

Biological Larvicide

VectoBac[®] G

Granules

ACTIVE INGREDIENT

<i>Bacillus thuringiensis</i> , subspecies <i>israelensis</i> , strain AM 65-52, fermentation solids and solubles.....	2.80%
Other Ingredients.....	97.20%
Total.....	100.00%

Potency: 200 International Toxic Units (ITU) per mg
(Equivalent to 0.091 billion potency: ITU per pound)

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

KEEP OUT OF REACH OF CHILDREN

CAUTION

See side panel for First Aid and additional precautionary statements.

EPA Registration No. 73049-10

EPA Est. No. 33762-IA-001

List No. 5108-04-09

Net Contents: 40 Lbs (18.1 Kgs.)
Filled by weight, not volume

APPLICATION DIRECTIONS

VectroBac G is an insecticide for use against mosquito larvae.

Mosquitoes

Habitat

Suggested Range Rate*

(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.

2.5 - 10 lbs/acre

In addition, standing water containing mosquito larvae, in fields growing crops such as alfalfa, almonds, asparagus, corn, cotton, dates, grapes, peaches, sugar cane and walnuts may be treated at the recommended rates.

*Use 10-20 lbs./acre when late 3rd and early 4th instar larvae predominate, mosquito populations are high, water is heavily polluted (sewage lagoons, animal waste lagoons), and/or algae are abundant.

Apply uniformly by aerial or ground conventional equipment.

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.

A 7 to 14 day interval between applications should be employed.

NOTICE TO USER

Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the 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.

23-0334/R6

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.

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.

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.

STORAGE AND DISPOSAL

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

STORAGE: Store in a 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: Completely empty bag into application equipment. Then 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.

VECTOBAC® G

MSDS# BIO-0057 Rev. 1
ISSUED 06-19-03

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL NAME: VectoBac® G
EPA Registration # 73049-10

MANUFACTURER:

Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, Illinois 60048

EMERGENCY TELEPHONE NUMBERS

Emergency Health or Spill:
Outside the United States: 1-651-632-6184
Within the United States: 1-877-315-9819

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME: Bacillus thuringiensis, subsp. israelensis

CONCENTRATION: 2.80%

CAS/RTECS NUMBERS: 68038-71-1 / N/A

OSHA-PEL

8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV

8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER LIMITS

8HR TWA: N/A

STEL: N/A

CEILING: N/A

INGREDIENT NAME: Inert Ingredients - identity withheld as a Trade Secret

CONCENTRATION: 97.20%

CAS/RTECS NUMBERS: N/A / N/A

OSHA-PEL

8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV

8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER LIMITS

8HR TWA: N/A

STEL: N/A

CEILING: N/A

EEC (European Community): N/A

Symbol Designation: N/A

Risk Phrases: N/A

Safety Phrases: N/A

3. HAZARDS INFORMATION

EMERGENCY OVERVIEW: Product is non-toxic by ingestion, skin contact, or inhalation. Direct contact with eyes or skin may cause mild irritation.

ROUTE(S) OF ENTRY:

Skin: No

Inhalation: No

Ingestion: No

SKIN CONTACT: Non-irritant

SKIN SENSITIZATION: N/D

EYE CONTACT: Non-irritant

TARGET ORGANS: N/D

CARCINOGENICITY RATING:

NTP: N/L

IARC: N/L

OSHA: N/L

ACGIH: N/L

None

SIGNS AND SYMPTOMS: Direct contact with eyes or skin may cause mild irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: N/D.

4. FIRST AID MEASURES

EYES: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or

signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

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

INGESTION: Remove from source of exposure. 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.

5. FIRE FIGHTING PROCEDURES

FLASH POINT: N/A

FLASH POINT METHOD: N/D

LOWER EXPLOSIVE LIMIT(%): N/D

UPPER EXPLOSIVE LIMIT(%): N/D

AUTOIGNITION TEMPERATURE: N/D

FIRE & EXPLOSION HAZARDS: Non-flammable and no explosive properties.

EXTINGUISHING MEDIA: Use appropriate medium for underlying cause of fire.

