COUNTY OF MORRIS
DEPARTMENT OF PUBLIC WORKS
MOSQUITO CONTROL DIVISION

P.O. Box 900
Morristown, New Jersey 07963-0900

Board of County Commissioners
Commissioner Director
Stephen H. Shaw

Commissioner Deputy Director
John Krickus
Douglas R. Cabana
Tayfun Selen
Thomas J. Mastrangelo
Christine Myers
Deborah Smith

County Administrator
Deena Leary

Director of Public Works & County Engineer
Christopher J. Vitz, P.E.
973-285-6750
Fax: 973-539-3141
cvitz@co.morris.nj.us

Director, Mosquito Control Division
Kristian McMorland
973-285-6450
kmcmorland@co.morris.nj.us

July 15, 2026

Dear School IPM Coordinator,

As per New Jersey Pesticide Control Regulations (N.J.A.C Title 7, Chapter 30), The Morris County Division of Mosquito Control is supplying you with the required information regarding any insecticides that we may use to control mosquitoes on school or Board of Education property.

Enclosed you will find SDS sheets and labels of our pesticides for your records.

Thank you in advance for your cooperation and please do not hesitate to contact us should you have any questions or concerns.

Sincerely,

Teresa Duckworth
Assistant Director

Altosid® BRIQUETS

ZOËCON.

A SUSTAINED RELEASE MOSQUITO GROWTH REGULATOR TO PREVENT ADULT MOSQUITO EMERGENCE *(INCLUDING THOSE WHICH MAY TRANSMIT WEST NILE VIRUS)*

SPECIMEN LABEL

ACTIVE INGREDIENT:	
(S)-Methoprene (Dry Weight Basis)	
(CAS #65733-16-6)	8.62%
OTHER INGREDIENTS:	91.38%
Total	100.00%

This product contains water, therefore the weight of the briquet and percent by weight of active ingredient will vary with hydration. The Ingredient Statement is expressed on a dry weight basis.

EPA Reg. No. 2724-375 EPA Est. No. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

FIRST AID	
Call a poison control center or doctor for treatment advice.	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

FIRST AID (CONTINUED)	
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.	

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of unused product.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Note to User: Do not remove **ALTOSID® Briquets** from container except for immediate use.

Because of the unique mode of action of **ALTOSID® Briquets**, users must be familiar with special techniques for accurate evaluation of treatments. See Application Rates and Intervals section of this label or consult local Mosquito Abatement Agency. Effective use of **ALTOSID® Briquets** in sites subjected to periodic heavy flow of water requires careful attention to briquet placement and to the possible need for retreatment. Use of the product in storm drains, waste treatment and settling ponds, and similar systems should therefore be limited to experienced pesticide applicators, such as personnel of Mosquito Abatement Districts and Public Health Agencies.

Introduction: The **ALTOSID® Briquet** is a formulation designed to release effective levels of **ALTOSID®** Insect Growth Regulator up to 30 days under typical environmental conditions. Release of **ALTOSID®** Insect Growth Regulator is effected by dissolution of the **ALTOSID® Briquet**. If briquets become covered by obstructions such as debris, vegetation, and loose

sediment as a result of high rainfall or flow, normal dispersion of the active ingredient can be inhibited. Water flow may increase the dissolution of the briquet thus reducing the residual life of the briquet. Inspect areas of water flow to determine appropriate retreatment intervals. To assure positive results, place **ALTOSID® Briquets** where they will not be swept away by flushing action. **ALTOSID® Briquets** prevent the emergence of adult mosquitoes including Anopheles, *Culex, Culiseta, Coquillettidia,* and *Mansonia* spp., as well as those of the floodwater mosquito complex (*Aedes, Ochlerotatus,* and *Psorophora* spp.) from treated water. Treated larvae continue to develop normally to the pupal stage where they die.

APPLICATION TIMING

Apply **ALTOSID® Briquets** at the beginning of the mosquito season. **ALTOSID® Briquets** provide up to 30 days residual control. Continue treatment through the last brood of the season. Apply at any stage of larval development. **ALTOSID® Briquets** may be applied as a pre-flood treatment prior to wetting events. **ALTOSID® Briquets** will be unaffected in dry down situations and will begin working again during subsequent wetting events until the briquet is exhausted.

NOTE: This insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

APPLICATION SITES

ALTOSID® Briquets are designed to control mosquitoes in small bodies of water. Examples of application sites are: storm drains, catch basins, roadside ditches, fish ponds, ornamental ponds and fountains, other artificial water-holding containers, animal watering troughs, cesspools and septic tanks, waste treatment and settling ponds, flooded crypts, transformer vaults, abandoned swimming pools, tires, construction and other manmade depressions, cattail marshes, water-hyacinth beds, vegetation-choked phosphate pits, pastures, meadows, rice fields, freshwater swamps and marshes, salt and tidal marshes, treeholes, woodland pools, floodplains, and dredging spoil sites. For application sites connected by a water system, i.e., storm drains or catch basins, treat all of the water holding sites in the system to maximize the efficiency of the treatment program.

APPLICATION RATES AND INTERVALS

For mosquito control in non-(or low-) flow, shallow depressions (up to two ft in depth), treat on the basis of surface area placing one **ALTOSID® Briquet** per 100 sq ft. For applications in storm water drainage areas, sewers, and catch basins: Place one **ALTOSID® Briquet** into each catch basin. Follow the chart below to determine the number of **ALTOSID® Briquets** to use in large catch basins. Place one **ALTOSID® Briquet** per 100 sq ft of surface area up to two feet deep for storm water drainage areas. Use one additional **ALTOSID® Briquet** per two feet of water depth in areas deeper than two feet.

ALTOSID® BRIQUET APPLICATION CHART

Number of Briquets	Catch Basin Size	Water Depth (Feet)
1	0–1,500	0–2
2	1,500–3,000	2–4
3	3,000–4,500	4–6
4	4,500–6,000	6–8

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **Storage:** Store in cool, dry place. **Pesticide Disposal:** Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility. **Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or dispose of empty bag and box in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

To the fullest extent permitted by law, Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and handling of this material when such use and handling are contrary to label instructions.

Always read the label before using this product.

For more information call **1-800-248-7763**.

www.altosid.com

Wellmark International
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173

ZOËCON Professional Products

ALTOSID and ZOECON are registered trademarks of Wellmark International.

300506947

Made in the U.S.A.

©2005-2010 WELLMARK INTERNATIONAL

March, 2010
Schaumburg, IL

Zoecon Altosid Briquets
Safety Data Sheet

Date of issue: 11/01/2003 Revision date: 04/14/2020 Supersedes: 07/23/2015 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form	: Mixture
Trade name	: Zoecon Altosid Briquets
Synonyms	: EPA Reg. No.: 2724-375, 37060F, 37090C, ProLink Briquets

1.2. Recommended use and restrictions on use

Recommended use	: Insect growth regulator.
Restrictions on use	: Avoid contact with eyes and clothing. Do not use or store near heat or open flame. Keep out of reach of children.

1.3. Supplier

Wellmark International
1501 E. Woodfield Road, Suite 200W
Schaumburg, IL 60173 - United States
www.centralmosquitocontrol.com

1.4. Emergency telephone number

Emergency number	: 1-888-914-2082 1-800-424-9300 - CHEMTREC 1-703-527-3887 - CHEMTREC - Outside North America - Collect Calls Accepted

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Serious eye damage/eye irritation Category 2B	Causes eye irritation
Carcinogenicity Category 1A	May cause cancer
Combustible Dust	May form combustible dust concentrations in air

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



GHS08

Signal word (GHS US)	: Danger
Hazard statements (GHS US)	: May form combustible dust concentrations in air Causes eye irritation May cause cancer
Precautionary statements (GHS US)	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash hands, forearms and face thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Store locked up. Dispose of contents/container to in accordance with local/regional/national/international regulations.
Supplemental information	: Exposure to silica dust from the finished product is not expected to occur due to the manner in which the constituents are bound. Finished product is not considered carcinogenic.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification	: Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product Identifier	%
(s)-Methoprene Technical	(CAS-No.) 65733-16-6	8.62
Silica, crystalline - quartz	(CAS-No.) 14808-60-7	< 0.73
Plaster of paris	(CAS-No.) 26499-65-0	71.84
Activated Carbon	(CAS-No.) 7440-44-0	17.53
Non-hazardous and/or does not meet criteria for classification	(CAS-No.) N/A	Balance

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice and attention.

First-aid measures after ingestion : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after eye contact : Causes mild eye irritation.

Chronic symptoms : May cause cancer.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Carbon dioxide. Water spray. Dry chemical. Foam.

Unsuitable extinguishing media : Avoid heavy hose streams.

5.2. Specific hazards arising from the chemical

Explosion hazard : Dust cloud can be ignited by a spark. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Reactivity : This material is friable and can create small dust particles during any handling, processing, and transfer operations. This material can form explosive dust/air suspensions that are ignitable under some conditions.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Combustible dust - use low-pressure medium fog streams to avoid dust clouds. Ventilate closed spaces before entering. Eliminate ignition sources.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel. Contain spill and monitor for excessive dust accumulation. Turn off electric power to area. No flames, no sparks. Eliminate all sources of ignition. Wear appropriate personal protective equipment, avoid direct contact.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: Exposure controls/personal protection.

Emergency procedures : Contain spill and monitor for excessive dust accumulation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Ventilate closed spaces before entering. Turn off electric power to area. As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions. Evacuate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Sweep or scoop spills, dispose of any unusable material in approved landfill. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Non-sparking tools should be used. Use appropriate PPE.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Avoid dust formation. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Take all necessary technical measures to avoid or minimize the release of the product on the workplace.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Store locked up.

Incompatible materials : Heat, sparks, open flame. Strong oxidizers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Silica, crystalline - quartz (14808-60-7)		
ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (respirable particulate matter)
OSHA	OSHA PEL (TWA) (mg/m³)	50 µg/m³
IDLH	US IDLH (mg/m³)	50 mg/m³ (respirable dust)
NIOSH	NIOSH REL (TWA) (mg/m³)	0.05 mg/m³ (respirable dust)

Plaster of paris (26499-65-0)		
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
NIOSH	NIOSH REL (TWA) (mg/m³)	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)

Activated Carbon (7440-44-0)		
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³ Inhalable; 3 mg/m3 Respirable
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ Total dust; 5 mg/m3 Repirable

8.2. Appropriate engineering controls

Appropriate engineering controls : Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. It is recommended that dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

If prolonged exposure is anticipated, it is recommended for handlers to wear appropriate clothing to prevent skin contact.

Respiratory protection:

In case of insufficient ventilation, use NIOSH approved respiratory protection.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Gray to black solid
Color	:	Gray to black
Odor	:	Slight hydrocarbon
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	Not applicable
Boiling point	:	No data available
Flash point	:	Not applicable
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Non-flammable
Vapor pressure	:	No data available
Relative vapor density at 20 °C	:	No data available
Relative density	:	Not applicable
Bulk density	:	1.04 g/cc (64.9 lb/ft3)
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No data available
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	No data available
Explosion limits	:	Not applicable
Explosive properties	:	Combustible Dust
Oxidizing properties	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is friable and can create small dust particles during any handling, processing, and transfer operations. This material can form explosive dust/air suspensions that are ignitable under some conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur. May form combusitble dust concentrations in the air.

10.4. Conditions to avoid

Avoid dust formation. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Heat, sparks, open flame. Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Zoecon Altosid Briquets	
LD50 oral	> 5100 mg/kg
LD50 dermal rabbit	> 2100 mg/kg

Silica, crystalline - quartz (14808-60-7)	
Listed on IARC (International Agency for Research on Cancer), Listed as carcinogen on NTP (National Toxicology Program)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Known Human Carcinogens
In OSHA Hazard Communication Carcinogen list?	Yes

GHS-US Properties	Classification
Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Causes eye irritation.
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	May cause cancer.
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	Not classified

Potential health effects

Inhalation

Acute : Exposure to dust may cause respiratory irritation. Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss.

Chronic : Repeated and prolonged exposure to crystalline silica containing materials may cause irritation and/or lung damage silicosis, fibrosis, inflammation, cancer.

Skin

Acute : Exposure to dust may cause mechanical irritation.

Eye

Acute : Causes mild eye irritation.

Ingestion

Acute : Under normal conditions of use, no health effects are expected.

Mutagenicity : (s)-Methoprene has been tested and found negative for mutagenicity potential.

Carcinogenicity : (s)-Methoprene is not classified as a carcinogen by NTP, IARC or OSHA. Crystalline silica (quartz) inhaled from occupational sources is classified as carcinogenic to humans. Exposure to respirable crystalline silica dust from the finished product is not expected to occur due to the manner in which the constituents are bound, thus the finished product is not considered carcinogenic under conditions of normal use.

Reproductive Effects : (s)-Methoprene is not a reproductive toxin and does not cause birth defects.

SECTION 12: Ecological information

12.1. Toxicity

(s)-Methoprene Technical (65733-16-6)	
LC50 Acute fish 1	0.76 mg/l (Exposure time: 96h - Rainbow trout)

(s)-Methoprene Technical (65733-16-6)	
LC50 Acute fish 2	> 0.37 mg/l (Exposure time: 96h - Blue gill)
LC50 Acute crustacea 1	0.11 mg/l (Exposure time: 96h - Mysid shrimp)
LC50 Acute crustacea 2	0.36 mg/l (Exposure time: 48h - Daphnia magna)
NOEC Chronic fish 1	0.048 mg/l (Fathead minnow)
NOEC Chronic crustacea 1	0.014 mg/l (Mysid shrimp)

12.2. Persistence and degradability

(s)-Methoprene Technical (65733-16-6)	
Persistence and degradability	(s)-Methoprene degrades rapidly in sunlight, both in water and on inert surfaces. The pesticide also is metabolized rapidly in soil and does not leach. Thus, it should not persist in soil or contaminate ground water.

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

(s)-Methoprene Technical (65733-16-6)	
Mobility in soil	Rapidly metabolized in soil under both aerobic and anaerobic conditions (half-life 10-14 days).

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14: Transport information

	UN number	Proper Shipping Name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	Not regulated	Not regulated	Not regulated	Not regulated	Not applicable
IMDG	Not regulated	Not regulated	Not regulated	Not regulated	Not applicable
IATA	Not regulated	Not regulated	Not regulated	Not regulated	Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Silica, crystalline - quartz (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Activated Carbon (7440-44-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

FIFRA Labelling	
EPA Registration Number	2724-375
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.	
FIFRA Signal word	Caution
FIFRA Precautionary Statement	KEEP OUT OF REACH OF CHILDREN.
FIFRA Hazards to Humans and Domestic Animals	Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin and clothing. Wash thoroughly with soap and water after handling.

FIFRA First Aid	If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.
FIFRA Environmental Hazards	Do not contaminate water when disposing of unused product.

15.2. US State regulations

No additional information available

SECTION 16: Other information

Date of issue	: 01 November 2003
Revision date	: 14 April 2020
Supersedes	: 23 July 2015

SDS US (GHS HazCom 2012) - CGP

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.

Altosid® PELLETS WSP

ZOËCON.

MOSQUITO GROWTH REGULATOR

- **A GRANULAR PRODUCT TO PREVENT ADULT MOSQUITO EMERGENCE** ***(including those which may transmit West Nile virus)***
- **IDEAL WHEN TREATING HARD-TO-REACH STORMWATER SITES**
- **READY-TO-USE WATER SOLUBLE POUCHES (WSP)**
- **A SINGLE WSP COVERS UP TO 135 FT² OF WATER SURFACE AREA**

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS# 65733-16-6).....	4.25%
OTHER INGREDIENTS:.....	95.75%
TOTAL	100.00%

EPA Reg. No. 2724-448 EPA Est. No. 065387-AR-002

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional Precautions

PRECAUTIONARY STATEMENTS – HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

FIRST AID
Call a poison control center or doctor for treatment advice.
IF IN EYES • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
IF ON SKIN OR CLOTHING • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling

INTRODUCTION

ZOËCON® ALTOSID® Pellets WSP (ALTOSID® Pellets WSP) release ALTOSID®, an Insect Growth Regulator as they erode. **ALTOSID® Pellets WSP** prevent the emergence of adult standing water mosquitoes, including *Anopheles, Culex, Culiseta, Coquillettidia,* and *Mansonia* spp., as well as adults of the floodwater mosquitoes, such as *Aedes, Ochlerotatus,* and *Psorophora* spp. from treated sites.

GENERAL DIRECTIONS

ALTOSID® Pellets WSP release effective levels of ALTOSID® Insect Growth Regulator for up to 30 days under typical environmental conditions. Continue treatment through the last brood of the season. Treated larvae continue to develop normally to the pupal stage where they die.

NOTE: This insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

ALTOSID® Pellets WSP are convenient ready-to-use pouches for treating mosquito breeding sites. The pouches are water-sensitive and when in contact with water, the pouches dissolve, releasing the pellets. Use care when handling unused pouches so that moisture does not collect on the pouches. Keep pouches sealed in the original package until ready for use. Once outer foil bag containing water soluble pouches is opened, use pouches within one day.

APPLICATION SITES

ALTOSID® Pellets WSP are effective against *Anopheles, Culex, Culiseta, Aedes, Ochlerotatus, Coquillettida, Mansonia* and *Psorophora* mosquito species. Use pouches to treat small bodies of water such as: catch basins, storm drains, roadside ditches, tree holes, flooded crypts, transformer pits, fish ponds, woodland pools, fountains, septic tanks, ornamental ponds, manmade depressions, animal watering troughs, ditches, and other natural or artificial water-holding containers.

APPLICATION RATE

Place one pouch into each catch basin. For other mosquito breeding sites, one pouch will treat up to 135 ft2 of surface area. **ALTOSID® Pellets WSP** will provide up to 30 days control of emerging adult mosquitoes.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Storage: Store closed containers of ALTOSID® Pellets WSP in a cool, dry place.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling: Outer foil-lined pouch of water soluble packets: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, or dispose of empty outer foil pouch in the trash as long as WSP is unbroken.

WARRANTY AND CONDITIONS OF SALE

Seller makes no warranty, expressed or implied, concerning the use and handling of this product other than indicated on the label. Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

For information or in case of an emergency, call 1-800-248-7763.

www.centralmosquitocontrol.com

Produced for:

Wellmark International
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173

Zoëcon, Zoëcon with design and Altosid are registered trademarks of Wellmark International.
©2005–2022 Wellmark International.

September, 2022
Schaumburg, IL

VEC 22-006

Zoecon Altosid Pellets

Safety Data Sheet

Issue date: 06/22/2015 Revision date: 12/11/2023 Supersedes: 12/18/2020 Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form	: Mixture
Name	: Zoecon Altosid Pellets
Synonyms	: 100503099, 100526053, 37730D, EPA Reg. No.: 2724-448, Prolink Pellets Mosquito Growth Regulator, Strike Pellets, Zoecon Altosid Pellets WSP, Zoecon Altosid WSP, Zoecon RF-330 Altosid Mosquito Growth Regulator

1.2. Recommended use and restrictions on use

Recommended use	: Insect growth regulator.
Restrictions on use	: Avoid contact with eyes and clothing. Do not use or store near heat or open flame. Avoid breathing dust.

