

# A UNIQUE LARVICIDAL SOLUTION

## DUPLEX™-G



### EXPERIENCE DUAL-ACTION CONTROL



Central Life Sciences, the founders of insect growth regulator (IGR) mosquito larvicide technology, (S)-methoprene, and supporters of the mosquito control industry for more than 30 years has created the innovative, **Duplex™-G** larvicide.

**Duplex™-G** larvicide combines biorational and biological control agents in an extended residual granule. This clean, spherical larvicide offers excellent flow through application equipment.

#### BIORATIONAL CONTROL AGENT . . .

**(S)-Methoprene** - an IGR that interrupts the normal development of mosquito larvae without impacting non-target mammals, waterfowl, fish, or beneficial predatory insects

#### BIOLOGICAL CONTROL AGENT . . .

***Bacillus thuringiensis subspecies israelensis (Bti) Strain BMP144*** - an industry standard feeding toxin and mosquito larvicide that is ideal for a wide range of environments

Both control agents are broken down by the environment over a short time, which prevents the bioaccumulation of active ingredients in the environment.

# DUPLEX™ -G TECHNOLOGY COMPONENTS

## (S)-Methoprene Core:

This is designed to increase residual effectiveness by controlling (S)-methoprene release over a 28-day period when continually flooded. In situations where occasional flooding predominates, the (S)-methoprene core stops releasing when the habitat dries and resumes releasing as the habitat re-floods. Control release technology has been optimized along with stability enhancements.

## *Bacillus thuringiensis* subspecies *israelensis* (Bti):

The outer shell contains layers of *Bti* mixed with a floating agent and a release agent. The release agent will only deliver *Bti* to the water column when flooded; this ability allows for the pre-treatment of habitats prior to flooding. The release agent is referred to as “Active Booster Release Technology”. Water activates the release mechanisms that cause the separation of *Bti* and the floating agent from the (S)-methoprene core. Once the *Bti* and floating agent reach the water surface, the water’s surface tension begins to separate the floating agent and *Bti*, causing the *Bti* to be bioavailable to mosquito larvae.



Floating agent and Bti released to the top of the mosquito habitat by “Active Booster Release Technology”

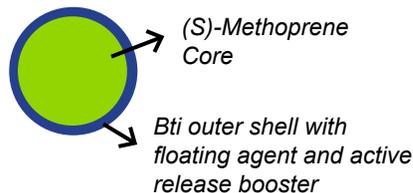
## KEY DIFFERENTIATORS

1. **Quick Kill:** Dead larvae within 24-72 hours
2. **Long Residual:** Larvae control up to 28 days with continuous flooding
3. **Consistent Granular Size:** Calibration ease and normalized swath characterization for ground and aerial application equipment
4. **Heavy Granule:** High bulk density allows for habitat penetration and no-drift applications, on-target delivery to mosquito breeding habitats
5. **Pre-Flood Treatments:** Mosquito breeding habitats can be treated before water inundation from planned irrigation, snowmelt and rainfall

## GRANULE DESIGN

- 5.35% *Bacillus thuringiensis* subspecies *israelensis* (Bti) Strain BMP 144 solids

- 1.6% (S)-Methoprene



## THE DUPLEX™ ADVANTAGE

### Features:

1. Provides a quick kill with long residual
2. Controls many species of mosquito larvae
3. “Active Booster Release Technology” allows pre-treatment with *Bti* without misfires from humidity
4. High bulk density allows for excellent foliage penetration
5. Uniform granule size ensures consistent product application through both ground and aerial equipment
6. Wide application range; 2.5 – 20 lbs. per acre
7. *Bti* kills 1st through early 4th instar mosquito larvae within 72 hours

### Benefits:

1. Helps with resistance management, as the two modes of action in a single product eliminate the need for product rotation
2. Beneficial when (S)-methoprene is the secondary control agent; when larvae development times may be shortened or prolonged by environmental conditions that hamper *Bti* control
3. Helps with quality control checks, as the quick *Bti* kill allows application checks, without the need to wait for pupation
4. “Active Booster Release Technology” quickly releases *Bti* to the “kill zone”
5. No bioaccumulation of active ingredients
6. (S)-Methoprene disrupts adult mosquito development when applied prior or up to the late 4th instar stage of mosquito larvae

To learn more about the Central Life Sciences portfolio of mosquito control products, visit [CentralMosquitoControl.com](http://CentralMosquitoControl.com)

Duplex is a trademark of Wellmark International.  
Central Life Sciences with design is a registered trademark of Central Garden & Pet Company.  
©2019 Wellmark International. VEC 19-010