

Chemical Factsheet

Mancozeb

General Information

- Product Names:
 - Ridomil** (Syngenta) formulated with [Metalaxyl-M](#)
 - Maxim** (Syngenta) formulated with [Fludioxonil](#)
 - Acrobat** (BASF) formulated with [Dimethomorph](#)
 - Stature** (BASF) formulated with [Dimethomorph](#)
 - Grain Guard** (Chemtura)
 - Moncoat** (Gowan) formulated with [Flutolanil](#)
 - Gavel** (Gowan) formulated with [Zoxamide](#)
 - Dithane** (Dow)
 - Penncozeb** (United Phosphorus)
- Chemical Class: ethylene bisdithiocarbamate (EBDC) fungicide
- Uses: Fungicide used in agriculture, professional turf management, and horticulture, on a wide variety of food/feed crops, including tree fruits, vegetable crops, field crops and grapes, ornamental plants, and sod farms. Other uses include greenhouse grown flowers and ornamentals, and seed and seed piece treatment.
- Alternatives: [Organic agriculture](#)
- Beyond Pesticides rating: [Toxic](#)

Health and Environmental Effects

See citations at end of document.

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

Residential Uses as Found in the ManageSafe™ Database

- [Mold](#)

Additional Information

- Regulatory Status:
 - [Beyond Pesticides' Comments \(October 2024\)](#)

- [EPA Reregistration Eligibility Decision](#) (RED) signed (9/2005)
- [EPA Factsheet](#) (9/2005)
- Supporting information:
 - [Exttoxnet Mancozeb Factsheet](#) (Extension Toxicology Network)
 - [PAN Pesticides Database - Mancozeb](#) (Pesticide Action Network)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
 - [Top 15 Farmworker Poison](#)
 - [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
 - [Autism: Transient in utero hypothyroxinemia related to maternal flavonoid ingestion during pregnancy and to other environmental antithyroid agents.](#) Román, G, C. 2007. *Journal of the Neurological Sciences*; 262(1-2), pp 15-26
 - [Pesticides expenditures by farming type and incidence of Parkinson disease in farmers: A French nationwide study.](#) Perrin, L., Spinosi, J., Chaperon, L., Kab, S., Moisan, F. and Ebaz, A. *Environmental Research*, 197, p.111161.
 - [Haematological and biochemical toxicity in freshwater fish *Clarias gariepinus* and *Oreochromis niloticus* following pulse exposure to atrazine, mancozeb, chlorpyrifos, lambda-cyhalothrin, and their combination.](#) Kanu, K.C., Okoboshi, A.C. and Otitolaju, A.A., 2023. *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology*, 270, p.109643.
 - [Depressive symptoms and suicide attempts among farmers exposed to pesticides.](#) Zheng, R. et al. (2024) *Depressive symptoms and suicide attempts among farmers exposed to pesticides*, *Environmental Toxicology and Pharmacology*. Available at: <https://www.sciencedirect.com/science/article/pii/S1382668924001017?via%3Dihub>.
 - [Thyroid under Attack: The Adverse Impact of Plasticizers, Pesticides, and PFASs on Thyroid Function.](#) Rodrigues, V.G. et al. (2024) *Thyroid under Attack: The Adverse Impact of Plasticizers, Pesticides, and PFASs on Thyroid Function*, *Endocrines*. Available at: <https://www.mdpi.com/2673-396X/5/3/32>.
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 - [Pesticide exposure and neurodevelopment in children aged 6–9 years from Talamanca, Costa Rica.](#) Berna van Wendel de Joode, Ana M. Mora, Christian H. Lindh, David Hernández-Bonilla, Leonel Córdoba, Catharina Wesseling, Jane A. Hoppin, Donna Mergler, *Pesticide exposure and neurodevelopment in children aged 6–9 years from Talamanca, Costa Rica*, *Cortex*, Volume 85, 2016, Pages 137-150, ISSN 0010-9452, <https://doi.org/10.1016/j.cortex.2016.09.003>.
 - [Exposure to multiple pesticides and neurobehavioral outcomes among smallholder farmers in Uganda.](#) Samuel Fuhrmann, Andrea Farnham, Philipp Staudacher, Aggrey Atuhaire, Tiziana Manfioletti, Charles B. Niwagaba, Sarah Namirembe, Jonathan Mugweri, Mirko S. Winkler, Lutzen Portengen, Hans Kromhout, Ana M. Mora, *Exposure to multiple pesticides and neurobehavioral outcomes among smallholder farmers in Uganda*, *Environment International*, Volume 152, 2021, 106477, ISSN 0160-4120, <https://doi.org/10.1016/j.envint.2021.106477>.
 - [Impact of Endocrine Disrupting Pesticide Use on Obesity: A Systematic Review.](#) Pérez-

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Gateway Health and Environmental Effects Citations

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