FIRE FIGHTING INSTRUCTIONS: Wear protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR RELEASE PROCEDURES: Recover product. Place into appropriate container for disposal. Avoid dust. Ventilate and wash spill area.

7. HANDLING AND STORAGE

HANDLING: N/D.

STORAGE: Store in a cool, dry place.

SPECIAL PRECAUTIONS: N/A

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local exhaust.

RESPIRATORY PROTECTION: Not usually required. However, 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.

SKIN PROTECTION: Impervious gloves, clothing to minimize skin contact.

EYE PROTECTION: Not usually required. If necessary, use safety glasses or goggles.

OTHER PROTECTION: Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Granular solid.

ODOR: Mild

BOILING POINT: N/A

MELTING/FREEZING POINT: N/A

VAPOR PRESSURE (mm Hg): N/A

VAPOR DENSITY (Air=1): N/A

EVAPORATION RATE: N/D

BULK DENSITY: 27 ± 4 lb/cu.ft.

SPECIFIC GRAVITY: N/D

SOLUBILITY: N/A

pH: 5.4 ± 1.0 (10% slurry)

VISCOSITY: N/A

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

INCOMPATIBILITIES: Alkalinity inactivates product.

HAZARDOUS DECOMPOSITION PRODUCTS: N/D.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

ORAL LD50: LD50 (rat) > 5,000 mg/kg

DERMAL LD50: LD50 (rabbit) > 5,000 mg/kg

INHALATION LC50: N/D. No lethality was observed in rats after a 4 hour exposure at the highest obtainable inhalation exposure chamber concentration (2.84 mg/l) to VectoBac® Technical Powder.

CORROSIVENESS: N/D. Not expected to have any corrosive properties.

DERMAL IRRITATION: N/D. Transient, slight or mild irritation noted in a dermal toxicity study with VectoBac® Technical Powder.

OCULAR IRRITATION: N/D. VectoBac® Technical Powder was mildly irritating in an eye irritation test in rabbits.

DERMAL SENSITIZATION: N/D

SPECIAL TARGET ORGAN EFFECTS: N/D

CARCINOGENICITY INFORMATION: N/D. None of the components are classified as carcinogens.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: N/D

13. DISPOSAL CONSIDERATIONS

Do not contaminate potable water, food or feed by storage or disposal. Dispose of product in accordance with federal, state, and local regulations.

WASTE DISPOSAL METHODS:

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

Container Disposal: Completely empty bag into application equipment. Then 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.

14. TRANSPORTATION INFORMATION

DOT

STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

IATA/ICAO

STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

IMO

STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

FLASH POINT: N/A

15. REGULATORY INFORMATION

TSCA STATUS: Exempt

CERCLA STATUS: N/D

SARA STATUS: N/D

RCRA STATUS: N/D

PROP 65 (CA): N/D

16. OTHER INFORMATION

REASON FOR ISSUE: Updated Hazard Information (Section 3) and Toxicological Information (Section 11).

APPROVAL DATE: 06/19/03

SUPERSEDES DATE: 06/12/01

LEGEND:

N/A = Not Applicable

N/D = Not Determined

N/L = Not Listed

L = Listed

C = Ceiling

S = Short-term

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June 2003

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Biological Larvicide

VectoBac® 12AS

Aqueous Suspension

Active Ingredient:

<i>Bacillus thuringiensis</i> , subsp. <i>israelensis</i> , 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. 5605

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KEEP OUT OF REACH OF CHILDREN

CAUTION

1.0	FIRST AID	
	If in eyes	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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: Triple rinse (or equivalent). Then 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.

5.0 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.

CONTINUED

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.

6.0 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
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*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.

7.0 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.

8.0 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.

9.0 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.

CONTINUED

9.1 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.

10.0 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

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.

