

Cape May County  
Department of Mosquito Control  
Fact Sheet

## **ALTOSID (Larvicide)**

### **What Is Altosid And How Is It Used?**

**ALTOSID** is an insecticide product that is recommended for mosquito control in New Jersey by Rutgers, the State University of New Jersey. It contains the pesticide called **METHOPRENE**. The U.S. Environmental Protection Agency's (EPA) current evaluation considers **METHOPRENE**-containing products to be very slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

**ALTOSID** is used to prevent mosquitoes from hatching in lakes, ponds and other bodies of water. It acts on the larval or immature stage of the mosquito in water immediately before the flying mosquito emerges. **ALTOSID** is part of a mosquito management approach using habitat management and other measures to control immature mosquitoes in order to lessen the need to spray for adult mosquitoes.

### **How Can I Avoid Exposure To Altosid?**

Risk to the general public from the use of **ALTOSID** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by the following actions:

- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Avoid direct contact with water bodies that have been treated.
- Move children's toys out of application areas.
- Move animals and their food and water dishes out of application areas.
- Stay away from application equipment, whether in use or not.

### **What Are The Symptoms Of Exposure Of Altosid?**

**METHOPRENE** is not a skin irritant or a sensitizer. The chance of experiencing symptoms of exposure use is very low. You should contact your physician, other medical providers or the New Jersey Poison Information and Education System (NJPIES) at **1-800-222-1222** if you experience any symptoms following a pesticide application. Bring this sheet with you if you visit a physician or other medical provider.

### **How Long Will Altosid Last In The Environment?**

**METHOPRENE** has a low persistence and breaks down in water within a few days. In soil, it breaks down in less than 10 days.

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## **ANVIL “Adulticide”**

### **What Is Anvil And How Is It Used?**

**ANVIL** is an insecticide product that is recommended for Ultra-Low Volume mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticides called “**SUMITHRIN AND PIPERONYL BUTOXIDE (PBO)**”. The U.S. Environmental Protection Agency (EPA) current evaluation considers **SUMITHRIN AND PBO**-containing products to be slightly toxic with minimal potential risk to people when used properly as part of an integrated mosquito control program.

**Anvil** is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in water are preferred and most used, the spraying of adult mosquitoes is called for when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

### **How Can I Avoid My Exposure To Anvil?**

Risk to the general public from the use of **Anvil** is minimal.

Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by the following actions:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.
- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Move children’s toys out of application areas.
- Move animals and their food and water dishes out of application areas.
- Stay away from application equipment, whether in use or not.
- Whenever possible, remain indoors with windows closed and with window air conditioners on non-vent (closed to the outside) and window fans turned off during spraying.
- Avoid direct contact with surfaces that are wet from pesticide spraying. Do not allow children to play in areas that have been sprayed until they have completely dried (approximately one hour).
- If you must remain outdoors, avoid eye and skin contact with the spray. If you get spray in your eyes or on you skin, immediately flush and rinse with water.

### **What Are The Symptoms Of Exposure To Anvil?**

Irritation or sensitization sometimes occurs after exposure, causing an asthmatic condition or skin rash. The chance of experiencing these symptoms of exposure with proper use is low. You should contact your physician, other medical providers or the New Jersey Poison Information and Education System (**NJPIES**) at **1-800-222-1222** if you experience these symptoms following a pesticide application.

### **How Long Will Anvil Last In The Environment?**

The **Anvil** application stays in the air for a short time until it lands on surfaces. **Sumithrin** has a low persistence and breaks down in water and soil within 1 to 25 days. **Sumithrin** breaks down faster in sunlight.

