

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>.
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 - [Respiratory and allergic outcomes among 5-year-old children exposed to pesticides.](#) Islam, J.Y. et al. (2023) Respiratory and allergic outcomes among 5-year-old children exposed to pesticides, Thorax. Available at: <https://thorax.bmj.com/content/78/1/41.abstract>.
 - [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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- [Immune response of Brazilian farmers exposed to multiple pesticides](#). Jacobsen-Pereira, C.H. et al. (2020) 'Immune response of Brazilian farmers exposed to multiple pesticides', *Ecotoxicology and Environmental Safety*, 202, p. 110912. doi:10.1016/j.ecoenv.2020.110912.
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Gateway Health and Environmental Effects Citations

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