1.3. Supplier

Wellmark International
1501 E. Woodfield Road, Suite 200W
Schaumburg, IL 60173 - United States

www.centralmosquitocontrol.com

1.4. Emergency telephone number

Emergency number	: 1-800-248-7763 1-800-424-9300 - CHEMTREC 1-703-527-3887 - CHEMTREC - Outside North America - Collect Calls Accepted

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Serious eye damage/eye irritation Category 2B	Causes eye irritation
Carcinogenicity Category 1A	May cause cancer
Combustible Dust	May form combustible dust concentrations in air

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



GHS08

Signal word (GHS US) : Danger

Hazard statements (GHS US) : May form combustible dust concentrations in air
Causes eye irritation
May cause cancer

Precautionary statements (GHS US) : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash hands, forearms and face thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If exposed or concerned: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Store locked up.
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Supplemental information : The finished product is not considered carcinogenic because of the product's physical form. The Hazard Statement "May Cause Cancer" is presented because a component of this product contains a naturally occurring trace amount of crystalline silica (quartz) which is classified as carcinogenic to humans if inhaled. Respiratory exposure to silica dust from the finished product is not expected to occur under normal conditions of use due to the manner in which the constituents are bound or packaged in water soluble pouches. The crystalline silica in the finished product is unlikely to pose personal exposure via inhalation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
(s)-Methoprene Technical	(CAS-No.) 65733-16-6	4.25
Plaster of paris	(CAS-No.) 26499-65-0	69.16
Silica, crystalline - quartz	(CAS-No.) 14808-60-7	0.7
Activated Carbon	(CAS-No.) 7440-44-0	9.26
Non-hazardous and/or does not meet criteria for classification	(CAS-No.) N/A	Balance

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice and attention.

First-aid measures after ingestion : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after eye contact : Causes mild eye irritation.

Chronic symptoms : May cause cancer.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Dry chemical, CO2, or water spray or regular foam.

Unsuitable extinguishing media : Avoid heavy hose streams.

5.2. Specific hazards arising from the chemical

Explosion hazard : Dust cloud can be ignited by a spark. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Reactivity : This material is friable and can create small dust particles during any handling, processing, and transfer operations. This material can form explosive dust/air suspensions that are ignitable under some conditions.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Combustible dust - use low-pressure medium fog streams to avoid dust clouds. Ventilate closed spaces before entering. Eliminate ignition sources. Move containers away from the fire area if this can be done without risk.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Avoid contact with skin, eyes and clothing. Wear suitable protective equipment.

Emergency procedures : Evacuate unnecessary personnel. No flames, no sparks. Eliminate all sources of ignition. Ventilate spillage area. Do not breathe dust. Wear appropriate personal protective equipment, avoid direct contact.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Positive pressure self-contained breathing apparatus (SCBA). For further information refer to section 8: Exposure controls/personal protection.
Emergency procedures	: Contain spill and monitor for excessive dust accumulation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Ventilate closed spaces before entering. Turn off electric power to area. As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions. Evacuate area. Stay upwind. Stop leak if safe to do so. Wear appropriate personal protective equipment, avoid direct contact.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Non-sparking tools should be used. Sweep or scoop spills, dispose of any unusable material in approved landfill. Use appropriate PPE.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin, eyes and clothing. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Ensure good ventilation of the work station. Avoid dust formation. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Provide local exhaust or general room ventilation. Wear personal protective equipment. Do not breathe dust.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Keep only in original container. Store in a well-ventilated place. Keep cool. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store locked up. Store in cool, dry area, inaccessible to children and pets. Avoid excessive heat. Store at temperatures not exceeding 90°F.
Incompatible materials	: Heat, sparks, open flame. Strong oxidizers. Strong acids. Strong bases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Plaster of paris (26499-65-0)		
OSHA	OSHA PEL TWA	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
NIOSH	NIOSH REL TWA	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)

Silica, crystalline - quartz (14808-60-7)		
ACGIH	ACGIH OEL TWA	0.025 mg/m³ : (respirable particulate matter)
OSHA	OSHA PEL TWA	50 µg/m³
IDLH	IDLH	50 mg/m³ : (respirable dust)
NIOSH	NIOSH REL TWA	0.05 mg/m³ : (respirable dust)

Activated Carbon (7440-44-0)		
ACGIH	ACGIH OEL TWA	10 mg/m³ Inhalable; 3 mg/m3 Respirable
OSHA	OSHA PEL TWA	15 mg/m³ Total dust; 5 mg/m3 Respirable

8.2. Appropriate engineering controls

Appropriate engineering controls	: It is recommended that dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

If prolonged exposure is anticipated, it is recommended for handlers to wear appropriate clothing to prevent skin contact.

Respiratory protection:

Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH approved respirator if exposure limits are exceeded or symptoms are experienced



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Dark gray to black rod-shaped pellets
Color	: Dark gray to black
Odor	: Slight hydrocarbon
Odor threshold	: No data available
pH	: Not applicable
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability	: Non-flammable
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Bulk density	: 59 to 60 lb(s)/ft3
Solubility	: Insoluble
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosion limits	: Not applicable
Explosive properties	: Combustible dust
Oxidizing properties	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is friable and can create small dust particles during any handling, processing, and transfer operations. This material can form explosive dust/air suspensions that are ignitable under some conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

May form combustible dust concentrations in air. Hazardous polymerization will not occur. No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid dust formation. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Zoecon Altosid Pellets	
LD50 oral rat	> 5100 mg/kg
LD50 dermal rabbit	> 2100 mg/kg

Silica, crystalline - quartz (14808-60-7)	
Listed on IARC (International Agency for Research on Cancer), Listed as carcinogen on NTP (National Toxicology Program)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Known Human Carcinogens
In OSHA Hazard Communication Carcinogen list?	Yes

GHS-US Properties	Classification
Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Causes eye irritation.
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	May cause cancer.
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	Not classified

Potential health effects

Inhalation

Acute : Under normal conditions of use, no health effects are expected.

Chronic : Exposure to respirable crystalline silica is not expected during normal use of this product. However, prolonged overexposure to respirable crystalline silica may cause lung disease (silicosis).

Skin

Acute : Under normal conditions of use, no health effects are expected.

Eye

Acute : Causes eye irritation.

Ingestion

Acute : Under normal conditions of use, no health effects are expected.

Mutagenicity : (s)-Methoprene has been tested and found negative for mutagenicity potential.

Carcinogenicity : (s)-Methoprene is not classified as a carcinogen by NTP, IARC or OSHA. Exposure to respirable crystalline silica dust from the finished product is not expected to occur due to the manner in which the constituents are bound, thus the finished product is not considered carcinogenic under conditions of normal use.

Reproductive Effects : (s)-Methoprene is not a reproductive toxin and does not cause birth defects.

SECTION 12: Ecological information

12.1. Toxicity

(s)-Methoprene Technical (65733-16-6)	
LC50 Acute fish 1	0.76 mg/l (Exposure time: 96h - Rainbow trout)
LC50 Acute fish 2	> 0.37 mg/l (Exposure time: 96h - Blue gill)
LC50 Acute crustacea 1	0.11 mg/l (Exposure time: 96h - Mysid shrimp)
LC50 Acute crustacea 2	0.36 mg/l (Exposure time: 48h Daphnia)
NOEC Chronic fish 1	0.048 mg/l (Fathead minnow)
NOEC Chronic crustacea 1	0.014 mg/l (Mysid shrimp)

12.2. Persistence and degradability

(s)-Methoprene Technical (65733-16-6)	
Persistence and degradability	(s)-Methoprene degrades rapidly in sunlight, both in water and on inert surfaces. The pesticide also is metabolized rapidly in soil and does not leach. Thus, it should not persist in soil or contaminate ground water.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

(s)-Methoprene Technical (65733-16-6)	
Mobility in soil	Rapidly metabolized in soil under both aerobic and anaerobic conditions (half-life 10-14 days).

12.5. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14: Transport information

	UN number	Proper Shipping Name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	Not regulated	Not regulated	Not regulated	Not regulated	Not applicable
IMDG	UN3077	Packaging greater than 5 kg: Environmentally hazardous substance, solid, n.o.s ((s)-Methoprene)	9	III	Marine pollutant
IATA	UN3077	Packaging greater than 5 kg: Environmentally hazardous substance, solid, n.o.s ((s)-Methoprene)	9	III	Chronic Aquatic Toxicity Acute aquatic toxicity

SECTION 15: Regulatory information

15.1. US Federal regulations

Silica, crystalline - quartz (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Activated Carbon (7440-44-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA Labelling	
EPA Registration Number	2724-448
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.	
FIFRA Hazard statements	**Caution**
FIFRA Precautionary statements	KEEP OUT OF REACH OF CHILDREN.

FIFRA Hazards to Humans and Domestic Animals	Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.
FIFRA First aid	If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.
FIFRA Environmental hazards	Do not contaminate water when disposing of rinsate or equipment washwaters.

15.2. US State regulations

No additional information available

SECTION 16: Other information

Issue date	:	22 June 2015
Revision date	:	11 December 2023
Supersedes	:	18 December 2020

Indication of changes:
Revised Sec. 14: Updated transportation description.

SDS US (GHS HazCom 2012) - CGP

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.

Altosid® XR
EXTENDED RESIDUAL BRIQUETS

ZOËCON.

A SUSTAINED RELEASE PRODUCT TO PREVENT ADULT MOSQUITO EMERGENCE
(INCLUDING THOSE WHICH MAY TRANSMIT WEST NILE VIRUS)

SPECIMEN LABEL

ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6)) (Dry Weight Basis):	2.1%
OTHER INGREDIENTS:	97.9%
Total.	100.0%

EPA Reg. No. 2724-421
EPA Est. No. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN
CAUTION
SEE ADDITIONAL PRECAUTIONARY STATEMENTS

INTRODUCTION

ALTOSID® XR BRIQUETS are designed to release effective levels of (S)-Methoprene insect growth regulator over a period up to 150 days in mosquito breeding sites. Release of (S)-Methoprene insect growth regulator occurs by dissolution of the briquet. Soft mud and loose sediment can cover the briquets and inhibit normal dispersion of the active ingredient. The product may not be effective in those situations where the briquet can be removed from the site by flushing action.

ALTOSID® XR BRIQUETS prevent the emergence of adult mosquitoes including: *Anopheles, Culex, Culiseta, Coquillettidia,* and *Mansonia* spp., as well as those of the floodwater mosquito complex (*Aedes, Ochlerotatus,* and *Psorophora* spp.) from treated water. Treated larvae continue to develop normally to the pupal stage where they die.

NOTE: (S)-Methoprene insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS - CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

FIRST AID	
Call a poison control center or doctor for treatment advice.	
If in eyes	•Hold eye open and rinse slowly and gently with water for 15-20 minutes. •Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
If on skin or clothing	•Take off contaminated clothing. •Rinse skin immediately with plenty of water for 15-20 minutes.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.	

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of unused product.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

APPLICATION TIME

Place **ALTOSID® XR BRIQUETS** at or before the beginning of the mosquito season. Apply **ALTOSID® XR BRIQUETS** prior to flooding when sites are dry, or on snow and ice in breeding sites prior to spring thaw. Under normal conditions, one application will last the entire mosquito season, or up to 150 days, whichever is shorter. Alternate wetting and drying will not reduce their effectiveness.

APPLICATION RATES

***Aedes, Ochlerotatus,* and *Psorophora* spp.:** For control in non-(or low-) flow shallow depressions (≤ 2 feet in depth), treat on the basis of surface area, placing one **ALTOSID® XR BRIQUET** per 200 ft². Place briquets in the lowest areas of mosquito breeding sites to maintain continuous control as the site alternately floods and dries up.

***Culex, Culiseta* and *Anopheles* spp.:** Place one **ALTOSID® XR BRIQUET** per 100 ft².

Coquillettidia and *Mansonia* spp.: For application to cattail marshes and water hyacinth beds. For control of these mosquitoes, place one **ALTOSID® XR BRIQUET** per 100 ft².

***Culex* sp. in storm water drainage areas, sewers, and catch basins:** For catch basins, place one **ALTOSID® XR BRIQUET** into each basin. In cases of large catch basins, follow the chart below to determine the number of briquets to use. For storm water drainage areas, place one briquet per 100 ft² of surface area up to two ft deep. In areas that are deeper than two feet, use one additional briquet per two feet of water depth.

Water flow pressure increases the potential dissolution of the briquet. Conduct regular inspections (visual or biological) in areas of water flow to determine if the briquet is still present. Adjust the retreatment interval based on the results of an inspection.

ALTOSID® XR BRIQUETS Application Chart

Number of Briquets	Catch Basin Size (Gallons)	Surface Area/ Water Depth (ft)
1	0 – 1500	0 – 2
2	1500 – 3000	2 – 4
3	3000 – 4500	4 – 6
4	4500 – 6000	6 – 8

APPLICATION SITES

ALTOSID® XR BRIQUETS are designed to control mosquitoes in treated areas. Examples of application sites are: storm drains, catch basins, roadside ditches, fish ponds, ornamental ponds and fountains, other artificial water-holding containers, animal watering troughs, cesspools and septic tanks, waste treatment and settling ponds, flooded crypts, transformer vaults, abandoned swimming pools, tires, construction and other manmade depressions, cattail marshes, water hyacinth beds, vegetation-choked phosphate pits, pastures, meadows, rice fields, freshwater swamps and marshes, salt and tidal marshes, treeholes, woodland pools, floodplains, and dredging spoil sites. For application sites connected by a water system, i.e., storm drains or catch basins, treat all of the water-holding sites in the system to maximize the efficiency of the treatment program.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

STORAGE: Store in a cool place. Do not reuse empty container.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or dispose of empty container in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND CONDITIONS OF SALE

Seller makes no warranty, expressed or implied, concerning the use and handling of this product other than indicated on the label. To the extent permitted by law, Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

For information, or in case of an emergency, call 1-800-248-7763.

www.altosid.com

Wellmark International
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173

ZOËCON Professional Products

ALTOSID, ZOECON and the ZOECON logo are registered trademarks of Wellmark International.
©2005-2010 WELLMARK INTERNATIONAL
Made in USA

May, 2010
Schaumburg, IL

300507286

Zoecon Altosid XR Extended Residual Briquets

Safety Data Sheet

Issue date: 07/17/2015 Revision date: 07/22/2022 Supersedes: 05/31/2017 Version: 1.2

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Name : Zoecon Altosid XR Extended Residual Briquets

Synonyms : 100508841, 100508842, 100508846,100530326, EPA Reg. No.: 2724-421, ProLink XR Extended Release Briquets, Zoecon RF-292 Briquet, Altosid 150 Day XR Briquet

1.2. Recommended use and restrictions on use

Recommended use : Insect growth regulator.

Restrictions on use : Keep out of reach of children and domestic animals. Avoid contact with eyes, skin or clothing.

1.3. Supplier

Wellmark International
1501 E. Woodfield Road, Suite 200W
Schaumburg, IL 60173 - United States

www.zoecon.com

1.4. Emergency telephone number

Emergency number : 1-800-248-7763
1-800-424-9300 - CHEMTREC
1-703-527-3887 - CHEMTREC - Outside North America - Collect Calls Accepted

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Serious eye damage/eye irritation Category 2B Causes eye irritation

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Signal word (GHS US) : Warning

Hazard statements (GHS US) : Causes eye irritation

Precautionary statements (GHS US) : Wash hands, forearms and face thoroughly after handling.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
(s)-Methoprene Technical	(CAS-No.) 65733-16-6	2.1
Plaster of paris	(CAS-No.) 26499-65-0	> 77.6
Non-hazardous and/or does not meet criteria for classification	(CAS-No.) N/A	Balance

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice and attention.

First-aid measures after ingestion : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after eye contact : Mild eye irritation.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry chemical. Foam. Carbon dioxide.

Unsuitable extinguishing media : Avoid heavy hose streams.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Keep upwind. Wear appropriate personal protective equipment, avoid direct contact.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: Exposure controls/personal protection.

Emergency procedures : Avoid dust formation. Do not scatter spilled material with high pressure water streams. Evacuate unnecessary personnel. Stay upwind. Stop release. Ventilate area. Wear appropriate personal protective equipment, avoid direct contact.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Use appropriate PPE. Sweep or scoop spills, dispose of any unusable material in approved landfill.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Provide local exhaust or general room ventilation. Wear personal protective equipment. Avoid contact with skin and eyes.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool. Avoid humid, wet or moist conditions.

Incompatible materials : Strong acids.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Plaster of paris (26499-65-0)		
OSHA	OSHA PEL TWA [1]	15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)
NIOSH	NIOSH REL TWA	10 mg/m³ (total dust) 5 mg/m³ (respirable dust)

8.2. Appropriate engineering controls

Appropriate engineering controls : Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

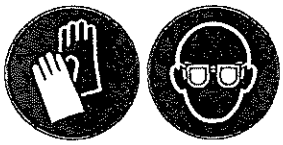
Safety glasses

Skin and body protection:

It is recommended for handlers to wear appropriate clothing to prevent skin contact including long sleeves, long pants, socks and shoes.

Respiratory protection:

In case of insufficient ventilation, use NIOSH approved respiratory protection.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: White to gray briquet
Color	: White to gray
Odor	: Slight hydrocarbon
Odor threshold	: No data available
pH	: Not applicable
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability	: Non-flammable
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.04 g/cc (64.9 lb/ft3)
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosion limits	: Not applicable

Explosive properties : Not explosive
Oxidizing properties : Not applicable

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use. Hazardous polymerization will not occur.

10.4. Conditions to avoid
Avoid humid, moist or wet conditions.

10.5. Incompatible materials
Strong acids.

10.6. Hazardous decomposition products
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Zoecon Altosid XR Extended Residual Briquets	
LD50 oral rat	> 5100 mg/kg
LD50 dermal rabbit	> 2100 mg/kg

GHS-US Properties	Classification
Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Causes eye irritation.
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	Not classified

Potential health effects

Inhalation
Acute : May cause respiratory tract irritation.

Skin
Acute : May cause mild skin irritation.

Eye
Acute : Causes mild eye irritation.

Ingestion
Acute : Under normal conditions of use, no health effects are expected.

Mutagenicity : (s)-Methoprene has been tested and found negative for mutagenicity potential.

Carcinogenicity : (s)-Methoprene is not classified as a carcinogen by NTP, IARC or OSHA.

Reproductive Effects : (s)-Methoprene is not a reproductive toxin and does not cause birth defects.

