



## Duet® Adulticide FAQs

### **What is Duet?**

Duet is the name of a public health mosquito control product. It has two active ingredients: Sumithrin and Prallethrin. They are formulated to mimic the insect-killing (insecticidal) properties of natural substances called “pyrethrins” in chrysanthemum flowers. Duet was registered by the U.S. EPA in 1995 to help control adult mosquito populations that may transmit disease.

### **Does Duet pose a health risk to humans?**

When applied as indicated on the label for adult mosquito control, Duet does not endanger human health.

Prior to registering a product, the EPA evaluates products thoroughly to be sure there is a “reasonable certainty of no harm” to humans, animals and the environment from their use. Duet and its ingredients have passed rigorous tests required by the EPA and has been approved for use in ground and aerial application in outdoor residential and recreational areas and other similar areas.

### **Will application of this product harm my children and/or pets? Can they be outdoors during the application?**

Duet is applied at extremely low dosage rates – less than an ounce per acre. An acre is equivalent to approximately a football field. Such low rates mean there is very low exposure even if present during or immediately after the application is made; this level of exposure is far less than the amount necessary to pose a health concern.

People and pets can be outdoors during the application; there are no re-entry restrictions or limitations for Duet. If you choose to remain indoors, the spray (mist) will dissipate quickly through the treatment area (in 5-30 minutes, depending on weather conditions). The low application rate and wide area dispersal of the spray ensure that exposures are minimal.

### **Will this chemical harm the finish on my car and/or house? Do I need to rinse off outdoor toys?**

No. The ingredients of Duet are not corrosive or staining and therefore should cause no chemical harm to the finish of a car and/or house and there is no need to wash off outdoor toys.

### **Do I need to close my doors and windows during the applications?**

No. It is not necessary to close doors or windows. The spray will dissipate from the treated area quickly (within 5-30 minutes).

### **I have an air conditioner. Should I turn it off if spraying is scheduled in my area?**

No. There is no need to take any precautions with air conditioning systems.

**Do vegetables and fruits need to be harvested before the spraying? Or is there a certain amount of time I need to wait? Is rinsing with water sufficient?**

No. Duet will not deposit in significant amounts. Residues will degrade quickly on exposure to sunlight. It is good common sense to rinse all fruits and vegetables with water prior to eating as a precautionary measure.

**Do I need to cover my fish pond prior to a spraying?**

No. The spraying should not pose a risk for a healthy pond.

**Do horses and livestock need to be sheltered during the application?**

No. Horses and livestock should not be adversely affected by applications of Duet. This product has low mammalian toxicity and its ingredients are commonly used in livestock pest management products.

**How does Duet affect non-target insects?**

Because of the manner in which Duet is applied and the time of day it is applied, it should not affect beneficial insects, like bees and butterflies. Duet is applied in small droplets, which break down quickly in the environment. Since the product must hit a mosquito while it is in flight to have an effect, it is sprayed at night when mosquitoes are actively flying and when other insects, such as bees and butterflies, are not active.

However, Duet is an insecticide and may be toxic upon direct exposure to bees active outside the hive. Beekeepers can protect their bees by sheltering the hives during the spraying operations.

**How does Duet affect the environment?**

The U.S. EPA has determined that Duet can be applied by truck or aircraft in residential and recreational areas, including vegetation surrounding parks, woodlands, swamps, marshes, overgrown areas and golf courses without undue risk to the environment. Duet may be toxic to some aquatic organisms, including fish and invertebrates; however the small amount of product and the manner in which it is applied greatly reduces this risk.

**How is Duet applied?**

Generally, Duet is applied at an ultra low volume in an extremely fine mist of tiny drops, where the average droplet size is 17 microns – smaller than the size of a pinpoint. It can be applied via ground (truck or backpack) or from the air.

**How much is typically applied?**

Duet is applied in very low dosages, from less than half an ounce to a little more than one ounce of formulated product per acre (.43 to 1.28 fl oz/ac). This current application will use a dosage rate of .8 fl oz/ac. This is approximately a tablespoon of formulated product to treat an area the size of a football field.

### **Will this eliminate our mosquito population?**

No, this will not completely eliminate all mosquitoes. Killing adult mosquitoes (adulticiding) – or spraying – helps to control the size of mosquito populations and prevent the spread of disease. Mosquito populations are constantly dying off and regenerating, and adulticiding will not eliminate all of the adult mosquitoes in the community. Adulticiding is needed because source reduction (reducing unnecessary standing water), surveillance and larviciding (killing the mosquito population at the larval stage) alone are not enough to control mosquito populations.

Duet is effective in controlling disease-spreading mosquitoes. A specific problem area is identified and treated, but the spraying in this targeted area is not reaching an entire habitat of mosquitoes. Sometimes mosquitoes move into the spray zone from outside of it after it is treated, which is called “reinfestation” (i.e., they drift in on wind currents from areas that have not been treated). When mosquito reinfestation occurs, additional sprayings may need to be considered to control the spread of mosquitoes that transmit disease. Effectively controlling an adult mosquito population through spraying also depends on a number of external factors, including timing, the level of reinfestation, methodology used during the application and weather conditions.