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## **AQUA-RESLIN (Adulticide)**

### **What Is Aqua-Reslin And How Is It Used?**

**AQUA-RESLIN** is an insecticide product that is recommended for mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticides called **PERMETHRIN AND PIPERONYL BUTOXIDE**. The U.S. Environmental Protection Agency's (EPA) current evaluation considers **PERMETHRIN AND PIPERONYL BUTOXIDE**-containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

**AQUA-RESLIN** is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in water are the preferred routine approaches, the spraying of adult mosquitoes is called for when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

### **How Can I Avoid Exposure To Aqua-Reslin?**

Risk to the general public from the use of **AQUA-RESLIN** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by the following actions:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.
- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Move children's toys out of application areas.
- Move animals and their food and water dishes out of application areas.
- Stay away from applications equipment, whether in use or not.
- Whenever possible, remain indoors with windows closed and with window air conditioners on non-vent (closed to the outside air) and window fans turned off during spraying.
- Avoid direct contact with surfaces that are still wet from pesticide spraying. Do not allow children to play in areas that have been sprayed until they have completely dried (approximately one hour).
- If you must remain outdoors, avoid eye and skin contact with the spray. If you get spray in your eyes or on your skin, immediately flush and rinse with water.

### **What Are The Symptoms Of Exposure To Aqua-Reslin?**

Irritation or sensitization sometimes occurs after exposure, causing an asthmatic condition or skin rash. The chance of experiencing these symptoms of exposure with proper use is low. You should contact your physician, other medical providers or the New Jersey Poison Information and Education System (**NJPIES**) at **1-800-222-1222** if you experience these symptoms following a pesticide spraying. Bring this sheet with you if you visit a physician or other medical provider.

### **How Long Will Aqua-Reslin Last In The Environment?**

The **AQUA-RESLIN** spray stays in the air for a short time until it lands on surfaces. **PERMETHRIN** has a low persistence and lasts no longer than 25 days in water and soil. **PERMETHRIN** breaks down faster in sunlight.

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## **BVA2 LARVICIDE OIL**

### **What Is BVA2 And How Is It Used?**

**BVA2** is an insecticide product that is recommended for mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticide called **MINERAL OIL**. The U.S. Environmental Protection Agency's (EPA) current evaluation considers **MINERAL**-oil products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

**BVA2** is used to prevent mosquitoes from hatching in lakes, ponds and other bodies of water. It acts on the pupae or immature stage of the mosquito in water immediately before the flying mosquito emerges.

**BVA2** is part of a mosquito management approach using habitat management and other measures to control immature mosquitoes in order to lessen the need to spray for adult mosquitoes.

### **How Can I Avoid Exposure To BVA2?**

Risk to the general public from the use of **BVA2** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by the following actions:

- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Move children's toys out of application areas.
- Move animals and their food and water dishes out of application areas.
- Stay away from application equipment, whether in use or not.

### **What Are The Symptoms Of Exposure To BVA2?**

Direct contact with eyes or skin may cause mild irritation or discomfort. The chance of experiencing these symptoms of exposure with proper use is low. You should contact your physician, other medical providers or the New Jersey Poison Information and Education System (**NJPIES**) at **1-800-222-1222** if you experience these symptoms following a pesticide application. Bring this sheet with you if you visit a physician or other medical provider.

### **How Long Will BVA2 Last In The Environment?**

**MINERAL OIL** photodegrades rapidly in water, breaking down after a few days.

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**“Duet Dual-Action<sup>®</sup> Adulticide”**

**What is *Duet Dual-Action<sup>®</sup>* adulticide and how is it used?**

*Duet Dual-Action<sup>®</sup>* contains two pesticides called ***Prallethrin*** and ***Sumithrin***, and a synergistic compound called ***piperonyl butoxide*** which increases the effectiveness of the pesticides. Prallethrin and Sumithrin are members of a category of pesticides called ***pyrethroids***, which in turn are synthetic versions of pesticides produced by plants called *pyrethrins*. Pyrethroid/piperonyl butoxide mixtures have been recommended for Ultra-Low-Volume (ULV) mosquito control in New Jersey by Rutgers, The State University of New Jersey. The U.S. Environmental Protection Agency’s (EPA) current evaluation considers pyrethroid-containing products to be slightly toxic with minimal potential risk to people when used properly as part of an integrated mosquito control program.

This pyrethroid-containing product is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in water are preferred and most used, the spraying of adult mosquitoes is called for when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective. The combination of the two pesticides has been shown to produce what the manufacturer calls ‘benign agitation’. In other words mosquitoes are agitated from a resting state to a non-biting flying state where they are more vulnerable to pesticide exposure. This makes *Duet Dual-Action<sup>®</sup>* adulticide more effective against hard-to-control species like *Aedes albopictus* which typically rest during the evening hours when adulticiding usually takes place.