SECTION 12: Ecological information

12.1. Toxicity

(s)-Methoprene Technical (65733-16-6)	
LC50 Acute fish 1	0.76 mg/l (Exposure time: 96hr Oncorhynchus mykiss)
LC50 Acute fish 2	> 0.37 mg/l (Exposure time: 96h - Blue gill)
LC50 Acute crustacea 1	0.11 mg/l (Exposure time: 96h - Mysid shrimp)
LC50 Acute crustacea 2	0.36 mg/l (Exposure time: 48h Daphnia)
NOEC Chronic fish 1	0.048 mg/l (Fathead minnow)
NOEC Chronic crustacea 1	0.014 mg/l (Mysid shrimp)

12.2. Persistence and degradability

(s)-Methoprene Technical (65733-16-6)	
Persistence and degradability	(s)-Methoprene degrades rapidly in sunlight, both in water and on inert surfaces. The pesticide also is metabolized rapidly in soil and does not leach. Thus, it should not persist in soil or contaminate ground water.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

(s)-Methoprene Technical (65733-16-6)	
Mobility in soil	Rapidly metabolized in soil under both aerobic and anaerobic conditions (half-life 10-14 days).

12.5. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14: Transport information

	UN number	Proper Shipping Name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	Not regulated	Not regulated	Not regulated	Not regulated	Not applicable
IMDG	Not regulated	Not regulated	Not regulated	Not regulated	Not applicable
IATA	Not regulated	Not regulated	Not regulated	Not regulated	Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

EPA Labelling	
EPA Registration Number	2724-421
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.	
FIFRA Hazard statements	Caution
FIFRA Precautionary statements	KEEP OUT OF REACH OF CHILDREN.
FIFRA Hazards to Humans and Domestic Animals	Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

FIFRA First aid	Call a poison control center or doctor for treatment advice. If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.
FIFRA Environmental hazards	Do not contaminate water when disposing of unused product.

15.2. US State regulations

No additional information available

SECTION 16: Other information

Issue date	: 17 July 2015
Revision date	: 22 July 2022
Supersedes	: 31 May 2017

Indication of changes:
Revised Sec. 1: Emergency telephone number. Revised Sec. 3: Mixture classification change.

SDS US (GHS HazCom 2012) - CGP

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.

Altosid XR-G®

ZOËCON.

LARVICIDE PRODUCT TO PREVENT ADULT MOSQUITO EMERGENCE (Including *Aedes* sp. and those which may transmit West Nile virus, Zika, dengue, chikungunya and other mosquito-borne diseases)

SPECIMEN LABEL

ACTIVE INGREDIENT:	
(S)-Methoprene (CAS #65733-16-6)	1.5%
OTHER INGREDIENTS:	98.5%
Total	100.0%

EPA Reg. No. 2724-451
EPA Est. No. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS - CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes or skin. Due to the size and abrasiveness of the granule, use protective eyewear and clothing to minimize exposure during loading and handling. Wash thoroughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

FIRST AID

If in eyes • Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

If on skin or clothing • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes.

Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

GENERAL DIRECTIONS

ALTOSID XR-G® releases effective levels of **ALTOSID®** insect growth regulator for up to 21 days after application. Applications should be continued throughout the entire season to maintain adequate control. Treated larvae continue to develop normally to the pupal stage where they die. Rotary and fixed-wing aircraft equipped with granular spreaders capable of applying rates listed below may be used to apply **ALTOSID XR-G®**. Ground equipment which will achieve even coverage at these rates may also be used. Apply **ALTOSID XR-G®** uniformly and repeat application as necessary.

NOTE: ALTOSID® insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

APPLICATION TIME

Apply **ALTOSID XR-G®** at any stage of larval mosquito development. Granules may be applied prior to flooding (i.e., "pre-hatch" or "pre-flood") in areas which flood intermittently. In such areas, 1 application of **ALTOSID XR-G®** can prevent adult mosquito emergence from several subsequent floodings. The actual length of control depends on the duration and frequency of flooding events.

APPLICATION RATES

Aedes, Anopheles, and *Psorophora* spp.: Apply **ALTOSID XR-G®** at 5 - 10 lb/acre (5.6-11.2 kg/ha). *Culex, Culiseta, Coquillettidia,* and *Mansonia* spp.: Apply **ALTOSID XR-G®** at 10-20 lb/acre (11.2-22.4 kg/ha). Within these ranges, use lower rates when water is shallow [< 2 feet (60 cm)] and vegetation and/or pollution are minimal. Use higher rates when water is deep [≥ 2 feet (60 cm)] and vegetation and/or pollution are heavy.

Zoecon Altosid XR-G

Safety Data Sheet

Issue date: 01/24/2014 Revision date: 01/18/2023 Supersedes: 10/01/2020 Version: 1.2

SECTION 1: Identification

1.1. Identification

Product form	: Mixture
Name	: Zoecon Altosid XR-G
Synonyms	: 37330, 38880, 100544004, EPA Reg. No.: 2724-451, Altosid Pro-G, RF9010, Zoecon 9010 GR, Zoecon Altosid Pro-G Insect Growth Regulator

1.2. Recommended use and restrictions on use

Recommended use	: Insect growth regulator.
Restrictions on use	: Keep out of reach of children and domestic animals. Avoid all contact with skin, eyes, or clothing. Avoid breathing dust.

1.3. Supplier

Wellmark International
1501 E. Woodfield Road, Suite 200W
Schaumburg, IL 60173 - United States

www.centralmosquitocontrol.com

1.4. Emergency telephone number

Emergency number	: 1-800-248-7763 1-800-424-9300 - CHEMTREC 1-703-527-3887 - CHEMTREC - Outside North America - Collect Calls Accepted

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Carcinogenicity Category 1A	May cause cancer
Specific target organ toxicity (repeated exposure) Category 1	Causes damage to organs through prolonged or repeated exposure

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



GHS08

Signal word (GHS US)	: Danger
Hazard statements (GHS US)	: May cause cancer Causes damage to organs through prolonged or repeated exposure
Precautionary statements (GHS US)	: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust, fume, gas, mist, vapors, spray. Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves, protective clothing, eye protection, face protection. If exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell. Store locked up. Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification	: The finished product is not considered carcinogenic because of the product's physical form. The Hazard Statement "May Cause Cancer" is presented because a component of this product contains naturally occurring crystalline silica (quartz) which is classified as carcinogenic to humans if inhaled. Respiratory exposure to silica dust from the finished product is not expected to occur under normal conditions of use due to the manner in which the constituents are bound. The crystalline silica in the finished product is unlikely to pose personal exposure via inhalation

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Use appropriate PPE. Sweep or scoop spills, dispose of any unusable material in approved landfill.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Provide local exhaust or general room ventilation. Wear personal protective equipment.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in original container. Keep container tightly closed. Store locked up. Store in a well-ventilated place. Store in a cool dry place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Silica, crystalline - quartz (14808-60-7)		
ACGIH	ACGIH OEL TWA	0.025 mg/m³ : (respirable particulate matter)
OSHA	OSHA PEL TWA [1]	50 µg/m³
IDLH	IDLH	50 mg/m³ : (respirable dust)
NIOSH	NIOSH REL TWA	0.05 mg/m³ : (respirable dust)

8.2. Appropriate engineering controls

Appropriate engineering controls : Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

If prolonged exposure is anticipated, it is recommended for handlers to wear appropriate clothing to prevent skin contact.

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Dark gray to black granules

Color : Dark gray to black

Odor : Mild hydrocarbon

Odor threshold : No data available

pH : No data available

Melting point : 1610 °C (2930° F)

Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	May cause cancer.
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not classified

Potential health effects

Inhalation

Acute : Exposure to respirable crystalline silica is not expected during the normal use of this product. However, acute silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss.

Chronic : Exposure to respirable crystalline silica is not expected during normal use of this product. However, prolonged overexposure to respirable crystalline silica may cause lung disease (silicosis).

Skin

Acute : Essentially non-irritating.

Eye

Acute : Essentially non-irritating.

Ingestion

Acute : Under normal conditions of use, no health effects are expected.

Mutagenicity : (s)-Methoprene has been tested and found negative for mutagenicity potential.

Carcinogenicity : (s)-Methoprene is not classified as a carcinogen by NTP, IARC or OSHA. Exposure to respirable crystalline silica dust from the finished product is not expected to occur due to the manner in which the constituents are bound, thus the finished product is not considered carcinogenic under conditions of normal use.

Reproductive Effects : (s)-Methoprene is not a reproductive toxin and does not cause birth defects.

SECTION 12: Ecological information

12.1. Toxicity

(s)-Methoprene Technical (65733-16-6)	
LC50 Acute fish 1	0.76 mg/l (Exposure time: 96hr Oncorhynchus mykiss)
LC50 Acute fish 2	> 0.37 mg/l (Exposure time: 96h - Blue gill)
LC50 Acute crustacea 1	0.11 mg/l (Exposure time: 96h - Mysid shrimp)
LC50 Acute crustacea 2	0.36 mg/l (Exposure time: 48h Daphnia)
NOEC Chronic fish 1	0.048 mg/l (Fathead minnow)
NOEC Chronic crustacea 1	0.014 mg/l (Mysid shrimp)

12.2. Persistence and degradability

(s)-Methoprene Technical (65733-16-6)	
Persistence and degradability	(s)-Methoprene degrades rapidly in sunlight, both in water and on inert surfaces. The pesticide also is metabolized rapidly in soil and does not leach. Thus, it should not persist in soil or contaminate ground water.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

(s)-Methoprene Technical (65733-16-6)	
Mobility in soil	Rapidly metabolized in soil under both aerobic and anaerobic conditions (half-life 10-14 days).

12.5. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

VectoBac® WDG

BIOLOGICAL LARVICIDE

WATER DISPERSIBLE GRANULE

FOR ORGANIC PRODUCTION

ACTIVE INGREDIENT:

Bacillus thuringiensis, subsp. *israelensis*, strain AM 65-52 fermentation solids, spores, and insecticidal toxins*	37.4%
OTHER INGREDIENTS	62.6%
TOTAL.....	100.0%

*Potency: 3000 International Toxic Units (ITU) per mg of product Equivalent to 1.36 billion ITU/lb of product.

The percent active ingredient does not indicate product performance and potency measurements are not Federally standardized.

EPA Reg. No. 73049-56
EPA Est. No. 33762-IA-001 List No. 60215

INDEX:

1.0 First Aid
2.0 Precautionary Statements
2.1 Hazards to Humans and Domestic Animals
2.2 Environmental Hazards
3.0 Directions for Use
4.0 Application Directions
5.0 Small Quantity Dilution Rates
6.0 Ground and Aerial Application
6.1 Aerial Application
7.0 Storage and Disposal
8.0 Notice to User

KEEP OUT OF REACH OF CHILDREN
CAUTION

1.0

FIRST AID	
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-892-0099 (24 hours) for emergency medical treatment and/or transportation emergency information. For all other information, call 1-800-89-VALENT (1-800-898-2536).	

2.0 PRECAUTIONARY STATEMENTS

2.1 HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if inhaled. Causes moderate eye irritation. Avoid breathing dust or spray mist. Avoid contact with eyes or clothing. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Mixers/loaders and applicators not in enclosed cabs or aircraft must wear a NIOSH-approved particulate respirator with any N, P or R filter with NIOSH approval number prefix TC-84A or a NIOSH-approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

2.2 Environmental Hazards

Do not contaminate water when disposing of equipment washwater or rinsate.

3.0 DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply directly to treated, finished drinking water reservoirs.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform mosquito control applications, or by persons under their direct supervision.

IN CALIFORNIA: This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel, or persons under contract to these entities only.

Do not apply this product through any type of irrigation system.

4.0 APPLICATION DIRECTIONS

Do not apply when wind speed favors drift beyond the area of treatment.

VectoBac® WDG Biological Larvicide Water Dispersable Granule (hereafter referred to as VectoBac WDG) is an insecticide for use against mosquito larvae.

Mosquito Larvae Control in Urban and Rural Areas

Mosquito Habitat	Application Rate Range*
Irrigation ditches, roadside ditches, flood water, standing pools, woodland pools, snow melt pools, pastures, catch basins, storm water retention areas, tidal water, salt marshes and rice fields.	1.75 - 7.0 oz/acre (50 - 200 g/acre) (125 - 500 g/ha)

Direct spray applications to sites where mosquitoes breed. These sites include tires and tire piles, potted plants, tree holes, garbage bins, cans, birdbaths, rain barrels, and other water-holding containers and small bodies of water such as personal rainwater catchment cisterns.

4.0 APPLICATION DIRECTIONS (CONT'D)

Mosquito Habitat	Applications Rate Range*
Polluted water, such as sewage and animal waste lagoons	7.0 - 14.0 oz/acre (200 - 400 g/acre) (500 - 1000 g/ha)

Standing water, which contains mosquito larvae, in fields with growing crops (e.g., alfalfa, almonds, asparagus, corn, cotton, dates, grapes, peaches and walnuts) can be treated at the specified application rates.

* Use higher application rate range in polluted water and when late 3rd and early 4th instar larvae predominate, mosquito populations are high, and/or algae are abundant.

5.0 SMALL QUANTITY DILUTION RATES

For when small areas are to be treated, the table below can be used to determine application rates.

Gallons Spray Mixture/Acre (Ounces Needed per Gallon of Spray)

VectoBac WDG

Rates in		Final concentration, ounces/gallon spray		
Ounces/Acre	Grams/A	10 Gal/A	25 Gal/A	50 Gal/A
1.75	50	0.175	0.07	0.04
3.5	100	0.35	0.14	0.07
7.0	200	0.7	0.28	0.14
14.0	400	1.4	0.565	0.28

6.0 GROUND AND AERIAL APPLICATION (In Urban and Rural Areas)

VectoBac WDG may be applied using conventional ground or aerial application equipment with quantities of water sufficient to provide uniform coverage of the target area. For application, first add VectoBac WDG to water to produce a final spray mixture.

The amount of water will depend on weather, spray equipment, and mosquito habitat characteristics. For application, fill the mix tank or plane hopper with the desired quantity of water. Start the mechanical or manual agitation to provide moderate circulation of water before adding VectoBac WDG. Backpack and compressed air sprayers may be agitated by shaking after adding VectoBac WDG to the water in the sprayer. VectoBac WDG suspends readily in water and will stay suspended over normal application periods. Brief recirculation may be necessary if the spray mixture has sat for several hours or longer. Do not mix more VectoBac WDG than can be used in a 48-hour period. AVOID CONTINUOUS AGITATION OF THE SPRAY MIXTURE DURING SPRAYING.

For ground spraying, apply VectoBac WDG at a rate of 1.75 - 14 oz/acre (50 - 400 g/acre; 125-1000 g/ha) in 5 - 100 gallons of water per acre (47 - 950 liters/ha) using hand-pump, airblast, mist blower, or other spray equipment.

For aerial application, apply VectoBac WDG at a rate of 1.75 - 14 oz/acre (50 - 400 g/acre; 125-1000 g/ha) in 0.25 - 10 gallons of water per acre (2.4 - 93.5 liters/ha) through fixed wing or helicopter aircraft equipped with either conventional boom and nozzle systems or rotary atomizers to provide uniform coverage of the target area.

Rinse and flush spray equipment thoroughly following each use.

6.1 Aerial Application

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the treatment coordinator are responsible for considering all of these factors when making decisions.

7.0 STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Store in cool [59 - 86°F (15 - 30°C)], dry place.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

8.0 NOTICE TO USER

To the extent consistent with applicable law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning use of this product other than as indicated on this label. To the extent consistent with applicable law, user assumes all risks of use, storage or handling not in accordance with accompanying directions.

VectoBac is a registered trademark of Valent BioSciences LLC.

VALENT BIOSCIENCES.
870 TECHNOLOGY WAY
LIBERTYVILLE, IL 60048 USA
PH: 800-323-9597

VectoBac® WDG Biological Larvicide

SDS# VBC-0019 Revision 6 ISSUED 03/25/2024
[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Product Identifier
MATERIAL NAME: VectoBac® WDG
Synonyms: VectoBac® WG, VectoBac 37 WG, Gnatrol WDG, Gnatrol DG
EPA Reg No.: 73049-56
Code Number: 80893, 33921
List Number: 60215, A560215
Chemical Family: **Not applicable; microbial product**
Substance Registration Number(s)[REACH]: N/A

1.2 Relevant Identified Uses and Uses Advised Against
Identified Uses: Biological mosquito larvicide
Uses Advised Against: It is a violation of Federal law to use this product in a manner inconsistent with its FIFRA pesticide labeling.

1.3 Details of the supplier of the Safety Data Sheet
Supplied By: Valent BioSciences LLC
1910 Innovation Way, Suite 100
Libertyville, Illinois 60048

1.4 EMERGENCY TELEPHONE NUMBERS
Emergency Health or Spill:
VBC Product Information: (800)323-9597
Health Emergency (24 hours): 1-877-315-9819
US Transportation (24 hr): CHEMTREC: 800-424-9300
International Transportation (24 hr): 703-741-5970

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture
Not Classified

2.2 Labeling Elements
Symbol(s)
Symbols not required

Signal Word
WARNING

Hazard Statement(s)
None

2.3 Precautionary Statement:

Prevention

Wash hands and face thoroughly after handling

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.

Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

2.4 Other Hazards

None identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Component Name	Percent
None	*Bacillus thuringiensis* subsp. *israelensis*, strain AM65-52	37.4
Trade Secret	Other ingredients	62.6

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

GENERAL: In all cases of doubt, seek medical attention.

EYES: Remove from source of exposure. Flush with copious amounts of water. Remove contact lenses, if present and easy to do, after the first 5 minutes, then continue rinsing. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

SKIN: Remove from source of exposure. Take off contaminated clothing. Flush with copious amounts of water. If irritation occurs or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

INGESTION: Remove from source of exposure. Move person to fresh air. Do NOT induce vomiting. If signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

INHALATION: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. If person is not breathing, call

911, then give artificial respiration.

4.2 Most important Symptoms and Effects, both Acute and Delayed

Acute

Possible eye and skin irritation

Delayed

No information on significant adverse effects

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically and supportively

5. FIRE FIGHTING PROCEDURES

5.1 Extinguisher Media

Suitable Extinguisher Media

Dry chemical, water spray, foam or carbon dioxide. Use appropriate medium for the underlying cause of the fire.

Unsuitable Extinguisher Media

None known

5.2 Specific Hazards Arising from the Chemical

Thermal decomposition products

Carbon oxides, nitrogen oxides

5.3 Advice to Firefighters

Protective Equipment and precautions for firefighters

Fire fighter should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling combustion products. See Section 8 (Exposure Controls / Personal Protection)

Fire & Explosive hazard

Not expected to be flammable.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

For respiratory protection wear a dust mask. Wear eye protection appropriate to handling activities. Wear impervious gloves. See personal protection as recommended in Section 8.

6.2 Environmental Precautions

Dispose of excess product and washwaters according to local regulations.

6.3 Methods and Materials for Containment and Cleaning Up

Wear appropriate personal protective equipment. Sweep up material and place in appropriate container for disposal. Avoid generating dust.