VALENT BIOSCIENCES.
CORPORATION

870 TECHNOLOGY WAY
LIBERTYVILLE, IL 60048 - 800-323-9597

04-4403/R5 © Valent BioSciences Corporation January, 2004

VectoBac® 12AS
MSDS# BIO-0031 Rev. 2

ISSUED 12/16/03

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL NAME: VectoBac® 12AS Biological Larvicide

EPA REG. NO.: 73049-38
List Number: 5605
Code Number: 15576, 15577, 21894

MANUFACTURER: Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, Illinois 60048

EMERGENCY TELEPHONE NUMBERS

Emergency Health or Spill:

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

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME: Bacillus thuringiensis, subsp. israelensis

CONCENTRATION: 11.61 %

CAS NUMBER: 68038-71-1

OSHA-PEL 8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV 8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER 8HR TWA: N/A

LIMITS STEL: N/A

CEILING: N/A

INGREDIENT NAME: Inert Ingredients - identity withheld as a Trade
Secret

CONCENTRATION: 88.39 %

CAS NUMBER: N/A

OSHA-PEL 8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV 8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER 8HR TWA: N/A

LIMITS STEL: N/A

CEILING: N/A

VectoBac® 12AS

MSDS# BIO-0031 Rev. 2

ISSUED 12/16/03

3. HAZARDS INFORMATION

EMERGENCY OVERVIEW: Product is non-toxic by ingestion, skin contact, or inhalation. May be irritating to skin and eyes, and may be a skin sensitizer.

ROUTE(S) OF ENTRY: Skin: No
 Inhalation: No
 Ingestion: No

SKIN CONTACT: Mild irritant

SKIN SENSITIZATION: Possible mild sensitizer

EYE CONTACT: Mild irritant

TARGET ORGANS: N/D

CARCINOGENICITY RATING: NTP: N/L IARC: N/L OSHA: N/L ACGIH: N/L
None

SIGNS AND SYMPTOMS: Direct contact with eyes or skin may cause mild irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: N/D

4. FIRST AID MEASURES

EYES: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

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

INGESTION: Remove from source of exposure. 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.

VectoBac® 12AS

MSDS# BIO-0031 Rev. 2

ISSUED 12/16/03

5. FIRE FIGHTING PROCEDURES

FLASH POINT: N/A (Aqueous suspension)

FLASH POINT METHOD: N/A

LOWER EXPLOSIVE LIMIT(%): N/A

UPPER EXPLOSIVE LIMIT(%): N/A

AUTOIGNITION TEMPERATURE: N/A

FIRE & EXPLOSION HAZARDS: Non-flammable and no explosive properties.

EXTINGUISHING MEDIA: Use appropriate media for underlying cause of fire.

FIRE FIGHTING INSTRUCTIONS: Wear protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR RELEASE PROCEDURES: Recover product and place in appropriate container for disposal. Ventilate and wash area.

7. HANDLING AND STORAGE

HANDLING: N/D.

STORAGE: Store in a cool (59-86° F or 15-30° C), dry place.

SPECIAL PRECAUTIONS: Wash thoroughly with soap and water after handling. Keep impervious gloves on until all potentially contaminated personal protective equipment is removed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local exhaust.

RESPIRATORY PROTECTION: Not usually required. If necessary (Mixers/loaders and applicators not in enclosed cabs or aircraft), use a MSHA/NIOSH approved (or equivalent) respirator with a dust/mist filter (N-95, R-95, or P95).

SKIN PROTECTION: Impervious, waterproof gloves and clothing to minimize skin contact.

EYE PROTECTION: Not usually required. If necessary, use safety glasses or goggles.

OTHER PROTECTION: Wash thoroughly with soap and water after handling.

VectoBac® 12AS

MSDS# BIO-0031 Rev. 2

ISSUED 12/16/03

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Light brown aqueous suspension.
ODOR: Typical fermentation (malt) odor.
BOILING POINT: Approx. 100° C
MELTING/FREEZING POINT: Approx. 0° C
VAPOR PRESSURE (mm Hg): N/D
VAPOR DENSITY (Air=1): N/D
EVAPORATION RATE: N/D
BULK DENSITY: 1.06-1.1 g/mL
SPECIFIC GRAVITY: N/D
SOLUBILITY: Disperses well in water
pH: 4.6-5.0
VISCOSITY: 250-1000 cps at 25 C

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

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

HAZARDOUS DECOMPOSITION PRODUCTS: N/D.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

ORAL LD50: > 5,000 mg/kg (rat)

DERMAL LD50: > 5,000 mg/kg (rabbit)

INHALATION LC50: > 5.34 mg/l (rat) No lethality was observed in rats after a 4 hour whole body exposure to this concentration of the product as an undiluted aerosol.

