

Chemical Factsheet

Fludioxonil

General Information

- Product Names:
 - Cannonball** (Syngenta)
 - Graduate** (Syngenta)
 - Hurricane** (Syngenta) formulated with Metalaxyl-M
 - Maixm** (Syngenta)
 - Medallion** (Syngenta)
 - Scholar** (Syngenta)
 - Sporgard** (Lanxess)
 - Tc 281** (Whitmire)
 - EFOG-80** (Pace)
 - Shield-brite** (Pace)
- Chemical Class: Unclassified
- Uses: Fungicide
- Alternatives: [Organic agriculture](#)
- Beyond Pesticides rating: [Toxic](#)

Health and Environmental Effects

See citations at end of document.

- Cancer: Possible (1, 2)
- Endocrine Disruption: Likely (1, 3)
- Reproductive Effects: Possible (3)
- Neurotoxicity: Possible (4, 5)
- Kidney/Liver Damage: Yes (6)
- Sensitizer/ Irritant: Yes (6)
- Birth/Developmental: Possible (7, 8)
- Detected in Groundwater: Possible (9)
- Potential Leacher: Low (6)
- Toxic to Birds: Possible (10)
- Toxic to Fish/Aquatic Organisms: Yes (6)
- Toxic to Bees: Yes (6)

Additional Information

- Supporting information:
 - [PAN Pesticides Database:Fludioxonil](#) (Pesticide Action Network)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
 - [Effect of nonpersistent pesticides on estrogen receptor, androgen receptor, and aryl hydrocarbon receptor](#). Medjakovic S, Zoehling A, Gerster P, et al. 2014. Environ Toxicol. 29(10):1201-16
 - [A Th2-type immune response and low-grade systemic inflammatory reaction as potential immunotoxic effects in intensive agriculture farmers exposed to pesticides](#). Lozano-

Paniagua, D. et al. (2024) 'A th2-type immune response and low-grade systemic inflammatory reaction as potential immunotoxic effects in intensive agriculture farmers exposed to pesticides', *Science of The Total Environment*, 938, p. 173545. doi:10.1016/j.scitotenv.2024.173545.

- [Toxic and Behavioral Effects to Carabidae of Seed Treatments Used on Cry3Bb1- and Cry1Ab/c-Protected Corn](#). Christopher A. Mullin, Michael C. Saunders, Timothy W. Leslie, David J. Biddinger, Shelby J. Fleischer, *Toxic and Behavioral Effects to Carabidae of Seed Treatments Used on Cry3Bb1- and Cry1Ab/c-Protected Corn*, *Environmental Entomology*, Volume 34, Issue 6, 1 December 2005, Pages 1626–1636, <https://doi.org/10.1603/0046-225X-34.6.1626>
- [A cumulative dietary pesticide exposure score based on produce consumption is associated with urinary pesticide biomarkers in a U.S. biomonitoring cohort](#). Temkin, A. et al. (2025) A cumulative dietary pesticide exposure score based on produce consumption is associated with urinary pesticide biomarkers in a U.S. biomonitoring cohort, *International Journal of Hygiene and Environmental Health*. Available at: <https://www.sciencedirect.com/science/article/pii/S1438463925001361>.
- [High temporal resolution pollen analysis: New insights into current-use pesticides distribution in agricultural landscapes](#). Cirelli, S. et al. (2026) High temporal resolution pollen analysis: New insights into current-use pesticides distribution in agricultural landscapes, *Environmental Pollution*. Available at: <https://www.sciencedirect.com/science/article/pii/S0269749126007189>.
- [Breakdown products of the fungicide Fludioxonil may account for observed environmental impact: potential implications for human health](#). Roelans, L., Brandhorst, T, Tonelli, M., Chiellini, G., and Porter, W. (2026) Breakdown products of the fungicide Fludioxonil may account for observed environmental impact: potential implications for human health, *PeerJ*. Available at: <https://peerj.com/articles/21290/>.
- [Genotoxicity of pesticide mixtures present in the diet of the French population](#). Graillot, V., Takakura, N., Hegarat, L. L., Fessard, V., Audebert, M., & Cravedi, J. P. (2012). Genotoxicity of pesticide mixtures present in the diet of the French population. *Environmental and molecular mutagenesis*, 53(3), 173–184. <https://doi.org/10.1002/em.21676>
- [Assessment of pesticide contamination in pomegranates: A multivariate approach and health risk evaluation](#). Gormez E, Odabas E, Golge O, González-Curbelo MÁ, Kabak B. Assessment of pesticide contamination in pomegranates: A multivariate approach and health risk evaluation. *Food and Chemical Toxicology : an International Journal Published for the British Industrial Biological Research Association*. 2025 Jun;200:115363. DOI: 10.1016/j.fct.2025.115363. PMID: 40032022.
- [Initial Survey of Pesticide Residues in Baby's food and The Exceedances of Maximum Residual Limit \(MRLs\)](#). Babalola, Oluwaseun & Raji, Ajoke. (2018). Initial Survey of Pesticide Residues in Baby's food and The Exceedances of Maximum Residual Limit (MRLs). *JOURNAL OF RESEARCH AND REVIEW IN SCIENCE*. 5. 10.36108/jrrslasu/8102/50(0102).
- [Combined toxic effects of fludioxonil and triadimefon on embryonic development of zebrafish \(Danio rerio\)](#). Wang, Y., Xu, C., Wang, D., Weng, H., Yang, G., Guo, D., Yu, R., Wang, X., & Wang, Q. (2020). Combined toxic effects of fludioxonil and triadimefon on embryonic development of zebrafish (Danio rerio). *Environmental pollution (Barking, Essex : 1987)*, 260, 114105. <https://doi.org/10.1016/j.envpol.2020.114105>
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- [Species Sensitivity Distributions of Benthic Macroinvertebrates in Fludioxonil-Spiked Sediment Toxicity Tests](#). Sun, J., Xiao, P. F., Yin, X. H., Zhang, K., Zhu, G. N., & Brock, T. C. M. (2022). Species Sensitivity Distributions of Benthic Macroinvertebrates in Fludioxonil-Spiked Sediment Toxicity Tests. *Archives of environmental contamination and toxicology*, 82(4), 569–580. <https://doi.org/10.1007/s00244-022-00933-8>
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Gateway Health and Environmental Effects Citations

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