

Chemical Factsheet

DEET

General Information

- Fact Sheet: [deet.pdf](#)
- Product Names:
 - Ben's 100 Tick & Insect Repellent** (Tender)
 - Cutter Insect Repellent** (Spectrum Brands)
 - OFF Skintastic Insect Repellent Spray with Aloe Vera** (SC Johnson)
 - Deep Woods OFF** (SC Johnson)
 - Repel Insect Repellent Family Formula** (Spectrum Brands)
 - PreStrike Mosquito Repellent** (Zodiac Pet Care Products)
- Chemical Class: Aromatic amide insecticide
- Uses: Households/Domestic Dwellings, Human body/clothing while being worn (insect repellent), Cats (adults/kittens), Dogs/canines (adults/puppies), Horses, Pet living/sleeping quarters; targets Biting flies, biting midges, black flies, chiggers (redbugs), deer flies, fleas, gnats, horse flies, mosquitoes, no-see-ums, sand flies, small flying insects, stable flies and ticks
- Alternatives: [Least-Toxic Insect Repellent](#)
- Beyond Pesticides rating: [Toxic](#)

Health and Environmental Effects

See citations at end of document.

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

Residential Uses as Found in the ManageSafe™ Database

- [Ticks](#)
- [Chiggers](#)
- [Mosquitoes](#)

Additional Information

- Regulatory Status:

- [EPA Reregistration Eligibility Decision](#) (RED) signed (9/1998)
- Supporting information:
 - [Daily News Blog entries](#) (Beyond Pesticides)
 - [NCAP DEET Factsheet](#) (Northwest Coalition for Alternatives to Pesticides)
 - [Exttoxnet DEET Factsheet](#) (Extension Toxicology Network)
 - [PAN Pesticides Database: DEET](#) (Pesticide Action Network)
 - [Synergy: the Big Unknowns of Pesticide Exposure](#) (Beyond Pesticides 2004)
 - [The Truth About West Nile Virus](#) (Beyond Pesticides 2003)
 - [West Nile Virus/Mosquito Management](#) (Beyond Pesticides program page)
- Studies [compiled from the [Pesticide-Induced Diseases Database](#)]
 - [DEET and Permethrin Syntax Study](#) *Experimental Neurology* (2001)
 - [Prenatal exposure to pesticides and risk for holoprosencephaly: a case-control study.](#) Addissie, Y.A., Kruszka, P., Troia, A., Wong, Z.C., Everson, J.L., Kozel, B.A., Lipinski, R.J., Malecki, K.M. and Muenke, M., 2020. *Environmental Health*, 19(1), pp.1-13.
 - [Genotoxicity studies on permethrin, DEET and diazinon in primary human nasal mucosal cells.](#) Tisch, M., et al. 2002. *Eur Arch Otorhinolaryngol* 259:150-153.
 - [Epigenome-wide association study for pesticide \(Permethrin and DEET\) induced DNA methylation epimutation biomarkers for specific transgenerational disease.](#) Thorson, J.L.M., Beck, D., Ben Maamar, M. et al. Epigenome-wide association study for pesticide (Permethrin and DEET) induced DNA methylation epimutation biomarkers for specific transgenerational disease. *Environ Health* 19, 109 (2020).
<https://doi.org/10.1186/s12940-020-00666-y>
 - [Urinary pesticide biomarkers from adolescence to young adulthood in an agricultural setting in Ecuador: Study of secondary exposure to pesticides among children, adolescents, and adults \(ESPINA\) 2016 and 2022 examination data.](#) Parajuli, R. et al. (2025) Urinary pesticide biomarkers from adolescence to young adulthood in an agricultural setting in Ecuador: Study of secondary exposure to pesticides among children, adolescents, and adults (ESPINA) 2016 and 2022 examination data, Data in Brief. Available at:
<https://www.sciencedirect.com/science/article/pii/S2352340925006067>.
 - [Reduced birth weight in relation to pesticide mixtures detected in cord blood of full-term infants.](#) Wickerham, Erin L et al. "Reduced birth weight in relation to pesticide mixtures detected in cord blood of full-term infants." *Environment international* vol. 47 (2012): 80-5. doi:10.1016/j.envint.2012.06.007
 - [Occurrence of per- and polyfluoroalkyl substances, pesticides, pharmaceuticals, and heavy metals in Greek backyard chicken eggs and estimation of the consumption risk.](#) Arvaniti, Olga S et al. "Occurrence of per- and polyfluoroalkyl substances, pesticides, pharmaceuticals, and heavy metals in Greek backyard chicken eggs and estimation of the consumption risk." *The Science of the total environment*, vol. 998 180253. 19 Aug. 2025, doi:10.1016/j.scitotenv.2025.180253

Gateway Health and Environmental Effects Citations

1. Beyond Pesticides ChemWatch Factsheets. (Cited under factsheets on [Beyond Pesticides Gateway](#); see top of individual chemical page)
2. Extension Toxicology Network (EXTOXNET) Pesticide Information Profiles.
<http://extoxnet.orst.edu/pips/ghindex.html>
3. Northwest Coalition for Alternatives to Pesticides (NCAP), Pesticide Factsheets.
<http://www.pesticide.org/pesticide-factsheets>.

