



Mosquito

Control Solutions

Featuring DeltaGard® & Suspend® PolyZone®

// Creating healthier spaces for your customers where they live, work & play





Partner with a worldwide leader in mosquito control



Help Address Mosquito Problems with DeltaGard® and Suspend® PolyZone®

To help you provide protection for your customers, Bayer created an outdoor spray service program utilizing DeltaGard and Suspend PolyZone to effectively control mosquitoes around residential and commercial properties.

Key Steps for Effective Control

1

Inspect Property

Inspect property for natural and man-made conditions that allow water to collect and lay stagnant, providing an environment conducive to mosquito breeding. Notify customer of such conditions and provide recommendations to reduce mosquito development.

2

Apply Larvicides

Apply larvicides (where appropriate) to mosquito-bearing stagnant water and/or to areas subject to periodic flooding that will allow immature mosquitoes to develop.

3

Apply DeltaGard

Apply DeltaGard as an immediate elimination solution to ensure superior efficacy for your mosquito control program.

4

Apply Suspend PolyZone

Apply Suspend PolyZone insecticide as a long-lasting residual barrier treatment to foliage and structures where mosquitoes will shelter and rest.

5

Report

Report to customer any changes in property conditions that may provide mosquito harborages or developing sites.

Why Having a Complete Program Makes Sense

- // Creates positive dialogue with customers
- // Establishes you as an expert in the field
- // Combines technical expertise along with innovative technology
- // Provides effective control while providing a responsible service protocol



Immediate Elimination of Mosquitoes

Fast Knockdown, Superior Efficacy

A Solution for Rapid Knockdown of Mosquitoes

- // DeltaGard kills mosquitoes in as few as 10-15 minutes
- // No knockdown recovery
- // Effective against pyrethroid-resistant mosquitoes

EPA Reduced Risk Classification for Wide Area Mosquito Control

- // Favorable toxicity profile
- // No Piperonyl Butoxide (PBO) or other synergist
- // For rural hygiene applications, may apply with livestock present

Utilizes Bayer Proprietary FFAST® Technology for ULV (Ultra Low Volume) Applications

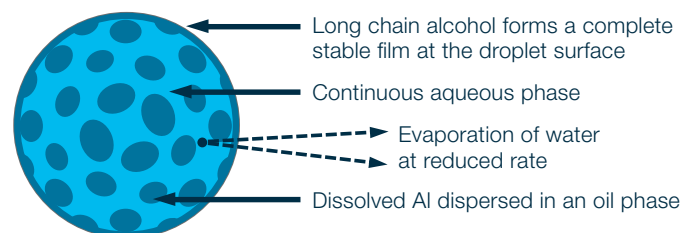
- // Water-based formulation can be applied in both concentrated and diluted, water-only forms
- // Allows for more even distribution of active ingredient in ULV form
- // Reduces the amount of active ingredient needed – one aspirin-sized tablet of AI can treat an area the size of a football field

DeltaGard Film Forming Aqueous Spray Technology (FFAST)

All the performance of a traditional oil-based spray, but with no volatile organic compounds (VOCs).

The active ingredient in DeltaGard is dissolved in a NO-VOC oil. In a final spray, the active oil droplet is encased in the FFAST technology. There is no particle present. The AI is in a dissolved state and will behave more like an emulsifiable concentrate (EC) than a typical suspension concentrate (SC). The DeltaGard formulation is an oil-in-water emulsion where active oil phase is dispersed into water.

Properties of a DeltaGard Insecticide Droplet

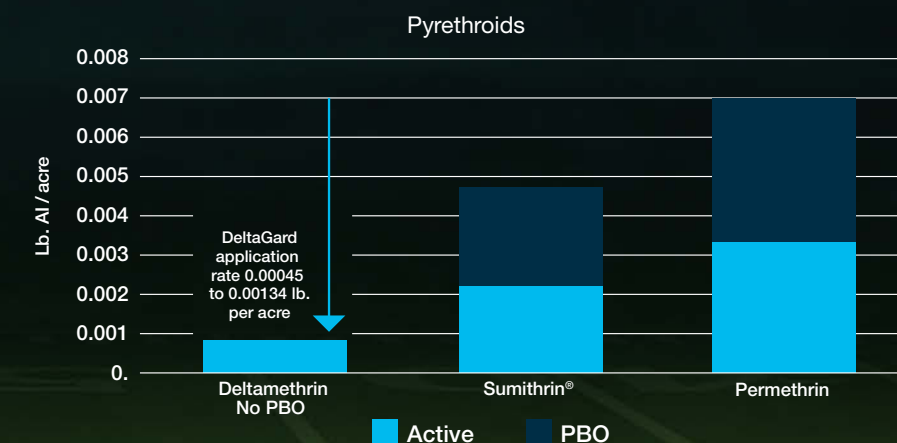


The low-label rate of DeltaGard is comparable to one aspirin-sized pellet of active ingredient dispersed over an entire football field.

