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Basic Information about Pesticide Ingredients

Pesticide products contain both "active" and "inert" ingredients:

What is a Pesticide?

A pesticide is any substance or mixture of substances intended for

- Preventing, destroying, repelling or mitigating any pest.
- Use as a plant regulator, defoliant, or desiccant.
- Use as a nitrogen stabilizer

[More information on types of pesticide ingredients.](#)

[Definition of pesticide in FIFRA](#)

[Información relacionada disponible en español](#)

- An "[active ingredient](#)" prevents, destroys, repels, or mitigates a pest, or is a plant regulator, defoliant, desiccant, or nitrogen stabilizer.
- All other ingredients are called "[inert ingredients](#)" by federal law. They are important for product performance and usability.

Active Ingredients

Active ingredients are the chemicals in a pesticide product that act to control the pests. Active ingredients must be identified by name on the pesticide product's label together with its percentage by weight.

There are several categories of active ingredients:

- Conventional, which are all ingredients other than biological pesticides and

- Antimicrobial, which are substances or mixtures of substances used to destroy or suppress the growth of harmful microorganisms whether bacteria, viruses, or fungi on inanimate objects and surfaces.
- Biopesticides, which are types of ingredients derived from certain natural materials.

Inert Ingredients

Pesticide products contain at least one active ingredient and other intentionally added inert ingredients. Called “inert ingredients” by the federal law, they are combined with active ingredients to make a pesticide product. Inerts are chemicals, compounds, and other substances, including common food commodities (e.g., certain edible oils, spices, herbs) and some natural materials (e.g., beeswax, cellulose).

The name “inert” does not mean non-toxic. All inert ingredients must be approved by EPA before they can be included in a pesticide. We review safety information about each inert ingredient before approval. If the pesticide will be applied to food or animal feed, a food tolerance is required for each inert ingredient in the product, and we may limit the amount of each inert ingredient in the product.

Inert ingredients play key roles in pesticide effectiveness and product performance. Examples of functions inerts can serve include:

- Act as a solvent to help the active ingredient penetrate a plant's leaf surface.
- Improve the ease of application by preventing caking or foaming.
- Extend the product's shelf-life.
- Improve safety for the applicator.
- Protect the pesticide from degradation due to exposure to sunlight.

Under federal law, the identity of inert ingredients is confidential business information. The law does not require manufacturers to identify inert ingredients by name or percentage on product labels. In general, only the total percentage of all inert ingredients is required to be on the pesticide product label.

Information on inert ingredients:

[Inert Ingredients Overview and Guidance](#)

[Inert Ingredient Regulation](#)

[Other/Inert Ingredients in Pesticides](#) EXIT

Evaluating Pesticide Ingredients

Before manufacturers can sell pesticides in the United States, EPA must evaluate them thoroughly to ensure that they meet federal safety standards to protect human health and the environment. We grant a "registration" or license that permits a pesticide's distribution, sale, and use only after the company meets the scientific and regulatory requirements.

In evaluating a pesticide registration application, we assess a wide variety of

concerns pertaining to the:

- identity,
- composition,
- potential adverse effects, and
- environmental fate

of each pesticide. The data allow us to evaluate whether a pesticide could harm certain nontarget organisms and endangered species. We evaluate both the active ingredient and the products in which the active ingredient is used.

We regulate pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act. See more information on these pesticide categories:

- Conventional pesticide registration
- Antimicrobial pesticide registration
- Biopesticide registration

LAST UPDATED ON JULY 15, 2019