6.4 Reference to Other Sections

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

7. HANDLING AND STORAGE

7.1 Precautions for Safe handling

For respiratory protection wear a dust mask. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Do not eat, drink, chew gum or smoke while working with product, obey reasonable safety precautions and practice good housekeeping.

7.2 Conditions for Safe Storage, Including Incompatibilities

Protect against physical damage. Keep in original containers. Close containers of unused material. Store in a dry, cool place.

Incompatibilities

None Known

7.3 Specific End Use(s)

Biological mosquito larvicide

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Component Exposure Limits

None

Derived No Effect Levels (DNELs)

No DNELs available

Predicted No Effect Concentrations (PNECs)

No PNECs available

8.2 Exposure Controls

Appropriate Engineering Controls

Provide general ventilation.

SKIN PROTECTION:

Wear protective clothing, including boots and gloves. For filling operations if dust/mist is produced wear a dust mask. Wash thoroughly with soap and water after handling.

EYE PROTECTION:

Wear goggles, safety glasses with side shields.

RESPIRATORY PROTECTION:

Where respiratory protection is warranted, use dust/mist filtering respirator (MSHA/NIOSH approved number prefix TC-21C or a NIOSH approved respirator with any N, P, R or HE filter during application procedures or when repeat exposure is expected.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor:	Brown fine granules	Odor :	Musty odor
pH:	5.8 (10% dispersion in water)	Boiling Point:	Not Determined
Melting Point:	Not Applicable	Solubility (H_2O):	Suspends and partially soluble
Specific Gravity:	Not Determined	Bulk Density:	0.36 g/ml
Octanol/H_2O Coeff:	Not Determined	Evaporation Rate:	Not Determined
Molecular Weight:	Not Applicable	Decomposition Temp.:	Not Determined
Auto Ignition:	Not Determined	LFL:	Not Determined
Flash Point:	Not Determined	UFL:	Not Determined
Vapor Density:	Not Determined	Vapor Pressure:	Not Applicable
VOC:	Not Determined	Kinematic Viscosity:	Not Determined

10. CHEMICAL STABILITY AND REACTIVITY

10.1 Reactivity

Material does not pose a significant reactivity hazard.

10.2 Chemical Stability

Stable under ordinary conditions of use and storage. Spontaneous reaction not possible.

10.3 Possibility of Hazardous Reactions

Does not undergo hazardous polymerization

10.4 Conditions to Avoid

None known

10.5 Incompatible Materials

None known

10.6 Hazardous Decomposition Products

Carbon oxides and unidentified organic compounds.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

LIKELY ROUTES OF EXPOSURE

Eye Contact: Yes
Skin Contact: Yes
Ingestion: No
Inhalation: No

ACUTE EFFECTS Product Toxicology Studies (Data for product)

ORAL TOXICITY: LD_{50} > 5,000 mg/kg (rat)
DERMAL TOXICITY: LD_{50} > 5,000 mg/kg (rabbit)
INHALATION TOXICITY: LC_{50} > 5.60 mg/L air (rat- nose only; maximum feasible concentration)
CORROSIVENESS: Not corrosive.
DERMAL IRRITATION: Weakly irritating
OCULAR IRRITATION: Mildly irritating
DERMAL SENSITIZATION: Not a sensitizer (guinea pig)
MUTAGENICITY INFORMATION: Components of this product are not listed as mutagens.
CARCINOGENICITY INFORMATION: Components of this product are not listed as carcinogenic by NTP, IARC or OSHA.
DEVELOPMENTAL/REPRODUCTIVE TOXICITY: This material is not pathogenic
SPECIAL TARGET ORGAN EFFECTS: Not Applicable.
ASPIRATION HAZARD: Not Applicable
REPEAT DOSE STUDIES: Not Applicable, Pathogenicity Toxicity testing was all negative

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity (Data for a Concentrated Technical Powder)

Fish: LC_{50} >370 mg/L (96-H, Rainbow Trout)
Bird: LC_{50} >3077 mg /kg (6.2×10^{11} cfu/kg) (Acute Oral - Bobwhite Quail)
LC_{50} >3077 mg /kg (6.2×10^{11} cfu/kg) each day for 5 days (Sub-Acute Oral (dietary) - Bobwhite Quail)
Invertebrates: EC_{50} >50 mg/L (48-H) (Daphnia)
Bees: Essentially nontoxic to honey bees

12.2 Persistence and Degradability
No data available

12.3 Bioaccumulation potential
Not applicable

12.4 Mobility in Soil
No data available

12.5 Results of PBT and vPvB assessment
Assessments not performed

12.6 Other adverse effects
None known

13. DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Methods
Dispose of product in accordance with federal, state, provincial, and local regulations. Prevent contamination of environment by wastes.

US EPA WASTE NUMBER & DESCRIPTIONS:
There is no applicable EPA waste number. This product, if discarded, is not expected to be a characteristic or listed hazardous waste.

14. TRANSPORTATION INFORMATION

DOT STATUS: Not regulated for domestic ground transport by US DOT
UN PROPER SHIPPING NAME: N/A
REMARKS: N/A

IATA/ICA0 STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A

IMDG STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations / Specific Legislation

TSCA STATUS: Exempt
CERCLA STATUS: Not regulated as hazardous
SARA STATUS: Acute: No Chronic: No Fire: No CDT: No
RCRA STATUS: Not regulated as hazardous
State Right-To-Know: Not Listed
Consult applicable national, state provincial or local laws to determine regulations, laws or ordinances which may be applicable.

OSHA HAZARD COMMUNICATION STANDARD: Not defined by the OSHA Hazard Communication Standard, 29 CFR

15.2 EPA Pesticide Regulations

EPA Registration Number: 73049-56
EPA Pesticide Label signal word: CAUTION
Product must have EPA Approved Pesticide Label attached to or accompanying all containers.

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions and limitations for its use.

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled. Avoid breathing dust. Remove contaminated clothing and wash before reuse. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

Do not apply directly to treated finished drinking water reservoirs.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Storage: Store in cool [59-86°F (15-30°C)], dry place.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling:
Plastic Container: Nonrefillable container. Do not reuse or refill this container.
Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

16. OTHER INFORMATION

NFPA Hazard Ratings		HMIS Hazard Ratings	
Health:	0	Health:	0
Flammability:	0	Flammability:	0
Instability:	0	Instability:	0

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Extreme

REASON FOR ISSUE: Add SAP product list number
APPROVAL DATE: 03/19/2021
SUPERSEDES DATE: 01/03/2020

LEGEND: N/A = Not Applicable
N/L = Not Listed
C = Ceiling
N/D = Not Determined
L = Listed
S = Short-term

(R) = Registered Trademark of Valent BioSciences
(TM) = Registered Trademark of Valent BioSciences

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, to the extent consistent with applicable law, Valent BioSciences LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, to the extent consistent with applicable law, neither Valent BioSciences LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. Except to the extent a particular use and particular information are expressly stated on the product label, it is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent BioSciences LLC to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use an EPA-registered pesticide product in any manner inconsistent with its labeling.

© Valent BioSciences LLC, 2021

VectoBac® 12AS

BIOLOGICAL LARVICIDE

AQUEOUS SUSPENSION

Active Ingredient:

Bacillus thuringiensis, subsp. *israelensis*, strain AM 65-52, fermentation solids and solubles	11.61%
Other Ingredients	88.39%
Total	100.00%

Potency: 1200 International Toxic Units (ITU) per mg
(Equivalent to 4.84 billion ITU per gallon, 1.279 billion ITU per liter)

There is no direct relationship between intended activity (potency) and the Percent Active Ingredient by Weight.

EPA Reg. No.73049-38
EPA Est. No. 33762-IA-001 List No. 05605

INDEX:

1.0 First Aid
2.0 Precautionary Statements
  2.1 Hazard to Humans (and Domestic Animals)
  2.2 Physical and Chemical Hazards
3.0 Directions for Use
  3.1 Chemigation
4.0 Storage and Disposal
5.0 Application Directions
6.0 Nuisance Flies
7.0 Nuisance Aquatic Midges
8.0 Ground and Aerial Application
9.0 Small Quantity Dilution Rates
10.0 Chemigation
  10.1 Rice-Flood (Basin) Chemigation
11.0 Notice to User

KEEP OUT OF REACH OF CHILDREN
CAUTION

1.0 FIRST AID

If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-315-9819 (24 hours) for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-323-9597.

2.0 PRECAUTIONARY STATEMENTS

2.1 HAZARD TO HUMANS (AND DOMESTIC ANIMALS)

CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash contaminated clothing before reuse.

Mixer/loaders and applicators not in enclosed cabs or aircraft must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

2.2 Physical and Chemical Hazards

Diluted or undiluted VectoBac 12AS can cause corrosion if left in prolonged contact with aluminum spray system components. Rinse spray system with plenty of clean water after use. Care should be taken to prevent contact with aluminum aircraft surfaces, structural components and control systems. In case of contact, rinse thoroughly with plenty of water. Inspect aluminum aircraft components regularly for signs of corrosion.

3.0 DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply directly to finished drinking water reservoirs or drinking water receptacles when water is intended for human consumption.

Do not apply when weather conditions favor drift from treated areas. Do not apply to metallic painted objects, such as automobiles, as spotting may occur. If spray is deposited on metallic painted surfaces, wash immediately with soap and water to avoid spotting.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the treatment coordinator are responsible for considering all these factors when making decisions.

3.1 Chemigation

Do not apply this product through any type of irrigation system unless labeling on chemigation is followed.

4.0 STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

STORAGE: Store in a cool, [less than 86° F (30° C)], dry place.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Do not reuse container.

CONTINUED

5.0 APPLICATION DIRECTIONS

Do not apply when wind speed favors drift beyond the area of treatment.

Mosquito Habitat	Suggested Rate Range*
(Such as the following examples): irrigation ditches, roadside ditches, flood water, standing ponds, woodland pools, snow melt pools, pastures, catch basins, storm water retention areas, tidal water, salt marshes and rice fields.	0.25 - 2 pts/acres
In addition, standing water containing mosquito larvae, in fields growing crops such as: Alfalfa, almonds, asparagus, corn, cotton, dates, grapes, peaches and walnuts, may be treated at the recommended rates.	
When applying this product to standing water containing mosquito larvae in fields growing crops, do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.	
Polluted water (such as sewage lagoons, animal waste lagoons).	1 - 2 pts/acre

*Use higher rate range in polluted water and when late 3rd and early 4th instar larvae predominate, mosquito populations are high, water is heavily polluted, and/or algae are abundant.

Blackflies Habitat	Suggested Rate Range
Streams	
Stream water† (=ppm) for 1 minute exposure time	0.5 - 25 mg/liter
Stream water† (=ppm) for 10 minutes exposure time	0.05 - 2.5 mg/liter

†Use higher rate range when stream contains high concentration of organic materials, algae, or dense aquatic vegetation.

†Discharge is a principal factor determining carry of Bti. Use higher rate or increase volume by water dilution in low discharge rivers or streams under low volume (drought) conditions.

6.0 NUISANCE FLIES

For control of nuisance flies (*Psychoda* spp., *Chironomus* spp.) in sewage treatment facilities utilizing trickling filter systems.

APPLICATION DIRECTIONS

Nuisance Fly Habitat	Suggested Rate Range*
Trickling filter system of wastewater treatment plants	10 - 20 mg/liter a.(0.833-1.67 ml) per liter of wastewater feed to the filter per 30 minutes

* Use high rate for control of *Chironomus* spp. Apply undiluted with pre-calibrated pump or other device into the wastewater feeding into the filters for a period of 30 minutes. Repeat applications as needed after 2-4 weeks. Control of *Chironomus* spp. may take up to 2 weeks.

7.0 NUISANCE AQUATIC MIDGES

For control of *Chironomine* midges (*Chironominae: Chironomini*) inhabiting shallow, manmade and natural lakes or ponds.

APPLICATION DIRECTIONS

Nuisance Midge Habitat	Suggested Rate Range*
Shallow Lakes and Ponds per sewage oxidation ponds (less than acre 6 feet deep)	1 gallon (3,785.5 ml) per acre

* Apply diluted with water in total volume of 5 gallons/acre by pouring or spraying over the surface to be treated with pre-calibrated device. Repeat application as needed after 2-4 weeks. Control of *Chironomine* midges may take up to 2 weeks.

8.0 GROUND AND AERIAL APPLICATION

VectoBac 12AS may be applied in conventional ground or aerial application equipment with quantities of water sufficient to provide uniform coverage of the target area. The amount of water will depend on weather, spray equipment, and mosquito habitat characteristics. Do not mix more VectoBac 12AS than can be used in a 72-hour period.

For most ground spraying, apply in 5-100 gallons of water per acre using hand-pump, airblast, mist blower, etc., spray equipment.

For aerial application, VectoBac 12AS may be applied either undiluted or diluted with water. For undiluted applications, apply 0.25 to 2.0 pt/acre of VectoBac 12AS through fixed wing or helicopter aircraft equipped with either conventional boom and nozzle systems or rotary atomizers.

For diluted application, fill the mix tank or plane hopper with the desired quantity of water. Start the mechanical or hydraulic agitation to provide moderate circulation before adding the VectoBac 12AS. VectoBac 12AS suspends readily in water and will stay suspended over normal application periods. Brief recirculation may be necessary if the spray mixture has sat for several hours or longer. AVOID CONTINUOUS AGITATION OF THE SPRAY MIXTURE DURING SPRAYING.

Rinse and flush spray equipment thoroughly following each use.

For blackfly aerial applications, VectoBac 12AS can be applied undiluted via fixed wing or helicopter aircraft equipped with either conventional boom and nozzle systems or open pipes. Rate of application will be determined by the stream discharge and the required amount of VectoBac 12AS necessary to maintain a 0.5 - 25 ppm concentration in the stream water. VectoBac 12AS can also be applied diluted with similar spray equipment. Do not mix more VectoBac 12AS than can be used in a 72-hour period.

9.0 SMALL QUANTITY DILUTION RATES

Gallons Spray Solution/Acre
(Ounces Needed per Gallon of Spray)

VectoBac 12AS
Rate in Pints

Per Acre	10 Gal/A	25 Gal/A	50 Gal/A
0.25 (4 oz)	0.4	0.16	0.08
0.5 (8 oz)	0.8	0.32	0.16
1.0 (16 oz)	1.6	0.64	0.32
2.0 (32 oz)	3.2	1.28	0.64

CONTINUED

10.0 CHEMIGATION

Apply this product through flood (basin) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have any questions about calibration, you should contact State Extension Service Specialists, equipment manufacturers or other experts.

A person knowledgeable of this chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

10.1 RICE-FLOOD (BASIN) CHEMIGATION

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.

VectoBac 12AS is metered or dripped into rice floodwater at application stations positioned at the point of introduction (levee cut) of water into each rice field or pan. Two to three pints of VectoBac 12AS are diluted in water to a final volume of 5 gallons. The diluted solution is contained in a 5 gallon container and metered or dispersed into the irrigation water using a constant flow device at the rate of 80 ml per minute. Introduction of the solution should begin when 1/3 to 1/2 of the pan or field is covered with floodwater. Delivery of the solution should continue for a period of approximately 4-1/2 hours. Floodwater depth should not exceed 10-12 inches to prevent excessive dilution of VectoBac 12AS which could result in reduced larval kill.

Agitation is not required during the period in which the VectoBac 12AS solution is being dispersed.

Application of VectoBac 12AS into rice floodwater is not permitted using a pressurized water and pesticide injection system.

11.0 NOTICE TO USER

Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

VectoBac is a registered trademark of Valent BioSciences Corporation.

VALENT BIOSCIENCES CORPORATION
870 TECHNOLOGY WAY
LIBERTYVILLE, IL 60048 USA
PH: 800-323-9597

04-6896/R7 ©Valent BioSciences Corporation, January 2012

SAFETY DATA SHEET

VectoBac® 12AS Biological Larvicide Aqueous Suspension

SDS# VBC-0036 Revision 8 ISSUED 01/06/20

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Product Identifier

MATERIAL NAME: VectoBac® 12 AS Biological Larvicide Aqueous Suspension
Synonyms: VectoBac 12AS
EPA Reg No.: 73049-38
Code Number: 15576, 15577, 15578, 21894, 83872, A515579 and A585873
List Number: 05605
Chemical Family: Not applicable; microbial product

1.2 Relevant Identified Uses and Uses Advised Against

Identified Uses: Mosquito larvicide
Uses Advised Against: It is a violation of Federal law to use this product in a manner inconsistent with its FIFRA pesticide labeling.

1.3 Details of the supplier of the Safety Data Sheet

Supplied By: Valent BioSciences LLC
1910 Innovation Way, Suite 100
Libertyville, Illinois 60048

1.4 EMERGENCY TELEPHONE NUMBERS

Emergency Health or Spill:
Outside the United States: 651-632-6184
Within the United States: 877-315-9819

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Not classified

2.2 Labeling Elements

Symbol(s)
Symbols not required

Signal Word
WARNING

Hazard Statement(s)
None

Precautionary Statement:

Prevention

Not required

Response

Not required

Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

2.3 Other Hazards

None identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Component Name	Percent
None	*Bacillus thüringiensis* subsp. *israelensis*	11.61
Trade Secret	Other Ingredients – withheld as Trade Secret	88.39

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

GENERAL: In all cases of doubt, seek medical attention.

EYES: Remove from source of exposure. Flush with copious amounts of water. Remove contact lenses, if present and easy to do, after the first 5 minutes, then continue rinsing. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

SKIN: Remove from source of exposure. Take off contaminated clothing. Flush with copious amounts of water. Cover irritated skin with an emollient. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

INGESTION: Remove from source of exposure. Move person to fresh air. Do NOT induce vomiting. Give large quantities of water. If signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

INHALATION: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. If person is not breathing, call 911, then give artificial respiration.

4.2 Most important Symptoms and Effects, both Acute and Delayed

Acute

Slight eye and skin irritation

Delayed

No information on significant adverse effects

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically and supportively

5. FIRE FIGHTING PROCEDURES

5.1 Extinguisher Media

Suitable Extinguisher Media

Dry chemical, water spray, foam or carbon dioxide. Use appropriate medium for the underlying cause of the fire.

Unsuitable Extinguisher Media

None known

5.2 Specific Hazards Arising from the Chemical

Keep containers cool by spraying with water if exposed to fire.

Thermal decomposition products

Carbon oxides, nitrogen oxides

5.3 Advice to Firefighters

Protective Equipment and precautions for firefighters

Fire fighter should wear full-face, self-contained breathing apparatus and protective clothing. Fire fighters should avoid inhaling combustion products. See Section 8 (Exposure Controls / Personal Protection)

Fire & Explosive hazard

Not expected to be flammable.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Wear a dust/mist filtering respirator, eye protection and gloves.

6.2 Environmental Precautions

Dispose of excess product and washwaters according to local regulations.

6.3 Methods and Materials for Containment and Cleaning Up

Recover product with inert material (earth, sand, vermiculite), place into appropriate container for disposal. Do not flush to sewer.