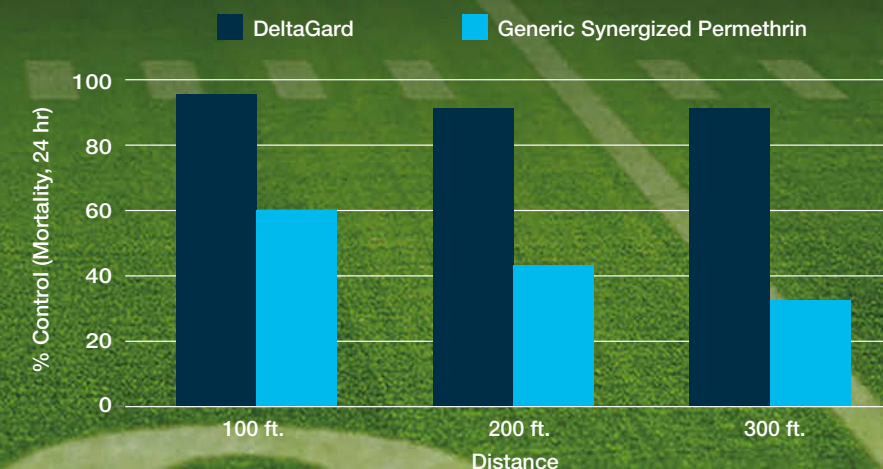
DeltaGard outperforms the competition at lower application rates while providing the superior efficacy you need to help protect your community from mosquitoes.

Pounds of Active Ingredient / Acre / Treatment

Mid-Label Rate, ULV Application For Adult Mosquito Control



DeltaGard Insecticide Field Trial – Florida

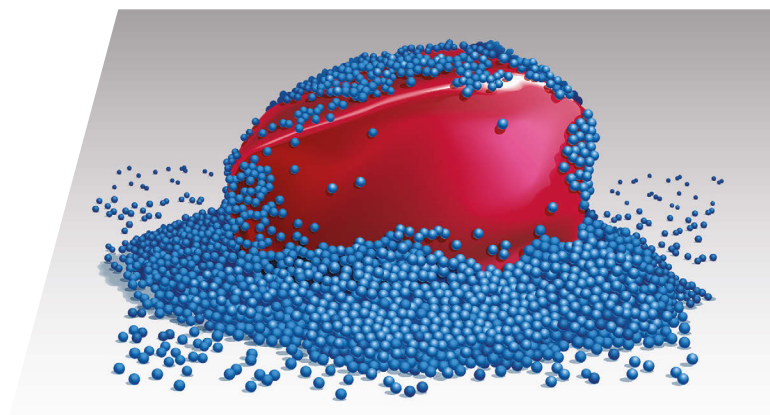


Reference: OE14USAVK1

Residual Barrier Treatment Applied After DeltaGard

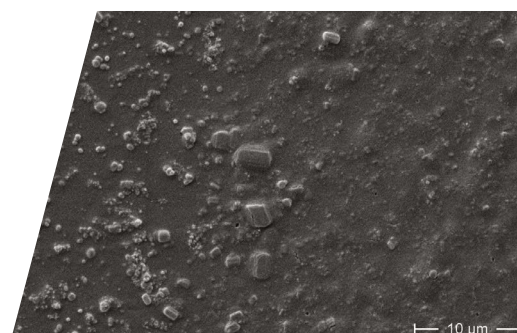
Proprietary Polymer Formulation Locks Active Ingredient in Place

Suspend PolyZone is an innovative residual spray that combines the trusted active ingredient, deltamethrin, with a proprietary polymer suspension. It does what conventional SCs and microcaps can't – it stays effective where it's sprayed, even in tough conditions, up to 90 days.

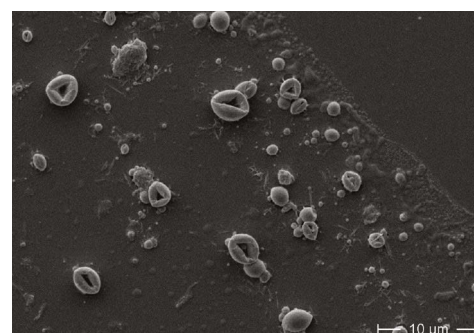


Why Suspend PolyZone is the Better Choice for Mosquito Control

When it comes to effective mosquito control, the critical factor is distribution of the active ingredient. The proprietary polymer formulation of Suspend PolyZone provides a more even surface distribution of the active ingredient, which results in increased bioavailability.



