticide
- Uses: Ornamental crops: to control mites, caterpillar pests, thrips, and fungus gnats in greenhouses  
Fruits, vegetables, grains, herbs, spices, and tea: as an insecticide-miticide
- Alternatives: [Organic Agriculture](#), [Organic lawn care](#)
- Beyond Pesticides rating: [Toxic](#)

### Health and Environmental Effects

See *citations at end of document*.

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

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

- [Carpenter Ants](#)
- [Termites](#)
- [Bed Bugs](#)
- [Pantry Moths](#)

### Additional Information

- Regulatory Status:
  - [EPA Factsheet](#) (1/2001)
- Supporting information:
  - [PAN Pesticides Database](#): (Pesticide Action Network)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
  - [Evaluation of estrogenic activities of pesticides using an in vitro reporter gene assay](#).  
Kojima M, et al 2005. Int J Environ Health Res.

- [A patient fatality following the ingestion of a small amount of chlorfenapyr](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4126128/). Kang, C. et al. (2014) A patient fatality following the ingestion of a small amount of Chlorfenapyr, Journal of Emergencies, Trauma, and Shock. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4126128/>.
- [Bioaccumulation, Metabolism and the Toxic Effects of Chlorfenapyr in Zebrafish \(Danio rerio\)](https://pubs.acs.org/doi/10.1021/acs.jafc.1c02301). Chen, X. et al. (2021) Bioaccumulation, Metabolism and the Toxic Effects of Chlorfenapyr in Zebrafish (Danio rerio), J. Agric. Food Chem. Available at: <https://pubs.acs.org/doi/10.1021/acs.jafc.1c02301>.
- [Clinical and radiological findings in chlorfenapyr poisoning](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3724086/). Tharakanath, V.R. et al. (2013) Clinical and radiological findings in chlorfenapyr poisoning, Annals of Indian Academy of Neurology. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3724086/>.
- [Chlorfenapyr poisoning: mechanisms, clinical presentations, and treatment strategies](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11153369/). Cheng, J. et al. (2024) Chlorfenapyr poisoning: Mechanisms, clinical presentations, and treatment strategies, World Journal of Emergency Medicine. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11153369/>.
- [Pesticide-Induced Inflammation at a Glance](https://doi.org/10.3390/toxics11110896). Lopes-Ferreira, M. et al. (2023) 'Pesticide-induced inflammation at a glance', Toxics, 11(11), p. 896. doi:10.3390/toxics11110896.
- [Assessment of genetic damage levels in agricultural workers exposed to pesticides in Paraíba, Brazil](https://www.sciencedirect.com/science/article/abs/pii/S1382668925000900). Carvalho-Gonçalves, L. et al. (2025) Assessment of genetic damage levels in agricultural workers exposed to pesticides in Paraíba, Brazil, Environmental Toxicology and Pharmacology. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S1382668925000900>.
- [Effect of Pesticides on Adult Rove Beetle Atheta coriaria \(Coleoptera: Staphylinidae\) Survival in Growing Medium](https://doi.org/10.1603/029.102.0504). Raymond A. Cloyd, Nicholas R. Timmons, Jessica M. Goebel, Kenneth E. Kemp, Effect of Pesticides on Adult Rove Beetle Atheta coriaria (Coleoptera: Staphylinidae) Survival in Growing Medium, Journal of Economic Entomology, Volume 102, Issue 5, 1 October 2009, Pages 1750–1758, <https://doi.org/10.1603/029.102.0504>

## Gateway Health and Environmental Effects Citations

1. Hazardous Substances Data Bank (HSDB). National Center for Biotechnology Information. PubChem Compound Database. Available at: <https://pubchem.ncbi.nlm.nih.gov/source/hsdb/7464>.
2. U.S. EPA, Office of Prevention, Pesticides and Toxic Substances, New Active Ingredients Factsheets: <http://web.archive.org/web/20120107215849/http://www.epa.gov/oppd001/factsheets/index.htm>
3. Yueh, MF et al. 2014. [The commonly used antimicrobial additive triclosan is a liver tumor promoter](https://doi.org/10.1073/pnas.1419119111). PNAS doi: 10.1073/pnas.1419119111. *Triclosan promotes liver cancer cell development and proliferation in mice through pathways common to humans*.

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