6.4 Reference to Other Sections

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

US Regulations may require reporting spills of hazardous materials: See Section 15: Regulatory Information for details on reportable quantities, if any.

7. HANDLING AND STORAGE

7.1 Precautions for Safe handling

Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Do not eat, drink or smoke while working with product, obey reasonable safety precautions and practice good housekeeping.

7.2 Conditions for Safe Storage, Including and Incompatibilities

Store in a cool, dry place. For further information refer to local country registration and label.

Incompatibilities

None Known

7.3 Specific End Use(s)

Mosquito Larvicide.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Component Exposure Limits

None Established

Derived No Effect Levels (DNELs)

No DNELs available

Predicted No Effect Concentrations (PNECs)

No PNECs available

8.2 Exposure Controls

Appropriate Engineering Controls
Provide general ventilation.

SKIN PROTECTION:
Wear protective clothing, including boots and gloves. Wash thoroughly with soap and water after handling.

EYE PROTECTION:
Wear goggles, safety glasses with side shields or full-face shield when splashing or spraying of materials is likely.

RESPIRATORY PROTECTION:
Use dust/mist filtering respirator (MSHA/NIOSH approved number prefix TC-21C) or a NIOSH approved respirator with any N, P, R or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light brown liquid	Odor:	Malt-like
pH:	5.0 (1% w/v susp)	Odor Threshold:	Not Determined
Melting Point:	Not Determined	Boiling Point:	Not Determined
Specific Gravity:	Not Determined	Solubility (H_2O):	Not Determined
Relative Density:	1.06 g/cm^3 @ 20 °C	Evaporation Rate:	Not Determined
Octanol/H_2O Coeff:	Not Determined	Decomposition Temp.:	Not Determined
Vapor Density:	Not Determined	Vapor Pressure:	Not Determined
VOC:	Not Determined	Flammability Class:	Not Flammable
Kinematic Viscosity:	Not Determined		

10. CHEMICAL STABILITY AND REACTIVITY

10.1 Reactivity
Material does not pose a significant reactivity hazard.

10.2 Chemical Stability
Stable under ordinary conditions of use and storage. Spontaneous reaction not possible.

10.3 Possibility of Hazardous Reactions
Does not undergo hazardous polymerization

10.4 Conditions to Avoid
Keep away from incompatible substances.

10.5 Incompatible Materials

Diluted or undiluted product can cause corrosion if left in prolonged contact with aluminum surfaces (e.g. spray equipment, aircraft components).

10.6 Hazardous Decomposition Products

Carbon oxides and unidentified organic compounds.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Acute Effects – Product Toxicology Studies

Oral Toxicity:	LD_{50} > 5,000 mg/kg (rat)
Dermal Toxicity:	LD_{50} > 5,000 mg/kg (rabbit)
Inhalation Toxicity:	LC_{50} > 5.34 mg/L air
Corrosiveness:	Not corrosive to humans, can be corrosive to aluminum.
Dermal Irritation:	slightly-irritating, (category IV)
Ocular Irritation:	slightly-irritating, (category IV)
Dermal Sensitization:	Not a skin sensitizer (mice)
Mutagenicity Information:	Components of this product are not listed as mutagens.
Carcinogenicity Information:	Components of this product are not listed as carcinogenic by NTP, IARC or OSHA.

Developmental/Reproductive Toxicity: This material is not a teratogenic compound.
Special Target Organ: Not Applicable
Aspiration Hazard: Not Applicable
Repeat Dose Studies: Not Applicable, Pathogenicity Toxicity testing was all negative

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity (Data for a Concentrated Technical Powder)

Fish: LC_{50} >370 mg/L (96-H, Rainbow Trout)
Bird: LC_{50} >3077 mg /kg (6.2 x 1011 cfu/kg) (Acute Oral - Bobwhite Quail)
LC_{50} >3077 mg /kg (6.2 x 1011 cfu/kg) each day for 5 days (Sub-Acute Oral (dietary) - Bobwhite Quail)
Invertebrates: LC_{50} >50 mg/L (48-H) (Daphnia)
Bees: Essentially non-toxic to honey bees.

12.2 Persistence and Degradability

No data available

12.3 Bioaccumulation potential

Not applicable. Substance is not pathogenic to non-target organisms

12.4 Mobility in Soil

No data available

12.5 Results of PBT and vPvB assessment

Assessments not performed

12.6 Other adverse effects

None known

13. DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Methods

Dispose of product in accordance with federal, state, provincial, and local regulations. Prevent contamination of environment by wastes.

US EPA WASTE NUMBER & DESCRIPTIONS:
There is no applicable EPA waste number. This product, if discarded, is not expected to be a characteristic or listed hazardous waste.

14. TRANSPORTATION INFORMATION

DOT STATUS: Not regulated by US DOT
UN PROPER SHIPPING NAME: N/A
REMARKS: N/A

IATA/ICA0 STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A

IMDG STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations / Specific Legislation

TSCA STATUS: Not Listed
CERCLA STATUS: Not regulated as hazardous
SARA STATUS: Acute: No Chronic: No Fire: No CDT: No
RCRA STATUS: Not regulated as hazardous

State Right-To-Know: Not listed.

Consult applicable national, state provincial or local laws to determine regulations, laws or ordinances which may be applicable.

OSHA HAZARD COMMUNICATION STANDARD: Not defined by the OSHA Hazard Communication Standard, 29 CFR.

15.2 FIFRA – Pesticide Labeling

EPA registration Number 73049-38

EPA Pesticide Label signal word: CAUTION

Product must have EPA Approved Pesticide Label attached or accompanying all containers.

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions and limitations for its use.

KEEP OUT OF REACH OF CHILDREN
PRECAUTIONARY STATEMENT
HAZARD TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash contaminated clothing before reuse.

Mixers/loaders and applicators not in enclosed cabs or aircraft must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95 or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

PHYSICAL AND CHEMICAL HAZARDS

Diluted or undiluted VectoBac 12AS can cause corrosion if left in prolonged contact with aluminum spray system components. Rinse spray system with plenty of clean water after use. Care should be taken to prevent contact with aluminum aircraft surfaces, structural components and control systems, In case of contact, rinse thoroughly with plenty of water. Inspect aluminum aircraft components regularly for signs of corrosion.

DIRECTIONS FOR USE

It is in violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply directly to treated finished drinking water reservoirs or drinking water receptacles when water is intended for human consumption.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Storage: Store in a cool, [less than 86°F (30° C)] dry place.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Nonrefillable container. Do not reuse or refill this container.
Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Do not reuse container.

16. OTHER INFORMATION

NFPA Hazard Ratings		HMIS Hazard Ratings	
Health:	N/D	Health:	N/D
Flammability:	N/D	Flammability:	N/D
Instability:	N/D	Instability:	N/D

0 = minimal
1 = slight
2 = moderate
3 = serious
4 = Extreme

REASON FOR ISSUE: Added new toxicity study to Section 11, changed classification, symbol and Prevention/Response in Section 2.

APPROVAL DATE: 01/06/20
SUPERSEDES DATE: 04/12/19

LEGEND: N/A = Not Applicable
N/L = Not Listed
C = Ceiling
N/D = Not Determined
L = Listed
S = Short-term

(R) = Registered Trademark of Valent BioSciences LLC
(TM) = Registered Trademark of Valent BioSciences LLC

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, to the extent consistent with applicable law, Valent BioSciences LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, to the extent

consistent with applicable law, neither Valent BioSciences LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. Except to the extent a particular use and particular information are expressly stated on the product label, it is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent BioSciences LLC to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use an EPA-registered pesticide product in any manner inconsistent with its labeling.

VALENT BIOSCIENCES.

1910 Innovation Way, Suite 100
Libertyville, IL 60048 – 800-323-9597

© Valent BioSciences LLC, 2020

VectoLex® FG

BIOLOGICAL LARVICIDE

FINE GRANULE

ACTIVE INGREDIENT:

Bacillus sphaericus 2362, Serotype H5a5b, strain ABTS 1743 fermentation solids, spores, and insecticidal toxins ...	7.5%
OTHER INGREDIENTS	92.5%
TOTAL	100.0%

Potency: This product contains 50 BsITU/mg or 0.023 Billion BsITU/lb.
Expiration Date: (Two years from the date of manufacture).

The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

EPA Reg. No.73049-20
EPA Est. No. 33762-IA-001 List No. 05722

INDEX:

1.0 First Aid
2.0 Precautionary Statements
  2.1 Hazard to Humans (and Domestic Animals)
  2.2 Environmental Hazards
3.0 Directions for Use
4.0 Storage and Disposal
5.0 Directions for Use - VectoLex FG
  5.1 Application Directions
6.0 Notice to User

KEEP OUT OF REACH OF CHILDREN
CAUTION

1.0 FIRST AID

If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-315-9819 (24 hours) for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-323-9597.

2.0 PRECAUTIONARY STATEMENTS

2.1 HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Causes moderate eye irritation. Harmful if absorbed through the skin or inhaled. Avoid contact with skin, eyes or clothing. Wear protective eyewear. Avoid breathing dust. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Mixers/loaders and applicators not in enclosed cabs or aircraft, must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitizations.

2.2 Environmental Hazards

Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

3.0 DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform mosquito control applications, or by persons under their direct supervision. IN CALIFORNIA: This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel, or persons under contract to these entities only.

4.0 STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not contaminate water when disposing of equipment washwaters.

Pesticide Storage: Store in a cool, dry place.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment, then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

5.0 DIRECTIONS FOR USE - VECTOLEX FG

5.1 Application Directions

MOSQUITO CONTROL

VectoLex® FG Biological Larvicide Fine Granule (hereafter referred to as VectoLex FG) is a selective microbial insecticide for use against mosquito larvae in a variety of habitats. VectoLex FG can be applied to areas that contain fish, other aquatic life, and plants. VectoLex FG can be applied to areas used by or in contact with humans, pets, horses, livestock, birds, or wildlife.

CONTINUED

I. For control of mosquito larvae species* in the following non-crop sites:

Habitat	Rate Range
Wastewater: Sewage effluent, sewage lagoons, oxidation ponds, septic ditches, animal waste lagoons, impounded wastewater associated with fruit and vegetable processing.	5-20 lbs/acre**
Stormwater/Drainage Systems: Storm sewers, catch basins, drainage ditches, retention ponds, detention ponds and seepage ponds.	5-20 lbs/acre**
Marine/Coastal Areas: Salt marshes, mangroves, estuaries.	5-20 lbs/acre**
Water Bodies: Natural and manmade aquatic sites such as lakes, ponds, rivers, canals, streams and livestock watering ponds and troughs.	5-20 lbs/acre**
Dormant Rice Fields: Impounded water in dormant rice fields. (For application only during the interval between harvest and preparation of the field for the next cropping cycle.)	5-20 lbs/acre**
Waste Tires: Tires stockpiled in dumps, landfills, recycling plants, and other similar sites.	0.5-2 lbs/ 1000 sq. ft.

II. For the control of mosquito larvae species* in the following agricultural/crop sites where mosquito breeding occurs:

Habitats:	Rate Range
Rice, pastures/hay fields, orchards, citrus groves, irrigated crops.	5-20 lbs/acre**

Apply VectoLex FG uniformly by aerial or conventional ground equipment. Reapply VectoLex FG as needed after 1 to 4 weeks.

* Mosquito species effectively controlled by VectoLex FG, including many of those known to carry/transmit West Nile virus:

Culex spp.	
Aedes vexans	
Ochlerotatus melanimon	*(Aedes melanimon)*
Ochlerotatus stimulans	*(Aedes stimulans)*
Ochlerotatus nigromaculis	*(Aedes nigromaculis)*
Psorophora columbiae	
Psorophora ferox	
Ochlerotatus triseriatus	*(Aedes triseriatus)*
Ochlerotatus sollicitans	*(Aedes sollicitans)*
Anopheles quadrimaculatus	
Coquillettidia perturbans	

**Use higher rates (10 to 20 lbs/acre) in areas where extended residual control is necessary, or in habitats having deep water or dense surface cover.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the treatment coordinator are responsible for considering all these factors when making decisions.

6.0 NOTICE TO USER

To the extent consistent with applicable law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on this label. To the extent consistent with applicable law, user assumes all risks of use, storage or handling not in accordance with accompanying directions.

VALENT BIOSCIENCES. CORPORATION
870 TECHNOLOGY WAY
LIBERTYVILLE, IL 60048 USA
PH: 800-323-9597

 ©Valent BioSciences Corporation, June 2015

SAFETY DATA SHEET

VectoLex® FG Biological Larvicide

SDS# VBC-0046 Revision 3 ISSUED 01/08/20

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Product Identifier

MATERIAL NAME: VectoLex® FG Biological Larvicide

Synonyms: VectoLex® CG, VectoLex® G, VectoLex® 7.5 GR, VectoLex® WSP, ABG-6185

EPA Reg No.: 73049-20

Code Number: None

List Number: 05722

Chemical Family: Not applicable; microbial product

Substance Registration Number(s)[REACH]: N/A

1.2 Relevant Identified Uses and Uses Advised Against

Identified Uses: Biological mosquito larvicide

Uses Advised Against: It is a violation of Federal law to use this product in a manner inconsistent with its FIFRA pesticide labeling.

1.3 Details of the supplier of the Safety Data Sheet

Supplied By: Valent BioSciences LLC
1910 Innovation Way, Suite 100
Libertyville, Illinois 60048

1.4 EMERGENCY TELEPHONE NUMBERS

Emergency Health or Spill:

Outside the United States: 651-632-6184
Within the United States: 877-315-9819

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Eye Irritation – Category 2B

2.2 Labeling Elements

Symbol(s)

None

Signal Word

WARNING

Hazard Statement(s)

Causes eye irritation

2.3 Precautionary Statement:

Prevention

Wash hands and face thoroughly after handling

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/ attention.

Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

2.4 Other Hazards

None identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Component Name	Percent
None	*Bacillus sphaericus* 2362, serotype H5a5b, strain ABTS 1743 fermentation solids	7.5
Trade Secret	Other ingredients	82.5

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

GENERAL: In all cases of doubt, seek medical attention.

EYES: Remove from source of exposure. Flush with copious amounts of water. Remove contact lenses, if present and easy to do, after the first 5 minutes, then continue rinsing. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

SKIN: Remove from source of exposure. Take off contaminated clothing. Flush with copious amounts of water. If irritation occurs or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

INGESTION: Remove from source of exposure. Move person to fresh air. Do NOT induce vomiting. If signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

INHALATION: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. If person is not breathing, call 911, then give artificial respiration.

4.2 Most important Symptoms and Effects, both Acute and Delayed

Acute

Possible eye irritation

Delayed

No information on significant adverse effects

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically and supportively

5. FIRE FIGHTING PROCEDURES

5.1 Extinguisher Media

Suitable Extinguisher Media

Dry chemical, water spray, foam or carbon dioxide. Use appropriate medium for the underlying cause of the fire.

Unsuitable Extinguisher Media

None known

5.2 Specific Hazards Arising from the Chemical

Thermal decomposition products

Carbon oxides, nitrogen oxides

5.3 Advice to Firefighters

Protective Equipment and precautions for firefighters

Fire fighter should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling combustion products. See Section 8 (Exposure Controls / Personal Protection)

Fire & Explosive hazard

Not expected to be flammable.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

For respiratory protection wear a dust mask. Wear eye protection appropriate to handling activities. Wear gloves. See personal protection as recommended in Section 8.

6.2 Environmental Precautions

Dispose of excess product and washwaters according to local regulations.

6.3 Methods and Materials for Containment and Cleaning Up

Wear appropriate personal protective equipment. Sweep up material and place in appropriate container for disposal. Avoid generating dust.

6.4 Reference to Other Sections

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

US Regulations may require reporting spills of hazardous materials: See Section 15: REGULATORY INFORMATION for details on reportable quantities, if any.

7. HANDLING AND STORAGE

7.1 Precautions for Safe handling

For respiratory protection wear a dust mask. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Do not eat, drink, chew gum or smoke while working with product, obey reasonable safety precautions and practice good housekeeping.

7.2 Conditions for Safe Storage, Including Incompatibilities

Protect against physical damage. Keep in original containers. Close containers of unused material. Store in a dry, cool place.

Incompatibilities

None Known

7.3 Specific End Use(s)

Pesticide, biological mosquito larvicide

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Component Exposure Limits

None

Derived No Effect Levels (DNELs)

No DNELs available

Predicted No Effect Concentrations (PNECs)

No PNECs available

8.2 Exposure Controls

Appropriate Engineering Controls

Provide general ventilation.

SKIN PROTECTION:

Wear protective clothing, including boots and gloves. For filling operations if dust/mist is produced wear a dust mask. Wash thoroughly with soap and water after handling.

EYE PROTECTION:

Wear Goggles, safety glasses with side shields or full-face shield when splashing or spraying of materials is likely.

RESPIRATORY PROTECTION:

Where respiratory protection is warranted, use dust/mist filtering respirator (MSHA/NIOSH approved number prefix TC-21C or a NIOSH approved respirator with any N, P, R or HE filter during application procedures or when repeat exposure is expected.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor:	Tan to Brown fine granules	Odor :	Characteristic odor
pH:	Not Determined	Boiling Point:	Not Determined
Melting Point:	Not Applicable	Solubility (H_2O):	Not Determined
Specific Gravity:	Not Determined	Bulk Density:	Not Determinedl
Octanol/H_2O Coeff:	Not Determined	Evaporation Rate:	Not Determined
Auto Ignition:	Not Determined	LFL:	Not Determined
Flash Point:	Not Determined	UFL:	Not Determined
Vapor Density:	Not Determined	Vapor Pressure:	Not Applicable
VOC:	Not Determined	Flammability Class:	None of the components are classified as flammable or highly flammable, it can be concluded that the preparation itself will not be classified as highly flammable.
Kinematic Viscosity:	Not Determined		

10. CHEMICAL STABILITY AND REACTIVITY

10.1 Reactivity

Material does not pose a significant reactivity hazard.

10.2 Chemical Stability

Stable under ordinary conditions of use and storage. Spontaneous reaction not possible.