Suspend PolyZone distribution



Microcap distribution

Unstoppable Staying Power

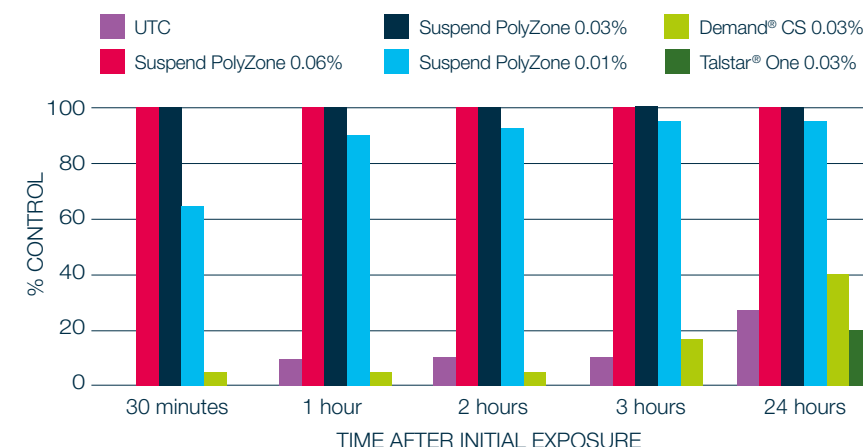
Residual Control Designed to Combat Mosquitoes in Africa

The proprietary polymer formulation in Suspend PolyZone was developed specifically to combat mosquitoes that may carry Malaria in Africa where the harsh environment destroys unprotected pyrethroids. You can count on Suspend PolyZone to deliver the protection you need to help protect your customers and improve your bottom line.

- // Proprietary polymer formulation locks the AI in place and protects it from the elements
- // Proven reduction in callback frequency, which can lead to customer satisfaction and retention
- // Broad-spectrum pest control with fewer applications
- // Provides long-term residual control regardless of weather events

Ideal for Monthly Outdoor Residual Service Intervals

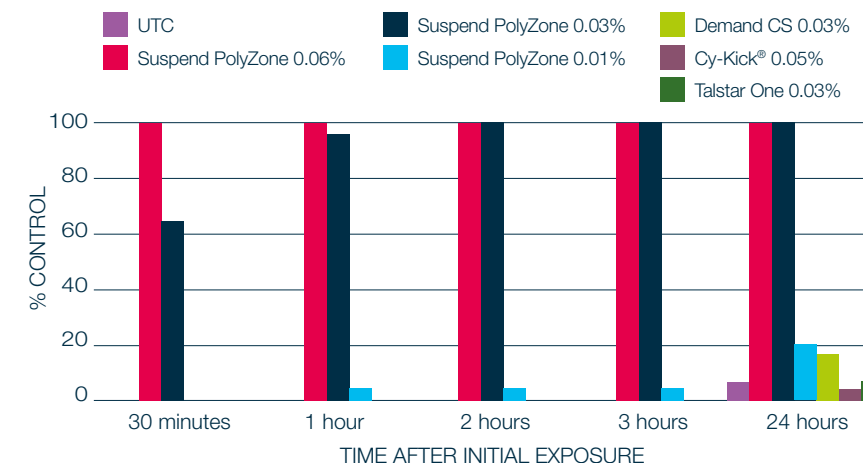
Aedes Aegypti - 28 day residual / glazed tile / 3 min exposure



Bayer Internal Study OE14USAVK4

Unstoppable Residual Power for Longer Service Intervals

Aedes Aegypti - 56 day residual / glazed tile / 3 min exposure



Bayer Internal Study OE14USAVK4

Each year, vector-borne diseases affect over one billion and kill more than one million people worldwide, making the mosquito the deadliest animal in the world.

As a Mosquito Control Professional, you provide a vital service in your community. Bayer has the solutions you need – the same technologies we use to combat mosquitoes worldwide can help protect your customers.

Source: <http://www.who.int/mediacentre/factsheets/fs387/>

The Bayer Commitment to Mosquito Control

For over 50 years, Bayer has been working with Mosquito Control Professionals worldwide to fight against mosquitoes that carry diseases such as Chikungunya, Dengue, Eastern Equine Encephalitis (EEE), Malaria, West Nile and Zika. We provide superior solutions, ongoing research and training and education to help protect public health, quality of life and the outdoor economy.

The same technology we use to combat mosquitoes worldwide can help protect your customers.