**How can I reduce my exposure to *Duet Dual-Action<sup>®</sup>*?**

Because of the very small amounts of active ingredients released per acre, the risk to the general public from the use of pyrethroid-containing products is minimal. Avoiding exposure is always the safest course of action. Any possible exposure risk can be reduced by the following actions:

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.
- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Move your pets, their food, and water dishes inside during ULV application. Also bring clothing and children’s toys inside.
- Stay away from application equipment, whether in use or not.
- Whenever possible, remain indoors with windows closed and with window air conditioners on non-vent (closed to the outside air) and window fans turned off during spraying.
- Avoid direct contact with surfaces that are still wet from pesticide spraying. Do not allow children to play in areas that have been sprayed until they have completely dried (approximately one hour).
- If you must remain outdoors, avoid eye and skin contact with the spray. If you get spray in your eyes or on your skin, immediately flush and rinse with water.

**What are the symptoms of exposure to *Duet Dual-Action<sup>®</sup>* ?**

Symptoms of over-exposure can include irritation to skin and eyes, respiratory and nasal irritation, irritability to sound or touch abnormal facial sensation, sensation of prickling, tingling or creeping of skin, numbness,

headache, dizziness, nausea, vomiting, diarrhea, excessive salivation, and fatigue. The chance of experiencing these symptoms of over-exposure with proper use is low. You should contact your physician, other medical providers, or the New Jersey Poison Information and Education System (NJPIES) at **1-800-222-1222** if you experience these symptoms following a pesticide application.

**How long will *Duet Dual-Action*<sup>®</sup> last in the environment?**

Pyrethroids have a soil half-life of 12 days. They have an extremely low pesticide movement rating because they bind tightly to the soil. Pyrethroids are unstable in light and air. They rapidly degrade in sunlight at the soil surface and in water. Piperonyl butoxide has a soil half-life of approximately 4 days.

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## **FYFANON “Adulticide”**

### **What Is FYFANON And How Is It Used?**

**FYFANON** is an insecticide product that is recommended for mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticide called **MALATHION**. The U.S. Environmental Protection Agency’s (EPA) current evaluation considers **MALATHION** containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

**FYFANON** is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in water are the preferred routine approaches, the spraying of adult mosquitoes is called for when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

### **How Can I Avoid Exposure to FYFANON?**

Risk to the general public from the use of **FYFANON** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by the following actions.

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.
- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Move children’s toys out of application area.
- Move animals and their food and water dishes out of application areas.
- Stay away from application equipment, whether in use or not.
- Whenever possible, remain indoors with windows closed and with window air conditioners on non-vent (closed to the outside air) and window fans turned off during spraying.
- Avoid direct contact with surfaces that are still wet from pesticide spraying. Do not allow children to play in areas that have been sprayed until they have completely dried (approximately one hour).
- If you must remain outdoors, avoid eye and skin contact with the spray. If you get spray in your eyes or on your skin, immediately flush and rinse with water.

### **What are the Symptoms of Exposure to FYFANON?**

Symptoms of exposure can include headache, nausea, dizziness, excessive sweating, salivation, excessive tearing and a runny nose. The chance of experiencing these symptoms of exposure with proper use is low. You should contact your physician, other medical providers or the New Jersey Poison Information and Education System (NJSPIES) at **1-800-222-1222** if you experience these symptoms following a pesticide application. Bring this sheet with you if you visit a physician or other medical provider.

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## **Natular® XRG (Larvicide)**

This sheet answers some basic questions about a mosquito control product in use in Cape May County. Cape May County Department of Mosquito control, along with several other resources (listed at the end of this sheet), can provide more detailed information.