CORROSIVENESS: N/D. Not expected to have any corrosive properties.

DERMAL IRRITATION: Transient, mild to moderate redness was observed at the site of application in a skin irritation test in rabbits.

VectoBac® 12AS

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OCULAR IRRITATION: Transient, redness and conjunctival irritation observed in test animals in a study with this product. No positive ocular effects were observed.

DERMAL SENSITIZATION: Eight of ten animals positive in a dermal sensitization study in guinea pigs. Considered to be a mild sensitizer.

SPECIAL TARGET ORGAN EFFECTS: N/D.

CARCINOGENICITY INFORMATION: N/D. None of the components are classified as carcinogens.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: N/D

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Dispose of product in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

DOT STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

IATA/ICAO STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

IMO STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

FLASH POINT: N/D

VectoBac® 12AS

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15. REGULATORY INFORMATION

TSCA STATUS: Exempt RCRA STATUS: N/D

CERCLA STATUS: N/D PROP 65 (CA): N/D

SARA STATUS: N/D

16. OTHER INFORMATION

REASON FOR ISSUE: Updated Composition Information (Section 2) and
Phys/Chem. Properties (Section 9).

APPROVAL DATE: 12/16/03

SUPERSEDES DATE: 07/03/03

LEGEND: N/A = Not Applicable

N/D = Not Determined

N/L = Not Listed

L = Listed

C = Ceiling

S = Short-term

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870 Technology Way, Suite 100
Libertyville, IL 60048 - 800-323-9597

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Valent BioSciences

VectoLex® WSP

Biological Larvicide

Water Soluble Pouches

ACTIVE INGREDIENT:

Bacillus sphaericus Serotype H5a5b, strain 2362

Technical Powder (670 BsITU/mg) 7.5%

OTHER INGREDIENTS 92.5%

TOTAL 100.0%

Potency: This product contains 50 BsITU/mg or 0.023 Billion BsITU/lb.

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

EPA Reg. No. 73049-20

List No. 05722

EPA Est. No. 33762-1A-001 (Lot No. Suffix 'N8')

EPA Est. No. 33967-NJ-1 (Lot No. Suffix 'Q5')

KEEP OUT OF REACH OF CHILDREN

CAUTION

1.0 FIRST AID	
If in eyes	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

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

2.2 ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of equipment washwaters or rinsate. 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. Once the foil bag containing Water Soluble Pouches is opened, use pouches within one day.

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 may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Dispose of empty outer foil bag in trash.

5.0 APPLICATION DIRECTIONS

MOSQUITO CONTROL

VectoLex WSP is a selective microbial insecticide for use against mosquito larvae in a variety of habitats. VectoLex WSP can be applied to areas that contain fish, other aquatic life, and plants. VectoLex WSP can be applied to areas used by or in contact with humans, pets, horses, livestock, birds or wildlife.

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

Habitat	Rate Range
Drainage/Drainage Systems: Storm drains, catch basins, retention, detention and seepage ponds.	1 pouch/50 sq.ft. ¹

¹Treatment Areas (For Use In):

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Habitat		Rate Range
Ponds	Standing water	Unused swimming pools or spas
Lagoons	Storm water retention areas	Flooded basements
Water gardens	Catch basins	Pool covers
Hollow trees and tree holes	Birdbaths	Gutters and drains
Urns	Fountains	Wheelbarrows
Rain barrels	Flowerpots and planters	Garbage cans and covers
Livestock watering troughs/ponds/tanks	Snowmelt pools	Discarded tires
Irrigation ditches	Abandoned swimming pools	
Roadside ditches		
Flood water		

Any location where water accumulates and remains standing for periods of time, except treated, finished drinking water for human consumption.

