

Health Questions and Answers for

Merit[®] Insecticidal Products

Prepared by the Office of Environmental Health Hazard Assessment, CalEPA



Q: *What is Merit[®]?*

A: Merit[®] is a line of insecticidal products containing the active ingredient imidacloprid. Merit[®] is being used by the California Department of Food and Agriculture (CDFA) to control invasive pests. Merit[®] can be applied to soil below a plant (soil drench or injection) or to leaves (foliar application). With soil drench, imidacloprid is taken up by the roots and distributed throughout the plant. With foliar application, imidacloprid enters the plant by penetrating the leaves. Insects are exposed to imidacloprid when they feed upon plant tissues or ingest plant fluids.

Q: *How does the active ingredient, imidacloprid, work?*

A: When insects ingest or come in contact with imidacloprid, it binds to their nerve cells. This affects transmission of nerve impulses and causes tremors and other nervous-system problems. This can lead to the death of the insect. Imidacloprid does not bind as strongly to mammalian nerve cells, making it much less toxic to humans and other mammals.

Q: *What are imidacloprid's human health effects?*

A: Animal testing shows imidacloprid caused effects in the nervous system, liver, thyroid, and on body weight. However, these effects are not expected at the low levels of imidacloprid that occurs when Merit[®] is used according to the instructions on the label. Imidacloprid does not cause cancer, eye irritation, or skin-sensitization reactions (allergic contact dermatitis).

Q: *How do regulatory agencies classify imidacloprid's health effects and risk?*

A: Imidacloprid is classified by the U.S. Environmental Protection Agency as a "General Use Pesticide." This means there are products containing imidacloprid available to the general public. These products include those registered for use on turf and ornamental plants and various food and feed crops. Imidacloprid can also be used on buildings for termite control and on cats and dogs for flea control.

Q: *What is known about the inert ingredients in Merit[®]?*

A: In animal studies, some of the inert ingredients in Merit[®] caused slight skin or eye irritation when applied at concentrations significantly higher than what humans would be exposed to from Merit[®] applications. When used according to label instructions, Merit[®] is highly diluted with water, ensuring a very low level of exposure to any one inert ingredient.

Health Questions and Answers for Merit[®] Insecticidal Products

Q: *What precautions should people take when Merit[®] is applied to plants in their yard?*

A: As a precaution, individuals should stay indoors during treatment, close all windows and doors that open to the outside, and turn off ventilation systems that receive outside air. Inhalation exposure is expected to be minimal because imidacloprid has a very low tendency to evaporate. Follow all instructions provided by CDFA.

Q: *What precautions should people take after Merit[®] is applied to plants in their yard?*

A: Residents should not perform yard work or allow children to play near the treated areas immediately after treatment. Wait until the material has dried before entering into the treated area. For those wishing to take extra precaution, wait at least 24 hours after treatment before entering the treated area. If it is necessary to enter prior to the material drying, wear gloves and clothes to protect the skin from direct contact with residues, and wash skin and clothing if contact occurs. Follow all instructions provided by CDFA.

Q: *Can I eat fruits and vegetables from plants treated or exposed to Merit[®]?*

A: When Merit[®] is applied to turf and groundcover, it is unlikely that imidacloprid residue would be found on fruits and vegetables in the yard. As a precaution, protect your plants from against spray drift and wash them before eating.

When it is applied to the soil near edible plants such as citrus trees, it may be found in or on the outside of fruits and leaves of treated plants. However, when detected, the levels of imidacloprid are very low and do not pose a health hazard. Produce can be harvested 24 hours after treatment and should be washed before eating.

Q: *Are there other products on the market that contain imidacloprid?*

A: Other pesticide products that contain imidacloprid include flea control products and home gardening products.

Q: *What should I do if I feel sick after the application of Merit[®] products?*

A: Call the California Poison Control System hotline at (800) 222-1222 or consult with your physician.

For further information, please contact:
Invasive Species Program
Office of Environmental Health Hazard Assessment
California Environmental Protection Agency

1001 I Street, P.O. Box 4010
Sacramento, CA 95812
Phone: (916) 327-7319

1515 Clay Street, 16th Floor
Oakland, CA 94612
(510) 622-3170

Email: pesticides@oehha.ca.gov

March 2016