

# Chemical Factsheet

## Pyriproxyfen

### General Information

- Product Names:
  - Archer Insect Growth Regulator** (Sygenta)
  - Country Vet Roach Embargo with Growth Inhibitor** (FMC) formulated with [Esfenvalerate](#)
  - Nylar** (McGlaughin Gomrly King)
  - Seper Nylar E.C.** (Wellmark)
  - Sumilarv** (Sumitomo)
  - Unicorn IGR** (Phaeton)
  - I.G. Regulator** (Control Solutions)
  - Knack** (Valent)
  - Distance Insect Growth Regulator** (Valent)
  - Esteem Insect Growth Regulator** (Valent)
  - Proxy** (Makhteshim)
- Chemical Class: Unclassified
- Uses: Agriculture, structural pest control
- Alternatives: [Organic agriculture](#), [Organic lawn care](#)
- Beyond Pesticides rating: [Toxic](#)

### Health and Environmental Effects

*See citations at end of document.*

- Cancer: Insufficiently Studied
- Endocrine Disruption: Likely (1, 2)
- Reproductive Effects: Likely (3, 4)
- Neurotoxicity: Possible (5)
- Kidney/Liver Damage: Yes (6)
- Sensitizer/ Irritant: Not Likely
- Birth/Developmental: Likely (4, 5)
- Detected in Groundwater: Low (7)
- Potential Leacher: Parent = Slight; Metabolite = Yes (8)
- Toxic to Birds: Possible (9)
- Toxic to Fish/Aquatic Organisms: Yes (10, 2)
- Toxic to Bees: Yes (11, 12, 13)

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

- [Fleas](#)
- [Ants](#)
- [Cockroaches](#)
- [Carpet Beetle](#)
- [Fire Ants](#)

## Additional Information

- Supporting information:
  - [PAN Pesticides Database: Pyriproxyfen](#)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
  - [Fate of pyriproxyfen in soils and plants](#). Devillers, J., 2020. *Toxics*, 8(1), p.20.
  - [Determination by chromatography and cytotoxic and oxidative effects of pyriproxyfen and pyridalyl](#). de Oliveira, M.D.D.A., de Almeida, P.M., Martins, F.A., Cavalcante, A.A.D.C.M., dos Santos, T.D.J.A., Feitosa, C.M., Rai, M., dos Reis, A.C. and da Costa Júnior, J.S., 2019. *Chemosphere*, 224, pp.398-406.
  - [The enantioselective environmental behavior and toxicological effects of pyriproxyfen in soil](#). Liu, H., Yi, X., Bi, J., Wang, P., Liu, D. and Zhou, Z., 2019. *Journal of hazardous materials*, 365, pp.97-106.
  - [The pyriproxyfen metabolite, 4'-OH-PPF, disrupts thyroid hormone signaling in neural stem cells, modifying neurodevelopmental genes affected by ZIKA virus infection](#). Vancamp, P., Spirhanzlova, P., Sébillot, A., Butruille, L., Gothié, J.D., Le Mével, S., Leemans, M., Wejaphikul, K., Meima, M., Mughal, B.B. and Roques, P. *Environmental Pollution*, 285, p.117654.
  - [The potential endocrine disruption of pesticide transformation products \(TPs\): The blind spot of pesticide risk assessment](#). Ji, C., Song, Q., Chen, Y., Zhou, Z., Wang, P., Liu, J., Sun, Z., & Zhao, M. (2020). The potential endocrine disruption of pesticide transformation products (TPs): The blind spot of pesticide risk assessment. *Environment international*, 137, 105490. <https://doi.org/10.1016/j.envint.2020.105490>

## Gateway Health and Environmental Effects Citations

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3. Shahid, A., Zaidi, S.D.E.S., Akbar, H. and Saeed, S., 2019. An investigation on some toxic effects of pyriproxyfen in adult male mice. *Iranian journal of basic medical sciences*, 22(9), p.997.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6880530/>
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<https://www.sciencedirect.com/science/article/abs/pii/S0269749116309794>
7. European Food Safety Authority (EFSA), Arena, M., Auteri, D., Barmaz, S., Brancato, A., Brocca, D., Bura, L., Carrasco Cabrera, L., Chiusolo, A., Court Marques, D. and Crivellente, F., 2018. Peer review of the pesticide risk assessment of the active substance spinosad. *EFSA Journal*, 16(5), p.e05252.  
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9. The University of Hertfordshire. 2021. Pesticide Properties DataBase (PPDB): Pyriproxyfen. <https://sitem.herts.ac.uk/aeru/ppdb/en/Reports/574.htm>
10. Pesticide Action Network Pesticide Database. [http://www.pesticideinfo.org/Search\\_Chemicals.jsp](http://www.pesticideinfo.org/Search_Chemicals.jsp).
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