### **What is Natular® and how is it used?**

**Natular®** is a bacterial larvicide that is in use by Cape May County Department of Mosquito Control on a limited basis this year. It contains the active ingredient “*Spinosad*.” Spinosad is made up of the complex organic compounds spinosyn A and spinosyn D, which are created by soil microbes. The U.S. Environmental Protection Agency’s (EPA) current evaluation considers **spinosyn**-containing products to be slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

**Natular®** contains parts of a naturally occurring soil bacterium. When mosquito larvae eat the spores, toxins are released by the mosquito’s stomach fluids, which in turn cause the larvae to die. **Natular®** is part of a mosquito management approach using habitat management and other measures to control immature mosquitos in order to lessen the need to spray for adult mosquitoes.

### **How can I avoid exposure to Natular®?**

Risk to the general public from the use of **Natular®** is very minimal. The organic compounds that are so lethal to mosquitoes are harmless to mammals. Avoiding exposure is always the safest course of action, particularly for populations that may be at a higher risk such as pregnant women, children, the elderly and those with chronic illness. Any possible exposure risk can be reduced by following some common sense actions:

Plan your activities to limit time spent outside during times of possible pesticide treatments.

- Avoid direct contact with water bodies that have been treated.
- Move children’s toys out of application areas.
- Move animals and their food and water dishes out of application areas.
- Stay away from application equipment, whether in use or not.

### **What are the symptoms of exposure to Natular®?**

Direct contact with eyes or skin may cause mild irritation or discomfort. The Chance of experiencing these symptoms of exposure with proper use is low. You should contact your physician, or other medical providers or the New Jersey Poison Information and Education System (**NJPIES**) at **1-800-222-1222** if you experience these symptoms following a pesticide spraying. Bring this sheet with you if you visit a physician or other medical provider.

### **How long will Natular® last in the environment?**

Because **spinosyn A** and **spinosyn D** are biological agents, they tend to break down quickly in the environment. Its breakdown in water or soil usually occurs within hours of use.

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## **VECTOBAC (Larvicide)**

### **What Is Vectobac And How Is It Used?**

**VECTOBAC** is an insecticide product that is recommended for mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticide called “**BACILLUS THURINGIENSIS ISRAELENSIS (BTI)**.” The U.S. Environmental Protection Agency’s (EPA) current evaluation considers **BTI**-containing products to be very slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

**VECTOBAC** is used to prevent mosquitoes from hatching in lakes, ponds and other bodies of water. It acts on the larval or immature stage of the mosquito in water immediately before the flying mosquito emerges.

**VECTOBAC** is part of a mosquito management approach using habitat management and other measures to control immature mosquitoes in order to lessen the need to spray for adult mosquitoes.

### **How Can I Avoid Exposure To Vectobac?**

Risk to the general public from the use of **VECTOBAC** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by the following actions:

- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Avoid direct contact with water bodies that have been treated.
- Move children’s toys out of application areas.
- Move animals and their food and water dishes out of application areas.
- Stay away from application equipment, whether in use or not.

### **What Are The Symptoms Of Exposure To Vectobac?**

Direct contact with eyes or skin may cause mild irritation or discomfort. The chance of experiencing these symptoms of exposure with proper use is low. You should contact your physician, other medical providers or the New Jersey Poison Information and Education System (**NJPIES**) at **1-800-222-1222** if you experience these symptoms after a pesticide application. Bring this sheet with you if you visit a physician or other medical provider.

### **How Long Will Vectobac Last In The Environment?**

Because **BTI** is a biological agent, it tends to break down quickly in the environment. Its breakdown in water or soil usually occurs within hours of use.

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## **VECTOLEX (Larvicide)**

### **What Is Vectolex And How Is It Used?**

**VECTOLEX** is an insecticide product that is recommended for mosquito control in New Jersey by Rutgers, The State University of New Jersey. It contains the pesticide called “**BACILLUS SPHAERICUS (BS)**.” The U.S. Environmental Protection Agency’s (EPA) current evaluation considers **BS**-containing products to be very slightly toxic with minimal potential risk to people when used properly as part of a complete mosquito control program.

**VECTOLEX** is used to prevent mosquitoes from hatching in lakes, ponds and other bodies of water. It acts on the larval or immature stage of the mosquito in water immediately before the flying mosquito emerges.

**VECTOLEX** is part of a mosquito management approach using habitat management and other measures to control immature mosquitoes in order to lessen the need to spray for adult mosquitoes.