10.3 Possibility of Hazardous Reactions

Does not undergo hazardous polymerization

10.4 Conditions to Avoid

None known

10.5 Incompatible Materials
None known

10.6 Hazardous Decomposition Products
Carbon oxides and unidentified organic compounds.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects
LIKELY ROUTES OF EXPOSURE
Eye Contact: Yes
Skin Contact: Yes
Ingestion: No
Inhalation: No

ACUTE EFFECTS Product Toxicology Studies
ORAL TOXICITY: LD_{50} > 5,000 mg/kg
DERMAL TOXICITY: LD_{50} > 2,000 mg/kg
INHALATION TOXICITY: LC_{50} > 0.09 mg/L highest attainable concentration
CORROSIVENESS: Not corrosive.
DERMAL IRRITATION: slightly-irritating
OCULAR IRRITATION: Eye irritant – Cat 2B
DERMAL SENSITIZATION: Skin sensitizer – Cat 1A

MUTAGENICITY INFORMATION: Components of this product are not listed as mutagens.
CARCINOGENICITY INFORMATION: Components of this product are not listed as carcinogenic by NTP, IARC or OSHA.
DEVELOPMENTAL/REPRODUCTIVE TOXICITY: This material is not pathogenic
SPECIAL TARGET ORGAN EFFECTS: Eye and mucus membrane Irritation.
ASPIRATION HAZARD: Not Applicable
REPEAT DOSE STUDIES: Not Applicable, Pathogenicity Toxicity testing was all negative

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity (Data for a Concentrated Technical Powder)
Fish: LC_{50} >15.5 mg/L (96-H, Rainbow Trout)
LC_{50} >15.5 mg/L (96-H, Blue Gill)
Bird: LC_{50} >9g /kg (Acute Oral - Mallard)
Invertebrates: EC_{50} >15.5 (48-H) (Daphnia)
Bees: Essentially non-toxic to bees

12.2 Persistence and Degradability
No data available

12.3 Bioaccumulation potential
Not applicable. Substance is not pathogenic to non-target organisms

12.4 Mobility in Soil
No data available

12.5 Results of PBT and vPvB assessment
Assessments not performed

12.6 Other adverse effects
None known

13. DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Methods
Dispose of product in accordance with federal, state, provincial, and local regulations. Prevent contamination of environment by wastes.

US EPA WASTE NUMBER & DESCRIPTIONS:
There is no applicable EPA waste number. This product, if discarded, is not expected to be a characteristic or listed hazardous waste.

14. TRANSPORTATION INFORMATION

DOT STATUS: Not regulated for domestic ground transport by US DOT
UN PROPER SHIPPING NAME: N/A
REMARKS: N/A

IATA/ICA0 STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A

IMDG STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations / Specific Legislation

TSCA STATUS: Exempt
CERCLA STATUS: Not regulated as hazardous
SARA STATUS: Acute: No Chronic: No Fire: No CDT: No
RCRA STATUS: Not regulated as hazardous
State Right-To-Know: Not Listed
Consult applicable national, state provincial or local laws to determine regulations, laws or ordinances which may be applicable.
OSHA HAZARD COMMUNICATION STANDARD: Not defined by the OSHA Hazard Communication Standard, 29 CFR

15.2 EPA Pesticide Regulations

EPA Registration Number: 73049-20
EPA Pesticide Label signal word: CAUTION
Product must have EPA Approved Pesticide Label attached to or accompanying all containers.

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions and limitations for its use.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. Harmful if absorbed through the skin or inhaled. Avoid contact with skin, eyes or clothing. Wear protective eyewear. Avoid breathing dust. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.
Mixers/loaders and applicators not in enclosed cabs or aircraft must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

ENVIRONMENTAL HAZARDS

Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform mosquito control applications, or by persons under their direct supervision.

IN CALIFORNIA: This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel, or persons under contract to these entities only.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in cool, dry place.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment, then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

16. OTHER INFORMATION

NFPA Hazard Ratings		HMIS Hazard Ratings	
Health:	1	Health:	1
Flammability:	0	Flammability:	0
Instability:	0	Instability:	0

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Extreme

REASON FOR ISSUE: Address Change
APPROVAL DATE: 01/08/20
SUPERSEDES DATE: 09/12/18

LEGEND: N/A = Not Applicable
N/L = Not Listed
C = Ceiling
N/D = Not Determined
L = Listed
S = Short-term

(R) = Registered Trademark of Valent BioSciences LLC
(TM) = Registered Trademark of Valent BioSciences LLC

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, to the extent consistent with applicable law, Valent BioSciences LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, to the extent consistent with applicable law, neither Valent BioSciences LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. Except to the extent a particular use and particular information are expressly stated on the product label, it is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent BioSciences LLC to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use an EPA-registered pesticide product in any manner inconsistent with its labeling.

VALENT BIOSCIENCES.

1910 Innovation Way, Suite 100
Libertyville, IL 60048 – 800-323-9597

© Valent BioSciences LLC, 2020

VectoPrime® FG

BIOLOGICAL LARVICIDE

FINE GRANULE

MADE WITH BioFuse™ TECHNOLOGY

ACTIVE INGREDIENT:

Bacillus thuringiensis, subsp. *israelensis,* strain AM 65-52 fermentation solids, spores, and insecticidal toxins	6.07%
(S)-methoprene	0.10%
OTHER INGREDIENTS	93.83%
TOTAL	100.00%

Potency: 400 International Toxic Units (ITU) per mg or 0.182 billion ITU per pound

The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

EPA Reg. No.73049-501
EPA Est. No. 33762-IA-001 List No. 05725

INDEX:

1.0 First Aid
2.0 Precautionary Statements
  2.1 Hazard to Humans and Domestic Animals
  2.2 Environmental Hazards
3.0 Directions for Use
4.0 Application Directions
5.0 Storage and Disposal
6.0 Notice to User

KEEP OUT OF REACH OF CHILDREN
CAUTION

1.0 FIRST AID

If in eyes	• Hold eyes open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. • Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-315-9819 (24 hours) for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-323-9597.

2.0 PRECAUTIONARY STATEMENTS

2.1 Hazards To Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Mixers/loaders and applicators not in enclosed cabs or aircraft must wear a dust/mist respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

2.2 Environmental Hazards

Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

3.0 DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform mosquito control applications, or by persons under their direct supervision.

IN CALIFORNIA: This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel, or persons under contract to these entities only.

4.0 APPLICATION DIRECTIONS

VectoPrime® FG Biological Larvicide is an insecticide for use against mosquito larvae.

Mosquito Habitats	Application Rate Range*
(Such as the following examples):	
Irrigation ditches, roadside ditches, flood water, standing ponds, livestock watering ponds and troughs, woodland pools, snow melt pools, pastures, catch basins, storm water retention areas, tidal water, salt marshes and rice fields	1.25 - 20.0 lbs/acre*

In addition, standing water containing mosquito larvae, in fields growing crops such as (but not limited to) alfalfa, almonds, asparagus, corn, cotton, dates, grapes, peaches, sugar cane and walnuts may be treated at the recommended rates.

*** Post-flood Applications**

Use 1.25-4.0 lbs/acre against 1st-4th instar mosquito larvae. Use 4.0-10.0 lbs/acre when water is heavily polluted (e.g. sewage lagoons, animal waste lagoons), algae are abundant, and/or local experience suggests the need for higher rates. Re-treat as needed based on local conditions.

*** Pre-flood Applications**

VectoPrime FG can be applied prior to flooding of mosquito larval habitats. Use 10-20 lbs/acre when up to 7 days pre-flood capacity is needed. Use 20 lbs/acre when a 7-14 day pre-flood application is needed. Retreat as needed. Consult your local Valent BioSciences representative for further advice on pre-flood applications with VectoPrime FG.

CONTINUED

4.0 APPLICATION DIRECTIONS (Cont'd)

Apply uniformly by aerial or ground conventional equipment. Avoiding drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for drift. The applicator and the treatment coordinator are responsible for considering all of these factors when making decisions.

5.0 STORAGE AND DISPOSAL

Do not contaminate potable water, food or feed by storage or disposal.

Pesticide Storage: Store in a cool, dry place.

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration. Do not burn, unless allowed by State and local ordinances. If burned, stay out of smoke.

6.0 NOTICE TO USER

To the extent consistent with applicable law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning use of this product other than as indicated on the label. To the extent consistent with applicable law, user assumes all risks of use, storage or handling not in strict accordance with the accompanying directions.

VectoPrime is a registered trademark of Valent BioSciences Corporation.

VALENT BIOSCIENCES CORPORATION
870 TECHNOLOGY WAY
LIBERTYVILLE, IL 60048 USA
PH: 800-323-9597

 ©Valent BioSciences Corporation, March 2015

SAFETY DATA SHEET

VectoPrime® FG Biological Larvicide Fine Granules

SDS# VBC-0054 Revision 3 ISSUED 01/15/2020

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Product Identifier

MATERIAL NAME: VectoPrime® FG Biological Larvicide Fine Granules
Synonyms: VBC-60394
EPA Reg No.: 73049-501
Code Number: None
List Number: 05725
Chemical Family: Not applicable; microbial product
Substance Registration Number(s)[REACH]: N/A

1.2 Relevant Identified Uses and Uses Advised Against

Identified Uses: Biological mosquito larvicide
Uses Advised Against: It is a violation of Federal law to use this product in a manner inconsistent with its FIFRA pesticide labeling.

1.3 Details of the supplier of the Safety Data Sheet

Supplied By: Valent BioSciences LLC
1910 Innovation Way, Suite 100
Libertyville, Illinois 60048

1.4 EMERGENCY TELEPHONE NUMBERS

Emergency Health or Spill:
Outside the United States: 651-632-6184
Within the United States: 877-315-9819

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Not classified.

2.2 Labeling Elements

Symbol(s)

None required

Signal Word

WARNING

Hazard Statement(s)

None

2.3 Precautionary Statement:

Prevention

Wash hands and face thoroughly after handling.
Avoid breathing dust.

Response

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical attention.

Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

2.4 Other Hazards

None identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Component Name	Percent
None	*Bacillus thuringiensis* subsp. *israelensis*, strain AM65-52	6.07
65733-16-6	S-Methoprene	0.10
Trade Secret	Other ingredients	93.83

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

GENERAL: In all cases of doubt, seek medical attention.

EYES: Remove from source of exposure. Flush with copious amounts of water. Remove contact lenses, if present and easy to do, after the first 5 minutes, then continue rinsing. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

SKIN: Remove from source of exposure. Take off contaminated clothing. Flush with copious amounts of water. If irritation occurs or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

INGESTION: Remove from source of exposure. Move person to fresh air. Do NOT induce vomiting. If signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

INHALATION: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. If person is not breathing, call 911, then give artificial respiration.

4.2 Most important Symptoms and Effects, both Acute and Delayed

Acute

Possible eye irritation

Delayed

No information on significant adverse effects

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically and supportively

5. FIRE FIGHTING PROCEDURES

5.1 Extinguisher Media

Suitable Extinguisher Media

Dry chemical, water spray, foam or carbon dioxide. Use appropriate medium for the underlying cause of the fire.

Unsuitable Extinguisher Media

None known

5.2 Specific Hazards Arising from the Chemical

Thermal decomposition products

Carbon oxides, nitrogen oxides

5.3 Advice to Firefighters

Protective Equipment and precautions for firefighters

Fire fighter should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling combustion products. See Section 8 (Exposure Controls / Personal Protection)

Fire & Explosive hazard

Not expected to be flammable.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Wear a dust/mist filtering respirator, eye protection and impervious gloves.

6.2 Environmental Precautions

Dispose of excess product and washwaters according to local regulations.

6.3 Methods and Materials for Containment and Cleaning Up

Wear appropriate personal protective equipment. Sweep up material and place in appropriate container for disposal. Avoid generating dust. Do not flush to sewer.

6.4 Reference to Other Sections

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

US Regulations may require reporting spills of hazardous materials: See Section 15: REGULATORY INFORMATION for details on reportable quantities, if any.

7. HANDLING AND STORAGE

7.1 Precautions for Safe handling

Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Do not eat, drink or smoke while working with product, obey reasonable safety precautions and practice good housekeeping.

7.2 Conditions for Safe Storage, Including Incompatibilities

Store in a cool, dry place

Incompatibilities

None Known

7.3 Specific End Use(s)

Mosquito larvicide

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Component Exposure Limits

None

Derived No Effect Levels (DNELs)

No DNELs available

Predicted No Effect Concentrations (PNECs)

No PNECs available

8.2 Exposure Controls

Appropriate Engineering Controls

Provide general ventilation.

SKIN PROTECTION:

Wear protective clothing, including boots and gloves. Wash thoroughly with soap and water after handling.

EYE PROTECTION:

Wear goggles, safety glasses with side shields or full-face shield when splashing or spraying of materials is likely.

RESPIRATORY PROTECTION:

Use dust/mist filtering respirator (MSHA/NIOSH approved number prefix TC-21C or a NIOSH approved respirator with any N, P, R or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown granular	Odor:	Very little odor
pH:	5.0 (1% w/v)	Boiling Point:	Not Determined
Melting Point:	Not Applicable	Solubility (H_2O):	Not Determined
Specific Gravity:	Not Determined	Bulk Density:	Not Determined
Octanol/H_2O Coeff:	Not Determined	Evaporation Rate:	Not Determined
Molecular Weight:	Not Applicable	Decomposition Temp.:	Not Determined
Auto Ignition:	Not Determined	LFL:	Not Determined
Flash Point:	Not Determined	UFL:	Not Determined
Vapor Density:	Not Determined	Vapor Pressure:	Not Applicable
VOC:	Not Determined	Flammability Class:	Not Determined
Kinematic Viscosity:	Not Determined		

10. CHEMICAL STABILITY AND REACTIVITY

10.1 Reactivity

Material does not pose a significant reactivity hazard.

10.2 Chemical Stability

Stable under ordinary conditions of use and storage. Spontaneous reaction not possible.

10.3 Possibility of Hazardous Reactions

Does not undergo hazardous polymerization

10.4 Conditions to Avoid

None known

10.5 Incompatible Materials
None known

10.6 Hazardous Decomposition Products
Carbon oxides and unidentified organic compounds.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

LIKELY ROUTES OF EXPOSURE
Eye Contact: Yes
Skin Contact: Yes
Inhalation: No
Ingestion: No

ACUTE EFFECTS Product Toxicology Studies
ORAL TOXICITY: LD_{50} > 5,000 mg/kg (rat)
DERMAL TOXICITY: LD_{50} > 5,050 mg/kg (rabbit)
INHALATION TOXICITY: LC_{50} > Unable to generate sufficient respirable particles
CORROSIVENESS: Not corrosive.
DERMAL IRRITATION: Not irritating, (Category IV)
OCULAR IRRITATION: Minimally irritating, (Category IV)
DERMAL SENSITIZATION: Not a sensitizer (guinea pig)

MUTAGENICITY INFORMATION: Components of this product are not listed as mutagens.
CARCINOGENICITY INFORMATION: Components of this product are not listed as carcinogenic by NTP, IARC or OSHA.
DEVELOPMENTAL/REPRODUCTIVE TOXICITY: This material is not pathogenic
SPECIAL TARGET ORGAN EFFECTS: Eye and mucus membrane Irritation.
ASPIRATION HAZARD: Not Applicable
REPEAT DOSE STUDIES: Not Applicable, Pathogenicity Toxicity testing was all negative

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity (Data for a Concentrated Bti Technical Powder)
Fish: LC_{50} >300 mg/L (96-H, Rainbow Trout)
Bird: LC_{50} >3077 mg /kg (6.2 x 1011 cfu/kg) (Acute Oral - Bobwhite Quail)
LC_{50} >3077 mg /kg (6.2 x 1011 cfu/kg) each day for 5 days (Sub-Acute Oral (dietary) - Bobwhite Quail)
Invertebrates: EC_{50} >50 mg/L (48-H) (Daphnia)

(Data for a Concentrated S-Methoprene Technical Powder)

Fish: LC_{50} >4.26 mg/L (96-H, Zebra Fish); NOEC: 1.25 mg/L
Algae: EC_{50} >2.264 mg/L (48-H)
Invertebrates: EC_{50} >0.22 mg/L (48-H) (Daphnia)

12.2 Persistence and Degradability

No data available

12.3 Bioaccumulation potential

No data available

12.4 Mobility in Soil

No data available

12.5 Results of PBT and vPvB assessment

Assessments not performed

12.6 Other adverse effects

None known

13. DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Methods

Dispose of product in accordance with federal, state, provincial, and local regulations. Prevent contamination of environment by wastes.

US EPA WASTE NUMBER & DESCRIPTIONS:
There is no applicable EPA waste number. This product, if discarded, is not expected to be a characteristic or listed hazardous waste.

14. TRANSPORTATION INFORMATION

DOT STATUS: Not regulated for domestic ground transport by US DOT
UN PROPER SHIPPING NAME: N/A
REMARKS: N/A

IATA/ICA0 STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A

IMDG STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
REMARKS: N/A

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations / Specific Legislation

TSCA STATUS: Exempt
CERCLA STATUS: Not regulated as hazardous
SARA STATUS: Acute: No Chronic: No Fire: No CDT: No
RCRA STATUS: Not regulated as hazardous
State Right-To-Know: Not Listed
Consult applicable national, state provincial or local laws to determine regulations, laws or ordinances which may be applicable.
OSHA HAZARD COMMUNICATION STANDARD: Not defined by the OSHA Hazard Communication Standard, 29 CFR

15.2 EPA Pesticide Regulations

EPA Registration Number 73049-501
EPA Pesticide Label signal word: CAUTION
Product must have EPA Approved Pesticide Label attached to or accompanying all containers.

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions and limitations for its use.

PRECAUTIONARY STATEMENTS
HAZARD TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Mixers/loaders and applicators not in enclosed cabs or aircraft must wear a dust/mist respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

ENVIRONMENTAL HAZARDS

Do not contaminate water when cleaning equipment or disposing of equipment washwaters.
Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform mosquito control applications, or by persons under their direct supervision.

IN CALIFORNIA: This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel, or persons under contract to these entities only.

STORAGE AND DISPOSAL

Do not contaminate potable water, food, or feed by storage or disposal.

Storage: Store in cool, dry place.

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Container Disposal: Nonrefillable container. Do not reuse or refill this container.

Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

16. OTHER INFORMATION

NFPA Hazard Ratings		HMIS Hazard Ratings	
Health:	0	Health:	0
Flammability:	0	Flammability:	0
Instability:	0	Instability:	0

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Extreme

REASON FOR ISSUE: Address Change
APPROVAL DATE: 01/15/2020
SUPERSEDES DATE: 03/23/2018

LEGEND: N/A = Not Applicable
N/D = Not Determined
N/L = Not Listed
L = Listed
C = Ceiling
S = Short-term

(R) = Registered Trademark of Valent BioSciences LLC
(TM) = Registered Trademark of Valent BioSciences LLC

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, to the extent consistent with applicable law, Valent BioSciences LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, to the extent consistent with applicable law, neither Valent BioSciences LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. Except to the extent a particular use and particular information are expressly stated on the product label, it is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent BioSciences LLC to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use an EPA-registered pesticide product in any manner inconsistent with its labeling.

