

Chemical Factsheet

Prallethrin

General Information

- Fact Sheet: [Synthetic Pyrethroids.pdf](#)
- Product Names:
 - Cirrus™ Fogging Concentrate** (MGK®)
 - Duet® Dual Action Adulticide** (Clarke)
 - Multicide® Fogging Concentrate** (McLaughlin Gormley King Company)
 - Prallethrin Technical** (Sumitomo Chemical Australia Pty Ltd)
 - Raid® Multi Insect Killer 7** (S.C. Johnson)
 - Repel-X®** (Farnam Companies, Inc)
 - SSS Flying Insect spray** (Triple S)
 - Stryker Wasp and Hornet Killer** (Control Solutions, Inc.)
- Chemical Class: (Type I) Synthetic Pyrethroid Insecticide
- Uses: Agriculture, Residential / household, animal health (pet-cleaning products, pet-flea collar treatments), and against various insects (mosquitoes, ants, houseflies, fleas, ticks and cockroaches)
- Alternatives: [ManageSafe™](#), [Organic Agriculture](#), [Least-toxic mosquito control](#)
- Beyond Pesticides rating: [Toxic](#)

Health and Environmental Effects

See citations at end of document.

- Cancer: Possible (1)
- Endocrine Disruption: Likely (2, 1, 3, 4)
- Reproductive Effects: Not documented
- Neurotoxicity: Yes (3, 5)
- Kidney/Liver Damage: Yes (6)
- Sensitizer/ Irritant: Yes (7)
- Birth/Developmental: Not documented
- Detected in Groundwater: Not documented
- Potential Leacher: Not documented
- Toxic to Birds: Not documented
- Toxic to Fish/Aquatic Organisms: Yes (2)
- Toxic to Bees: Yes (2)

Residential Uses as Found in the ManageSafe™ Database

- [Fleas](#)
- [Mosquitoes](#)
- [Ticks](#)
- [Cockroaches](#)
- [Carpenter Ants](#)
- [Fire Ants](#)
- [Ants](#)

Additional Information

- Regulatory Status:
 - [Pesticide Registration Review: Proposed Interim Decisions for Several Pesticides](#) (05/05/2020)
 - [NOTICE OF PESTICIDE: Registration \(under FIFRA\) of Duet HD Dual-Action Adulticide](#) (01/29/16)
 - [Prallethrin; Pesticide Tolerances a Rule by the Environmental Protection Agency](#) (10/29/2014)
 - [Registration Review; Pesticide Dockets Opened for Review and Comment and Other Action](#) (07/06/2012)
 - [Prallethrin Summary Document / and Preliminary Work Plan](#) (06/08/2012)
 - [Prallethrin: Human Health Risk Assessment for the Public Health Use of Mosquito Adulticides Containing Prallethrin.](#)(11/21/2003)
 - [Label Change: WHITMIRE TC 161 INJECTION SYSTEM](#) (09/23/2002)
 - [Registration of EVERCIDE® Residual And & Roach Spray \(EPA Reg. No. 1021-1601\), Containing the New Active Ingredient Prallethrin \(ETOC\)](#) (07/11/1997)
 - [NOTICE OF PESTICIDE: Registration \(under FIFRA\) of WHITMIRE TC 161 INJECTION SYSTEM](#) (04/09/1997)
- Supporting information:
 - [Appendix D Pesticide Technical Background Information](#) (Blankinship & Associates, Inc)
 - [Pesticide Database: Prallethrin](#) (Pesticide Action Network)
 - [Pesticide Properties DataBase \(PPDB\): Prallethrin](#) (University of Hertfordshire, UNited Kingdom)
 - [Specifications and Evaluations or Public Health Pesticides: PRALLETHRIN](#) (World Health Organization)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
 - [Allethrin and prallethrin stimulates MUC5AC expression through oxidative stress in human airway epithelial cells](#) Na, H.G., Kim, Y.D., Choi, Y.S., Bae, C.H. and Song, S.Y., 2018. *Biochemical and biophysical research communications*, 503(1), pp.316-322.
 - [Cardiac Conduction Disturbance Due To Prallethrin \(Pyrethroid\) Poisoning](#) Bhaskar, E.M., Moorthy, S., Ganeshwala, G. and Abraham, G., 2010. *Journal of Medical Toxicology*, 6(1), pp.27-30.
 - [Mosquito larvicide and adulticide impacts on western honey bee larvae \(Apis mellifera\) reared in vitro.](#) Barascou, L., Ellis, J. D., & Jack, C. (2026). Mosquito larvicide and adulticide impacts on adult western honey bees (Apis mellifera) in in vitro cage studies. *Environmental science and pollution research international*, 33(16), 7734-7752. <https://doi.org/10.1007/s11356-026-37783-z>

Gateway Health and Environmental Effects Citations

1. Mossa, A.T.H., Refaie, A.A., Ramadan, A. and Bouajila, J., 2013. Antimutagenic effect of Origanum majorana L. essential oil against prallethrin-induced genotoxic damage in rat bone marrow cells. *Journal of medicinal food*, 16(12), pp.1101-1107. <https://doi.org/10.1089/jmf.2013.0006>
2. Pesticide Action Network, 2019. PAN Pesticide Database. http://www.pesticideinfo.org/Detail_Chemical.jsp?Rec_Id=PRI5323
3. Bhaskar, E.M., Moorthy, S., Ganeshwala, G. and Abraham, G., 2010. Cardiac conduction disturbance due to prallethrin (pyrethroid) poisoning. *Journal of Medical Toxicology*, 6(1), pp.27-30.

<https://doi.org/10.1007/s13181-010-0032-7>

4. Na, H.G., Kim, Y.D., Choi, Y.S., Bae, C.H. and Song, S.Y., 2018. Allethrin and prallethrin stimulates MUC5AC expression through oxidative stress in human airway epithelial cells. *Biochemical and biophysical research communications*, 503(1), pp.316-322. <https://doi.org/10.1016/j.bbrc.2018.06.022>

5. Alam, Z., Mohsin, A., Yunus, S.M., Ahmad, F. and Faruqi, N.A., 2017. EFFECT OF PRALLETHRIN VAPOURS ON CEREBELLAR CORTEX OF ALBINO RATS: A NEUROHISTOLOGICAL STUDY. *JOURNAL OF ANATOMICAL SCIENCES*, 25(1), pp.8-11.
<http://www.asiup.in/journals/june-2017/JAS%20JOURNAL%202017.pdf#page=15>

6. Mossa, A.T.H., Refaie, A.A., Ramadan, A. and Bouajila, J., 2013. Amelioration of prallethrin-induced oxidative stress and hepatotoxicity in rat by the administration of Origanum majorana essential oil. *BioMed research international*, 2013. doi: [10.1155/2013/859085](https://doi.org/10.1155/2013/859085)

7. Botnariu, G., Birsan, C., Podoleanu, C., Moldovan, C., Stolnicu, S. and Chiriac, A., 2016. Skin necrosis caused by prallethrin—A worldwide used insecticide. *Environmental toxicology and pharmacology*, 43, pp.103-104. <https://doi.org/10.1016/j.etap.2016.03.002>

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