### **How Can I Avoid Exposure To Vectolex?**

Risk to the general public from the use of **VECTOLEX** is minimal. Avoiding exposure is always the safest course of action, particularly for populations that may be at higher risk such as pregnant women, children, the elderly and those with chronic illnesses. Any possible exposure risk can be reduced by the following actions:

- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Avoid direct contact with water bodies that have been treated.
- Move children’s toys out of application areas.
- Move animals and their food and water dishes out of application areas.
- Stay away from application equipment, whether in use or not.

### **What Are The Symptoms Of Exposure To Vectolex?**

Direct contact with eyes or skin may cause mild irritation or discomfort. The chance of experiencing these symptoms of exposure with proper use is low. You should contact your physician, other medical providers or the New Jersey Poison Information and Education System (**NJPIES**) at **1-800-222-1222** if you experience these symptoms after a pesticide application. Bring this sheet with you if you visit a physician or other medical provider.

### **How Long Will Vectolex Last In The Environment?**

Because **BS** is a biological agent, it tends to break down quickly in the environment. Its breakdown in water or soil usually occurs within hours of use.

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**“Zenivex™ E20” Adulticide**

**What is Zenivex™ E20 adulticide and how is it used?**

*Zenivex™ E20* contains a pesticide called *Etofenprox*, a member of the category of pesticides called *non-ester pyrethroids*, which are synthetic versions of pesticides produced by plants called pyrethrins. Traditional pyrethroid/piperonyl butoxide mixtures are recommended for Ultra-Low-Volume (ULV) mosquito control in New Jersey by Rutgers, The State University of New Jersey. *Zenivex™ E20* is a non-ester pyrethroid, and therefore does not require a synergist such as piperonyl butoxide. The U.S. Environmental Protection Agency (EPA) has classified Etofenprox as a reduced risk molecule. It poses a low risk to human health and the environment when used properly as a part of an integrated mosquito control program. As formulated in *Zenivex™ E20* adulticide, Etofenprox is considered a non-carcinogen, non-teratogen and non-mutagen.

This non-ester pyrethroid-containing product is used for the control of adult mosquitoes. While habitat management and measures to control immature mosquitoes in water are preferred and most used, the spraying of adult mosquitoes is called for when biting populations reach critical levels or when a disease organism is present in adult mosquitoes. A very fine mist is sprayed into the air since flying mosquitoes must directly contact the pesticide in order for it to be effective.

**How can I reduce my exposure to Zenivex™ E20?**

Because of the very small amounts of active ingredients released per acre, the risk to the general public from the use of non-ester pyrethroid-containing products is minimal. Avoiding exposure is always the safest course of action. Any possible exposure risk can be reduced by the following actions.

- Pay attention to notices about spraying found through newspapers, websites, automated telephone messages or distributed by municipal, county or state agencies.
- Plan your activities to limit time spent outside during times of possible pesticide treatments.
- Move your pets, their food, and water dishes inside during ULV application. Also bring clothing and children’s toys inside.
- Stay away from application equipment, whether in use or not.
- Whenever possible, remain indoors with windows closed and with window air conditioners on non-vent (closed to the outside air) and window fans turned off during spraying.
- Avoid direct contact with surfaces that are still wet from pesticide spraying. Do not allow children to play in areas that have been sprayed until they have completely dried (approximately one hour).
- If you must remain outdoors, avoid eye and skin contact with the spray. If you get spray in your eyes or on your skin, immediately flush and rinse with water.

**What are the symptoms of exposure to Zenivex™ E20?**

Symptoms of over-exposure can include irritation to skin and eyes. The chance of experiencing these symptoms of over-exposure with proper use is low. You should contact your physician, other medical providers, or the New Jersey Poison Information and Education System (NJPIES) at **1-800-222-1222** if you experience these symptoms following a pesticide spraying.

**How long will Zenivex™ E20 last in the environment?**

The non-ester pyrethroid in *Zenivex™ E20* has a half-life of 1.7 days in water and 4.4 days in soil. The *Zenivex™ E20* molecule rapidly degrades in sunlight at the soil and water surface into its constituent elements Carbon, Hydrogen and Oxygen.