© Valent BioSciences LLC, 2020

ANVIL® 2+2 ULV

Contains an Oil Soluble Synergized Synthetic Pyrethroid for Control of Adult Mosquitoes (Including Organophosphate-Resistant Species) Midges, and Black Flies in Outdoor Residential and Recreational Areas.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

ACTIVE INGREDIENTS:	
3-Phenoxybenzyl-(1RS, 3RS; 1RS, 3SR)-2,2-dimethyl-3-(2-methylprop-1-enyl) cyclopropanecarboxylate	2.00%
*Piperonyl Butoxide	2.00%
**OTHER INGREDIENTS	96.00%
	100.00%

Contains 0.14 lbs. Technical SUMITHRIN®/Gallon and 0.14 lbs. Piperonyl Butoxide/Gallon

* (butylcarbityl)(6-propylpiperonyl) ether and related compounds

**Contains a petroleum distillate

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente

FIRST AID	
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or a doctor. • Do not give **any** liquid to the person. • Do not give anything by mouth to an unconscious person.
NOTE TO PHYSICIAN	
Contains petroleum distillate - Vomiting may cause aspiration pneumonia.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information regarding medical emergencies or pesticide incidents, call 1-888-740-8712.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if absorbed through the skin. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are: barrier laminate or Viton. Mixers, loaders, applicators, and other handlers must wear long-sleeve shirt, long pants, shoes and socks. In addition, all handlers except for applicators using motorized ground equipment, pilots, and flaggers, must wear chemical-resistant gloves. See engineering controls for additional requirements.

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. User should remove clothing/PPE immediately if pesticide gets inside, then wash thoroughly and put on clean clothing. User should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material beyond the body of water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or wash waters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply to or allow drift onto blooming crops or weeds when bees are visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS:

IN CALIFORNIA: This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel only.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

Do not treat a site with more than 0.0036 pounds of Sumithrin® or piperonyl butoxide per acre in a twenty-four hour period. Do not exceed 0.1 pounds of Sumithrin® or piperonyl butoxide per acre in any site in one year. More frequent applications may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

NOTE: When rotating products with other insecticides containing PBO, do not exceed 2 lbs PBO per acre per year.

Not for use in outdoor residential misting systems.

USE INFORMATION:

USE AREAS: For use in mosquito adulticiding programs involving outdoor residential and recreational areas where adult mosquitoes are present in annoying numbers in vegetation surrounding parks, woodlands, swamps, marshes, overgrown areas and golf courses. ANVIL 2+2 ULV may be applied over agricultural areas for the control of adult mosquitoes within or adjacent to these areas.

For best results, apply when mosquitoes are most active and weather conditions are conducive to keeping the fog close to the ground. Application in calm air conditions is to be avoided. Apply only when ground wind speed is greater than 1 mph. Air temperature should be greater than 50 °F when conducting all types of applications.

NOTE: ANVIL 2+2 ULV cannot be diluted in water. Dilute this product with light mineral oil if dilution is preferred.

SPRAY DROPLET SIZE DETERMINATION

Ground Equipment: Spray equipment must be adjusted so that the volume median diameter (VMD) is less than 30 microns (Dv 0.5 < 30 um) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 um). Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Equipment: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 um) and that 90% of the spray is contained in droplets smaller than 80 microns (Dv 0.9 < 80 um). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

GROUND ULV APPLICATION

Apply ANVIL 2+2 ULV through a standard ULV cold aerosol or non-thermal aerosol (cold fog) generator. Consult the following table for examples of various dosage rates using a swath width of 300 feet for acreage calculations. Vary flow rate according to vegetation density and mosquito population. Use higher flow rate in heavy vegetation or when pest populations are high.

ANVIL 2+2 ULV may also be applied undiluted with non-thermal, portable, motorized backpack equipment adjusted to deliver ULV particles of less than 100 microns VMD. Use 1.081 to 3.245 fl. oz. of the undiluted spray per acre (equal to 0.0012 to 0.0036 lb. a.i./acre) as a 50 ft. (15.2 m) swath while walking at a speed of 2 mph (3.2 kph). Do not use hand held equipment for this type of application in enclosed spaces.

Dosage Rate (Lbs. Sumithrin® / acre)	Fl.oz. ANVIL 2+2 ULV per Acre	Flow Rates in fluid oz./minute at truck speeds of:			
		5 MPH	10 MPH	15 MPH	20 MPH
0.0036	3.245	9.8	19.7	29.5	39.3
0.0024	2.163	6.6	13.1	19.7	26.2
0.0012	1.081	3.3	6.6	9.8	13.1

ANVIL 2+2 ULV may be applied through truck mounted thermal fogging equipment. Do not exceed the maximum rates listed above. May be applied at speeds of 5 to 20 mph. To reduce oil requirement and sludge buildup in equipment, use 100-second viscosity mineral "fog" oil. For use with hand-carried foggers, use same rates of active ingredient per acre. Do not wet foliage since oil base formulations may be phytotoxic. Use a clean, well-maintained and properly calibrated fogger. Fog downwind. Do not use hand held equipment for this type of application in enclosed spaces.

AERIAL APPLICATION

ANVIL 2+2 ULV may be applied at rates of 1.081 to 3.245 fluid ounces ANVIL 2+2 ULV per acre by fixed wing or rotary aircraft equipped with suitable ULV application equipment.

RELEASE HEIGHT FOR AERIAL: Fixed Wing: Apply using a nozzle height of no less than 100 feet above the ground or canopy. Rotary Wing: Apply using a nozzle height of no less than 75 feet above the ground or canopy.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

PESTICIDE STORAGE: Store in a cool, dry place. Keep container closed.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with mineral oil and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

CONTAINER DISPOSAL: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

NOTICE: To the extent provided by law, Seller makes no warranty, expressed or implied, concerning the use of this product other than as indicated on the label. Buyer assumes all risk of use and/or handling of this material when use and/or handling is contrary to label instructions.

ANVIL™ is a Trademark of Clarke Mosquito Control Products, Inc.
Sumithrin ® is a Trademark of Sumitomo Company, Ltd.

Manufactured For:
CLARKE MOSQUITO CONTROL PRODUCTS, INC.
159 N. GARDEN AVENUE
ROSELLE, ILLINOIS 60172 U.S.A
FOR MORE INFORMATION CALL: 1-800-323-5727

EPA Reg. No.: 1021-1687-8329

EPA Est. No: _____

NET CONTENTS: [ ] 2.5 GAL [ ] 30 GAL [ ] 55 GAL [ ] 275 GAL

LOT No.: _____

AL0397

SECTION 1. Identification of the Substance/Mixture and of the Company

Product Identifier

Formulation Identifier: ANVIL® 2 + 2 ULV
EPA Registration Number: 1021-1687-8329

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant identified uses: Insecticide for control of adult mosquitoes.
Uses advised against: See product label for use restrictions

Details of the Supplier

Clarke Mosquito Control Products, Inc.
675 Sidwell Court
St. Charles, IL 60174 U.S.A.
+1 (630) 894-2000
Email: Clarke@clarke.com

Emergency Telephone Number

24 Hour MEDICAL Emergency: SafetyCall®: (888) 740-8712 or (952) 852-9509
24 Hour TRANSPORTATION Emergency: CHEMTREC®: (800)-424-9300
International: (703) 527-3887

SECTION 2. Hazards identification

United States (US)
According to OSHA 29 CFR 1910.1200 HCS (2012)

Classification of the Substance or Mixture

Acute Toxicity (Inhalation): Category 4
Aspiration Toxicity: Category 1

Pictogram:



Signal Word: DANGER

Hazard Statements: Harmful if inhaled
May be fatal if swallowed and enters airways.

Precautionary Statements:

PREVENTION: Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in well-ventilated area

RESPONSE: IF SWALLOWED: IMMEDIATELY call a poison center/doctor. Do NOT induce vomiting.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a poison center/doctor if you feel unwell.

STORAGE: Store locked up.

DISPOSAL: Dispose of contents/container in accordance with local/regional/national regulations.

Other Hazards Not Classifiable Under OSHA 2012 HCS - Not applicable

SECTION 3. Composition/Information on Ingredients

Components

Substance Name	CAS No.	Concentration % w/w
SUMITHRIN® (d-Phenothrin)	26002-80-2	2.0
Piperonyl Butoxide (PBO)	51-03-6	2.0
Petroleum distillates, hydrotreated light	64742-47-8	25 – 40 *
White mineral oil	8042-47-5	60 – 75 *

* The exact percentage (concentration) of composition has been withheld as trade secret.
Ingredients not identified are non-hazardous and/or are not required to be disclosed pursuant to 29 CFR 1910.1200 (2012), and are withheld as trade secret.

SECTION 4. First Aid Measures

Description of First Aid Measures

General advice: If symptoms develop or persist, or for treatment advice, call a poison control center or doctor.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes then continue rinsing.

If on skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

If swallowed: IMMEDIATELY call a poison control center or doctor for treatment advice. DO NOT give any liquid to the person. Do NOT induce vomiting unless told to do so by a poison control center or doctor. Never give anything by mouth to an unconscious person.

If inhaled: Remove affected person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration; if by mouth-to-mouth use rescuer protection (pocket mask, etc.). Call a poison control center or doctor if you feel unwell.

Most Important Symptoms and Effects, both Acute and Delayed
The most important known symptoms and effects are described in section 2 and/or in section 11.

Indication of Immediate Medical Attention and Special Treatment

Treatment: Contains petroleum distillate- vomiting may cause aspiration pneumonia.

For skin effects, a highly efficient therapeutic agent for Pyrethrin/Pyrethroid exposure is topical application of Tocopherol Acetate (Vitamin E).

SECTION 5. Fire-Fighting Measures

Extinguishing Media

Suitable Extinguishing Media: Water Fog, Carbon Dioxide (CO_2), Dry Chemical, foam

Unsuitable Extinguishing Media: Do not use water jet.

Special Hazards Arising From the Substance or Mixture

Specific Hazards: No information available.

Explosion data:
Sensitivity to Mechanical Impact: None
Sensitivity to static discharge: None

Special Protective Equipment and Precautions for Fire-Fighters

Protection against fire: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Special Procedures: Treat as oil fire. Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dike for later disposal. Use extinguishing agents

appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

SECTION 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

General Precautions: Use appropriate protection (see section 8). Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment as required.

Environmental Precautions: Prevent product from entering into drains and waterways. Collect and dispose of this material and its container in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities.

Methods and Material for Containment and Cleaning Up

Methods for containment: Prevent further leakage of spillage if safe to do so. Move containers from spill area.

Small spill: Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Large Spill: Prevent entry into sewers, water courses, basements or confined areas. Dam up and soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7. Handling and Storage

Precautions for Safe Handling

Advice on safe handling: Use with local exhaust ventilation. Use personal protective equipment as required. Avoid breathing mist/vapors/spray.

Handling: Keep out of reach of children. Do not take internally. Avoid contact with skin and eyes.

Hygiene Measures: Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove soiled clothing immediately and clean thoroughly before using again.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store locked up. Store in accordance with local regulations. Protect from excessive heat and cold. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilizers. Keep in properly labeled containers.

SECTION 8. Exposure Controls / Personal Protection

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

Control Parameters

Component Name	CAS No.	List	Type	Value
Petroleum Distillates	64742-47-8	ACGIH	TLV/TWA (skin exposure)	200 mg/m³
Mineral Oil	8042-47-5	OSHA & ACGIH	PEL / TLV, TWA (oil mist)	5 mg/m³

Exposure controls

Engineering Controls: Use with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Wash hands thoroughly after handling. Wash clothing before re-using.

Individual Protection Measures, such as Personal Protection Equipment:

Eye Protection: Safety Glasses, Goggles or Face Shield

Skin Protection: Wear suitable protective gloves and clothing including long-sleeve shirt, long pants, shoes and socks.

Hand Protection:	It is good industrial hygiene practice to minimize skin contact. If required or preferred, use suitable protective chemical resistant gloves such as latex, nitrile, or neoprene.
Respiratory Protection:	None required. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

SECTION 9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Appearance:	Clear, Liquid
Color:	Colorless (1.0 Gardner Scale)
Odor:	Solvent, mineral oil
Odor Threshold:	No information available
pH:	No information available, immiscible in water
Melting Point:	No information available
Freezing Point:	No information available
Initial Boiling Point:	No information available
Flash Point:	>93.3°C (>200°F), Tag Closed Cup
Evaporation Rate:	No information available
Flammability:	No information available
Explosion limits [U/L]:	No information available
Vapor Pressure:	No information available
Vapor Density (Air =1):	Heavier than air
Density:	7.10 lbs./gal
Specific Gravity (Water = 1)	0.850 @ 20°C
Solubility:	Immiscible in water
Partition Coefficient:	No information available
Auto-Ignition Temperature:	No information available
Dynamic Viscosity:	15.5 cPs @ 24.0°C (Brookfield)
Decomposition Temperature:	No information available
Explosive Properties:	No information available
Oxidizing Properties:	No information available
VOC Content (%):	< 1.0

SECTION 10. Stability and Reactivity

Reactivity
No data available

Chemical Stability
Stable under recommended normal storage conditions

Possibility of Hazardous Reactions

Hazardous Reactions:	None under normal conditions
Hazardous Polymerization:	Hazardous polymerization does not occur

Conditions to avoid Extremes of temperature and direct sunlight

Incompatible materials Not compatible with strong acids and bases. Not compatible with oxidizing agents.

Hazardous decomposition products
Carbon monoxide (CO), Carbon dioxide (CO_2)

SECTION 11. Toxicological information

Information on Likely Routes of Exposure
Routes of entry: Oral, Dermal and Inhalation
May be fatal if swallowed and enters airways due to petroleum distillate. Vomiting may cause aspiration pneumonia.

Information on Toxicological Effects

Acute Toxicity / Effects
Assessment of acute toxicity: Slightly toxic after ingestion. Relatively non-toxic after short-term inhalation. Moderately toxic after short term skin contact.

Oral, (Rat) LD_{50}	> 5,000 mg/kg
Dermal, (Rabbit) LD_{50}	> 2,000 mg/kg
Inhalation, Rat LC_{50}	> 3.76 mg/l (4 hours)
Skin Corrosion/Irritation:	Irritation cleared in 72 hours, skin irritation index 0.04
Serious Eye Damage/Irritation:	Minor irritation clearing in 48 hours
Skin Sensitization:	Not a sensitizer (Buehler, Guinea Pig)
Conditions aggravated by exposure:	None known

Chronic Toxicity / Effects
Assessment of repeated dose toxicity: No significant signs or symptoms indicative of any adverse health effects are expected to occur.

Germ Cell Mutagenicity	This product has not been tested. The statement has been derived from the properties of the individual components. No data is available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not carcinogenic. This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. Marginally higher incidences of benign liver tumors in mice were observed following lifetime high dose exposures to PBO. The significance of these observations is undetermined and under review. The doses at which tumors were observed for PBO greatly exceeded potential exposure from labeled uses.
Reproductive Effects:	This product has not been tested. The statement has been derived from the properties of the individual components. No data is available to indicate product or any components present at greater than 0.1% produce a fertility impairing effect. No indication of a developmental toxic / teratogenic effect.
STOT – Single exposure	Not classified
STOT – Repeated exposure	Not classified

SECTION 12. Ecological Information

Ecotoxicity:

Product specific data is not available. Data referenced is in relation to active ingredients, d-Phenothrin and PBO

Toxicity to Fish:	d-Phenothrin 96-hr Acute LC_{50} 16.7 µg/L (rainbow trout), 15.8 µg/L (bluegill sunfish) PBO: 96-hour Acute LC_{50} 6/12 ppm (rainbow trout)
Toxicity to Aquatic Invertebrates:	d-Phenothrin 48-hr LC_{50} 4.4 µg/L *Daphnia magna* d-Phenothrin 48-hr LC_{50} 0.025 µg/L *Mysidopsis bahia* PBO: 96-hr LC_{50} 0.49 ppm, *Americamysis bahia*
Toxicity to Plants:	No data available

Persistence and Degradability
Product specific data not available. Data referenced is in relation to the active ingredients, d-Phenothrin and PBO

Biodegradability: Not readily biodegradable (by OECD criteria)

Bioconcentration Factor:	d-Phenothrin: 592 (edible), 4,000 (non-edible) PBO: 2, 175
Log Kow:	d-Phenothrin: 6 PBO: 4.95
Depuration:	d-Phenothrin, PBO: 2-4 days
Mobility in Soil:	d-Phenothrin has low water solubility and binds tightly to soil. Based on these properties, d-phenothrin is relatively immobile in soil and its potential to contaminate groundwater is low. PBO is not very soluble in water and adheres moderately to soil with organic matter.

SECTION 13. Disposal Considerations

Waste Treatment and Disposal methods

Pesticide wastes are regulated. Consult product label for chemical substance and container disposal instructions. Avoid release to the environment. Improper disposal of excess product or rinsate is a violation of Federal law. If these wastes cannot be disposed or by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA regional office for guidance.

Container disposal: Rinse thoroughly in accordance with label instructions.

SECTION 14. Transport Information

DOT (US)

In Non-Bulk quantities (i.e. less than or equal to 119 Gallons / 450 Liters): Not regulated

In Bulk quantities (more than 119 Gallons/ 450 Liters):

UN Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (d-PHENOTHRIN)
Hazard Class: 9
Packing Group: III
Marine Pollutant: Yes

IMDG (Vessel)

UN Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (d-PHENOTHRIN)
Hazard Class: 9
Packing Group: III
Marine Pollutant: Yes

ICAO/IATA (Air transport)
UN Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (d-PHENOTHRIN)
Hazard Class: 9
Packing Group: III
Marine Pollutant: Yes

SECTION 15. Regulatory Information

FIFRA Information: This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal word: CAUTION
KEEP OUT OF REACH OF CHILDEN

PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS: Caution. Harmful if absorbed through the skin. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE): Some materials that are chemical-resistant to this product are: barrier laminate or Viton. Mixers, loaders, applicators, and other handlers must wear long-sleeve shirt, long pants, shoes and socks. In addition, all handlers except for applicators using motorized ground equipment, pilots, and flaggers, must wear chemical-resistant gloves. See engineering controls for additional requirements.

User safety requirements: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

Engineering controls: Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

FIRST AID

If on skin or clothing:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If swallowed:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or a doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
Note to physician:	Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information regarding medical emergencies or pesticide incidents call 1-888-740-8712.

Other Federal regulations

SARA TITLE III CLASSIFICATION

Section 302: None

Section 311/312: Immediate (acute) health hazard

Section 313: This product contains the following chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

CAS Number	Chemical Name	% by wt.
26002-80-2	d-phenothrin	2.0
51-03-6	piperonyl butoxide	2.0

CERCLA RQ: None

US California Proposition 65: Not listed

STATE RIGHT-TO-KNOW: National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws.

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16. Other Information

DISCLAIMER OF LIABILITY: The information in this SDS was obtained from sources we believe to be reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared as is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

NFPA Health Hazards 2
Flammability 1
Instability 0
Physical and Chemical Properties –

HMIS Health Hazards 1
Flammability 1
Physical Hazards 0
Personal Protection X

® ANVIL is a Registered Trademark of Clarke Mosquito Control Products, Inc.