Fighting Against Mosquitoes That Carry Zika, Dengue And Chikungunya

Vector Control

**50** YEARS OF EXPERTISE IN VECTOR CONTROL

SIGNIFICANT INVESTMENTS IN THE DEVELOPMENT OF VECTOR CONTROL SOLUTIONS


-  **FIVE-FOLD INCREASE** IN OUR INVESTMENT INTO NEW VECTOR CONTROL PRODUCT DEVELOPMENT OVER THE LAST 10 YEARS
-  **INVESTMENT INTO PRODUCTION** CAPACITY OF VECTOR CONTROL PRODUCTS
-  **A GLOBAL TEAM OF 50 PEOPLE** DEDICATED TO DEVELOPING MORE SOLUTIONS

Zika/Dengue/Chikungunya Vector Control


3 OF THE 5 SPACE SPRAYS RECOMMENDED BY WHOPES* COME FROM BAYER

2 INNOVATIVE SOLUTIONS TO BE LAUNCHED: ONE GLOBALLY AND THE OTHER IN THE US MARKET

SOLUTIONS IN DEVELOPMENT

**PRODUCTS WITH IMPROVED RAIN FASTNESS** TARGETING OUTDOOR RESTING MOSQUITOES






NEW MODES OF ACTION FOR **INSECTICIDE RESISTANCE MANAGEMENT**


LONGER LASTING, MORE COST EFFECTIVE, AND MORE SUSTAINABLE SOLUTIONS


* WGI Pesticide Evaluation Scheme


Malaria Facts & Figures – Combating Resistance


Malaria: The Deadliest Vector-Borne Disease

 +  →  +  → 
Mosquito Person infected by Malaria Infected mosquito Healthy people Infected people

 **3.2 BILLION PEOPLE AT RISK**
↳ 44% OF THE GLOBAL POPULATION

 **214 MILLION CASES A YEAR**

 **438,000 DEATHS A YEAR**
↳ MALARIA REPRESENTS **80.55%** OF MORE THAN 1 MILLION DEATHS CAUSED BY MOSQUITOES

 **30 CHILD DEATHS EVERY HOUR**

Existing Solutions to Fight Malaria

MOSQUITO CONTROL

-  INDOOR RESIDUAL SPRAY
-  TREATED BEDNETS


MEDICAL TREATMENT


-  PREVENTIVE OR CURATIVE

116 MILLION people protected **BY INDOOR RESIDUAL SPRAY**

1 BILLION INSECTIDE TREATED BEDNETS distributed since 2000 globally

Progress Since 2000

**37% DECREASE IN THE NUMBER OF CASES**
WITH 78% OF THESE CASES AVERTED DUE TO VECTOR CONTROL

**60% MORTALITY RATE DECREASE**

ON ALERT SINCE 2010: INSECTICIDE RESISTANCE


EVOLUTION OF MOSQUITOES


↓

INSECTICIDE RESISTANCE: WIDESPREAD RESISTANCE TO THE ONLY INSECTICIDE USED ON NETS, RESISTANCE DEVELOPING TO OTHER INSECTICIDE, RAPIDLY WORSENING SITUATION

↓

DECLINING EFFICIENCY OF VECTOR CONTROL SOLUTIONS

 **150 MILLION PEOPLE PROTECTED** THANKS TO BAYER SOLUTIONS

 **DANGER:** RISK OF MALARIA RESURGENCE WITH ABOUT **120,000 NEW VICTIMS PER YEAR****

**Source WHO

Building on 50 Years of Expertise

 **FIVE-FOLD INCREASE** IN OUR INVESTMENT INTO NEW VECTOR CONTROL PRODUCT DEVELOPMENT BETWEEN 2005 AND 2015

 **INVESTMENT IN THE NEXT GENERATION** OF MALARIA SCIENTISTS

 **A GLOBAL TEAM OF 50 PEOPLE** INVOLVED IN VECTOR CONTROL

 **INVESTMENT INTO PRODUCTION** CAPACITY OF VECTOR CONTROL PRODUCTS IN SOUTH AFRICA, FOR AFRICA

 **PROACTIVELY PROMOTING AND SUPPORTING** SAFE USE OF MALARIA VECTOR CONTROL SOLUTIONS

Bayer Solutions to Combat Insecticide Resistance

 **A COMPREHENSIVE WHOPES RECOMMENDED PORTFOLIO** ADDRESSING MOST OF THE IMPORTANT VECTOR CONTROL INTERVENTIONS

 **DEVELOPING A NEW GENERATION** OF VECTOR CONTROL SOLUTIONS (eg. Fludora Fusion – new mode of action in first mixture product; long-lasting larvicides)

 **CONTINUED INVESTMENT** TO BRING RESISTANCE MANAGEMENT TOOL TO MARKET

 **STRONG COLLABORATION** WITH IVCC IN SOLUTION DEVELOPMENT



Science for a **better life**

ALWAYS READ AND FOLLOW LABEL INSTRUCTIONS.

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