End of document

Zenivex® E4 RTU

ETOFENPROX	GROUP 3A	INSECTICIDE

For use only by federal, state, tribal, or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

- **FOR THE CONTROL OF ADULT MOSQUITOES, NON-BITING MIDGES, NUISANCE AND BITING FLIES, AND BLACK FLIES**
- **FOR USE AS A SPACE SPRAY BY AIR AND GROUND APPLICATION TO CONTROL ADULT MOSQUITOES**
- **APPROVED FOR USE OVER AGRICULTURAL CROPS (INCLUDING THOSE INTENDED FOR HUMAN CONSUMPTION), PASTURE AND RANGELAND**
- **READY TO USE WITHOUT DILUTION**
- **CONTROLS ADULT MOSQUITOES THAT MAY CARRY WEST NILE VIRUS, EASTERN EQUINE ENCEPHALITIS, ST. LOUIS ENCEPHALITIS**
- **QUICK, PERMANENT KNOCKDOWN OF ADULT MOSQUITOES**

ACTIVE INGREDIENT:

Etofenprox (CAS #80844-07-1)	4%
OTHER INGREDIENTS*	96%
Total	100%

Contains 0.30 lbs Etofenprox per gallon

*Contains petroleum distillates

EPA Reg. No. 2724-807 EPA Est. No. 2724-TX-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional precautionary statements

SPECIMEN LABEL

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS - CAUTION

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Applicators and other handlers must wear long-sleeved shirt, long pants, socks and shoes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and launder before reuse. Repeated exposure to etofenprox can cause skin irritation.

FIRST AID
If swallowed • Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
If in eyes • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.
Note to Physician: May pose an aspiration pneumonia hazard. Contains petroleum distillate.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition into bodies of water may be hazardous to fish and other aquatic organisms. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Time applications to provide the maximum possible interval between treatment and the next period of bee activity. Do not apply to blooming crops or weeds when bees are foraging the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

PHYSICAL/CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

ENDANGERED AND THREATENED SPECIES PROTECTION REQUIREMENTS

Before using this product, you must obtain any applicable Endangered Species protection Bulletins ("Bulletins") within 6 months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live ! Two (BLT) at https://www.epa.gov/pesticides-bulletins. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

REPORTING ECOLOGICAL INCIDENTS

For guidance on reporting ecological incidents, including death, injury, or harm to plants and animals, including bees and other non-target insects, see EPA's Pesticide Incident Reporting website: https://www.epa.gov/pesticide-incidents or call 1-800-248-7763.

READ AND FOLLOW ALL LABEL DIRECTIONS. Before making the first application of the season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

RESISTANCE-MANAGEMENT

For resistance management, **Zenivex® E4 RTU** contains a Group 3A insecticide. Any insect population may contain individuals naturally resistant to **Zenivex® E4 RTU** and other Group 3A insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly. Appropriate resistance-management strategies should be followed. To delay insecticide resistance, take the following steps:

- Rotate the use of **Zenivex® E4 RTU** or other Group 3A insecticides with different groups that control the same pests.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, record keeping and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance, contact Wellmark International at 1-800-248-7763.

GENERAL

For outdoor use only, **Zenivex® E4 RTU** is an effective insecticide used at low volumes to control adult mosquitoes, non-biting midges, biting and non-biting flies. Use **Zenivex® E4 RTU** undiluted as UltraLow Volume (ULV) for the control of pest species in or near residential, industrial, commercial, urban, recreational areas, woodlands, golf courses, and other areas where these pests are a problem. **Zenivex® E4 RTU**may be applied over agricultural areas prior to or following harvest for the control of adult mosquitoes within or adjacent to these areas. Apply **Zenivex® E4 RTU** [aerially (both fixed and rotary aircraft)] for low volume applications [or] through mist-blowers, backpack, and handheld sprayers for ground applications. Removable chemical extraction probes (also known as "stingers") used in suction/extraction systems must be rinsed within the pesticide container prior to removal.

Zenivex® E4 RTU will control flies and mosquitoes and can be used as part of a total integrated pest management program for controlling disease vectors. Apply **Zenivex® E4 RTU** at rates from 0.00175 to 0.0070 pounds of etofenprox per acre by ground ULV. Use this product undiluted only; do not mix with water. Apply when wind is 2: 1 m.p.h. Do not apply when wind speeds exceed 10 mph. A temperature inversion is preferable to keep the fog close to the ground and applications should be made when labeled insects are most active.

Do not spray more than 0.18 lbs etofenprox per acre per site per year. Do not make more than 25 applications per site per year. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

MANDATORY SPRAY DRIFT MANAGEMENT

For Ultra-Low Volume Applications

- Apply when ground wind speeds are equal to or greater than 1 mph.
- All types of applications should be conducted when temperatures at ground level are at or above 50° F.

For Ground Applications

- Create an optimum swath when possible. An optimum swath width can be achieved when **Zenivex® E4 RTU** is applied from a truck that is being driven perpendicular to the wind direction. Direct the spray head of equipment to ensure even distribution of the spray cloud throughout the area.
- FOR BEST RESULTS, treat when mosquitoes or insects are most active and weather conditions are conducive to keep the spray cloud in the air column close to the ground.

- An inversion of air temperatures and a light breeze is preferable. Application during the cooler hours of the night or early morning is recommended.

Apply when ground wind speeds are equal to or greater than 1 mph.

For Aerial Applications

- Do not apply by fixed wing aircraft at a nozzle height less than 100 feet (30.5 m) above ground or canopy, or by helicopter at a height less than 75 feet (22.9 m) above the ground or canopy, unless specifically approved by the state or tribe based on public health needs.

For Ultra-Low Volume Applications

- Apply when ground wind speeds are equal to or greater than 1 mph.
- All types of applications should be conducted when temperatures at ground level are at or above 50° F.

Adult mosquito control applications should be limited to trained personnel.

- For use only by federal, state, tribal or local government officials responsible for public health or vector control or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their supervision, or as allowed by state regulations for persons treating private property.
- This pesticide is highly toxic to aquatic organisms. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to aquatic organisms.
- Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish farm ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied materials beyond the body of water to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.
- Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.
- Do not treat a site with more than 0.007 lb of each ai per acre in a single application or in any 24-hour period. Do not exceed 0.18 lb of ai in any site in one year. More frequent applications may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

SPRAY DRIFT ADVISORIES

Handheld Technology Applications:

- Take precautions to minimize spray drift.

GROUND APPLICATION

Use a vehicle-mounted cold aerosol ULV sprayer to apply the product. Direct the spray equipment nozzle to provide even distribution of the product. For best results, apply perpendicular to the wind direction using a swath width of 300 ft. Spray equipment must be adjusted so that the volume median diameter (VMD) is between 10-30 microns ($10\mu \leq D_{v0.5} \leq 30\mu$) and that 90% of the spray is contained in droplets smaller than 50 microns ($D_{v0.9} < 50\mu$). Directions from the equipment manufacturer or vendor, pesticide registrant, or test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

The appropriate application rate can be achieved by using the following table. Refer to the following chart for examples.

Application rate pound A.I. per acre	Flow Rates Undiluted		Vehicle Speed
	Oz/Acre	Oz/Minute	
0.00175	0.75	2.25	5
		4.50	10
		7.00	15
0.00350	1.5	4.50	5
		9.00	10
		13.50	15
0.00700	3.0	9.00	5
		18.00	10

Use the higher label rates when spraying areas where dense vegetation is present. Conduct applications when temperatures are between 50-95° F.

Backpack Sprayer ULV Application:

Apply **Zenivex® E4 RTU** undiluted through non-thermal ULV backpack sprayer capable of applying the product in the 10 to 30 micron range. Apply product to the area as evenly as possible. Apply at the rate of 0.00175 to 0.0070 pounds etofenprox per acre.

Urban ULV Mosquito Control Applications: For control of resting or flying adult mosquitoes, biting flies and non-biting midges in areas such as utility tunnels, sewers, storm drains and catch basins, pipe chases, underground basements, underground passages, parking decks, crawl spaces or uninhabited buildings, apply **Zenivex® E4 RTU** using mechanical foggers, hand-held or truck-mounted ULV equipment, thermal foggers or other spray equipment suitable for this application. Apply **Zenivex® E4 RTU** at rates up to but not exceeding 0.007 pounds of etofenprox per acre.

THERMAL FOGGING APPLICATION

Apply using a truck, dolly mounted, handheld, or other thermal fogging equipment. Following the equipment manufacturer's instructions, apply this product at a rate of 0.00175 to

0.0070 pounds etofenprox per acre. Direct fog to areas where mosquitoes and other pests are located. The volume median diameter (VMD) of droplets produced by thermal foggers is less than 60 microns ($D_{v0.5}$ < 60μ) and 90% of the spray is contained in droplets smaller than 100 microns ($D_{v0.9}$ < 100μ).

AERIAL APPLICATION

Apply **Zenivex® E4 RTU** aerially, undiluted, by fixed wing or rotary aircraft. Apply at the rate of 0.00175 to 0.0070 pounds of etofenprox per acre. Apply using ULV equipped and capable aircraft. Spray equipment must be adjusted so that the volume median diameter (VMD) produced is less than 60 microns ($D_{v0.5}$ < 60μ) and that 90% of the spray is contained in droplets smaller than 100 microns ($D_{v0.9}$ < 100μ). The effects of flight speed and, for non- rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated. Do not apply **Zenivex® E4 RTU** at altitudes below 100 feet. Apply at altitudes from 100-300 feet. Apply when wind speed on the ground is ≥1 mph. Apply when labeled insects are most active. For best results, use Global Positioning System (GPS) equipped aircraft.

APPLICATIONS OVER CROPS OR TO AREAS FAVORING DRIFT OVER CROPS

Zenivex® E4 RTU may be applied over crops (including row, tree, fruit, citrus, pasture and other areas where agricultural enterprises take place) or to areas, where drift over cropland could occur. **Zenivex® E4 RTU** can be applied to these areas by either ground or aerial application. Use label rates and follow directions for use as directed in this label. Applications over crops or where drift may occur over crops are limited to 4 applications per month to the same site but no more than two applications within a seven day interval. Do not apply more than 0.028 pounds of active ingredient per month to the same site within a month. Do not spray more than 0.18 lbs etofenprox per acre per site per year. Do not make more than 25 applications per site per year.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

PESTICIDE STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Storage and Spill Procedures: Store upright at room temperature, but do not store at temperatures below 75° F. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Disposal: Refillable 30 Gallon Drums and 275 Gallon Tote: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. If not refilled, offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration. To clean the container before final disposal, triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with mineral oil or other suitable oil diluents. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Non-refillable 2.5 gallon containers: Non-refillable container. Do not reuse or refill this container. Triple rinse (or equivalent), promptly after emptying. Triple rinse as follows. Empty the remaining contents into application equipment or mix tank and drain container for 10 seconds after the flow begins to drip. Fill the container ¼ full with mineral oil or other suitable oil diluents and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank. Drain container for 10 seconds after the flow begins to drip.

Repeat this procedure two more times. Once triple rinsed, recycle if available, or puncture and dispose of in a sanitary landfill, or by incineration.

In case of an emergency or for product use information, call 1-800-248-7763.

Manufactured for:
Wellmark International
1501 East Woodfield Road 200W
Schaumburg, Illinois 60173

ZOËCON Professional Products

Zoecon with design and Zenivex are registered trademarks of Wellmark International.
©2009-2025 Wellmark International.

Zenivex E4 RTU

Safety Data Sheet

Issue date: 06/17/2015 Revision date: 11/18/2021 Supersedes: 06/15/2017 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Trade name : Zenivex E4 RTU

Synonyms : 100503070, 100503072, 100503073, 100511618, EPA Reg. No.: 2724-807, RF2146 RTU

1.2. Recommended use and restrictions on use

Recommended use : Insecticide.

Restrictions on use : Avoid contact with skin and eyes. Keep out of reach of children. Avoid inhalation of vapors or fumes. Do NOT take internally. Do not use or store near heat or open flame.

1.3. Supplier

Wellmark International
1501 E. Woodfield Road, Suite 200W
Schaumburg, IL 60173 - United States
www.zenivex.com

1.4. Emergency telephone number

Emergency number : 1-800-248-7763
1-800-424-9300 - CHEMTREC
1-703-527-3887 - CHEMTREC - Outside North America - Collect Calls Accepted

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Aspiration hazard Category 1 May be fatal if swallowed and enters airways

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



GHS08

Signal word (GHS US) : Danger

Hazard statements (GHS US) : May be fatal if swallowed and enters airways

Precautionary statements (GHS US) : If swallowed: Immediately call a poison center or doctor.
Do NOT induce vomiting.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : This pesticide is toxic to aquatic organisms, including fish and invertebrates. This product is toxic to bees exposed to direct treatment on blooming crops or weeds. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product Identifier	%
Etofenprox	(CAS-No.) 80844-07-1	4
Mineral oil, petroleum distillates, hydrotreated light, heavy paraffinic	(CAS-No.) 64742-54-7, 64742-55-8, 8042-47-5	≥ 64.1
Non-hazardous and/or does not meet criteria for classification	(CAS-No.) N/A	Balance

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice and attention.

First-aid measures after ingestion : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after ingestion : Aspiration Hazard - may be fatal if swallowed and enters airways.

4.3. Immediate medical attention and special treatment, if necessary

Contains petroleum distillate vomiting may cause aspiration pneumonia. Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Avoid heavy hose streams.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Do not allow fire fighting water to escape into waterways or sewers. Evacuate area. Stay upwind. Ventilate closed spaces before entering. Do not breathe gas/fumes/vapor/spray.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: Exposure controls/personal protection.

Emergency procedures : Do NOT wash away into sewer. Avoid release to the environment. Do not scatter spilled material with high pressure water streams. Evacuate unnecessary personnel. Stay upwind. Stop leak if safe to do so. Ventilate area. Wear appropriate personal protective equipment, avoid direct contact. Static accumulator. This material can accumulate static charge and can be ignited by static discharge. Take precautionary measures against static discharges.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Absorb spills with an inert material, clay granules or other inert absorbent material and put in container for disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in original container. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid extreme temperatures. Keep container tightly closed. Store locked up. Avoid direct sunlight. Store at room temperature. Store in a well-ventilated place.

Incompatible materials : Strong acids. Strong bases. Strong oxidizers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Mineral oil, petroleum distillates, hydrotreated light, heavy paraffinic (64742-54-7, 64742-55-8, 8042-47-5)		
ACGIH	ACGIH OEL TWA	5 mg/m³ Form: mist/aerosols
ACGIH	ACGIH OEL STEL	10 mg/m³ Form: mist/aerosols

8.2. Appropriate engineering controls

Appropriate engineering controls : Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear protective gloves

Eye protection:

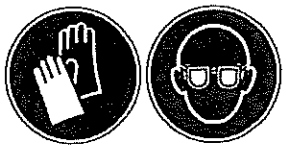
Safety glasses. Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, use NIOSH approved respiratory protection.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : Clear to pale yellow liquid

Color : Clear to pale yellow

Odor : Mild

Odor threshold : No data available

pH : No data available

Melting point : Not applicable

Freezing point : No data available

Boiling point : No data available

Flash point : 103 °C (217 °F)

Relative evaporation rate (butyl acetate=1) : No data available

Flammability (solid, gas) : Not applicable

Vapor pressure : No data available

Relative vapor density at 20 °C	:	No data available
Relative density	:	0.89 @ 20°C / 7.4 lb./gal
Solubility	:	Insoluble
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	< 100 cP @ 20°C (68 °F)
Explosion limits	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerization will not occur.

10.4. Conditions to avoid

Avoid temperatures below 75 °F. Heat, sparks, open flame and ignition sources. Avoid extreme heat.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Etofenprox (80844-07-1)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat	> 5.88 mg/l/4h

GHS-US Properties	Classification
Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity (single exposure)	Not classified
Specific target organ toxicity (repeated exposure)	Not classified
Aspiration hazard	May be fatal if swallowed and enters airways.

Potential health effects

Inhalation

Acute : Under normal conditions of use, no health effects are expected.

Skin

Acute : Under normal conditions of use, no health effects are expected.

Chronic : Repeated exposure to etofenprox can cause skin irritation.

Eye

Acute : May cause mild eye irritation.

Ingestion

Acute : Aspiration Hazard - may be fatal if swallowed and enters airways.

Mutagenicity : Etofenprox has been found negative for mutagenicity potential using the Ames test, chromosomal aberration and micronucleus test methods.

Carcinogenicity : Etofenprox is not classified as carcinogen by NTP, IARC and OSHA.

Reproductive Effects : Etofenprox did not produce teratogenic or reproductive effects in laboratory experiments.

SECTION 12: Ecological information

12.1. Toxicity

Etofenprox (80844-07-1)	
LC50 Acute fish 1	0.0027 mg/l (Exposure time: 96hr Oncorhynchus mykiss)
LC50 Acute fish 2	> 0.0165 (Exposure time: 96h - Sheepshead minnow)
LC50 Acute crustacea 1	0.0000188 mg/l (Exposure time: 96h - Mysid shrimp)
LC50 Acute crustacea 2	0.0008 mg/l (Exposure time: 48h Daphnia)
NOEC Chronic crustacea 1	0.00017 mg/l (Daphnia magna)

12.2. Persistence and degradability

Etofenprox (80844-07-1)	
Persistence and degradability	Etofenprox is not readily biodegradable.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Other adverse effects

Zenivex E4 RTU	
Ecological Fate	This product is toxic to aquatic organisms, including fish and invertebrates. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14: Transport information

	UN number	Proper Shipping Name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	Not regulated	Not regulated	Not regulated	Not regulated	Not applicable
IMDG	UN3082	Packaging greater than 5 L: Environmentally Hazardous substance, Liquid, n.o.s. (Etofenprox)	9	III	Marine pollutant
IATA	UN3082	Packaging greater than 5 L: Environmentally Hazardous substance, Liquid, n.o.s. (Etofenprox)	9	III	Acute aquatic toxicity

SECTION 15: Regulatory information

15.1. US Federal regulations

Mineral oil, petroleum distillates, hydrotreated light, heavy paraffinic (64742-54-7, 64742-55-8, 8042-47-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

EPA Labelling	
EPA Registration Number	2724-807
This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.	
FIFRA Hazard statements	**Caution**
FIFRA Precautionary statements	KEEP OUT OF REACH OF CHILDREN.
FIFRA Hazards to Humans and Domestic Animals	Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Applicators and other handlers must wear long-sleeved shirt, long pants, socks and shoes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove contaminated clothing and launder before reuse. Repeated exposure to etofenprox can cause skin irritation.
FIFRA First aid	If swallowed: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person. If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice. Note to Physician: May pose an aspiration pneumonia hazard. Contains petroleum distillate.
FIFRA Environmental hazards	This pesticide is toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition into bodies of water may be hazardous to fish and other aquatic organisms. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Time applications to provide the maximum possible interval between treatment and the next period of bee activity. Do not apply to blooming crops or weeds when bees are foraging the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.
FIFRA Physical hazards	Combustible. Do not use or store near heat or open flame.

15.2. US State regulations

No additional information available

SECTION 16: Other information

Issue date	: 17 June 2015
Revision date	: 18 November 2021
Supersedes	: 15 June 2017

SDS US (GHS HazCom 2012) - CGP

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.