¹Treat on basis of surface area of potential mosquito breeding sites by placing one (1) VectoLex Soluble Pouch for up to 50 square feet of treatment area. Re-apply as needed after 1 to 4 weeks.

Longer periods of mosquito population suppression may result where sufficient numbers of non-target aquatic invertebrate parasites and predators are present since these are not affected by the product and contribute to mosquito population reduction.

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

<i>Culex</i> spp.	
<i>Aedes vexans</i>	
<i>Ochlerotatus melanion</i>	(<i>Aedes melanion</i>)
<i>Ochlerotatus stimulans</i>	(<i>Aedes stimulans</i>)
<i>Ochlerotatus nigromaculis</i>	(<i>Aedes nigromaculis</i>)
<i>Psorophora columbiae</i>	
<i>Psorophora ferox</i>	
<i>Ochlerotatus triseriatus</i>	(<i>Aedes triseriatus</i>)
<i>Ochlerotatus sollicitans</i>	(<i>Aedes sollicitans</i>)
<i>Anopheles quadrimaculatus</i>	
<i>Coquillettidia perturbans</i>	

6.0 NOTICE TO USER

Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the 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.

VALENT BIOSCIENCES® CORPORATION

870 TECHNOLOGY WAY

LIBERTYVILLE, IL 60048—800-323-9597

04-5070/R3

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VID 7.14.05

VectoLex WSP

ISSUED 04-10-01

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**MATERIAL NAME:** VectoLex WSP

VectoLex CG

VectoLex G

EPA Registration No. 73049-20

Drug Code: 16025

List Number: 5722

MANUFACTURER: Valent BioSciences Corporation

870 Technology Way, Suite 100

Libertyville, Illinois 60048

EMERGENCY TELEPHONE NUMBERS**Emergency Health or Spill:**

Outside the United States: 1-651-632-6184

Within the United States: 1-877-315-9819

2. COMPOSITION/INFORMATION ON INGREDIENTS**INGREDIENT NAME:** Bacillus sphaericus Serotype H-5a5b, strain 2362**CONCENTRATION:** 7.5000 %**CAS/RTECS NUMBERS:** N/A / N/A**OSHA-PEL**

8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV

8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER LIMITS

8HR TWA: N/A

STEL: N/A

CEILING: N/A

INGREDIENT NAME: Inert Ingredients - identity withheld as a Trade Secret**CONCENTRATION:** 92.5000 %**CAS/RTECS NUMBERS:** N/A / N/A**OSHA-PEL**

8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV

8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER LIMITS

8HR TWA: N/A

STEL: N/A

CEILING: N/A

EEC (European Community): N/A**Symbol Designation:** N/A**Risk Phrases:** N/A**Safety Phrases:** N/A**3. HAZARDS INFORMATION****EMERGENCY OVERVIEW:** This material may be a skin and eye irritant.**ROUTE(S) OF ENTRY:**

Skin: N/D

Inhalation: N/D

Ingestion: N/D

INGESTION RATING: N/D**SKIN ABSORPTION RATING:** N/D**INHALATION RATING:** N/D**CORROSIVENESS RATING:** N/D**SKIN CONTACT RATING:** N/D**SKIN SENSITIZATION RATING:** N/D**EYE CONTACT RATING:** N/D**TARGET ORGANS:** N/D**CARCINOGENICITY RATING:**

NTP: N/L

IARC: N/L

OSHA: N/L

ACGIH: N/L

None

SIGNS AND SYMPTOMS: N/D. Data suggest mild skin or eye irritation.**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** N/D. Data suggest pre-existing skin or eye lesions.**4. FIRST AID MEASURES****EYES:** Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.**SKIN:** Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.**INGESTION:** Remove from source of exposure. 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.**5. FIRE FIGHTING PROCEDURES****FLASH POINT:** N/A**FLASH POINT METHOD:** N/D**LOWER EXPLOSIVE LIMIT(%):** N/D**UPPER EXPLOSIVE LIMIT(%):** N/D**AUTOIGNITION TEMPERATURE:** N/D**FIRE & EXPLOSION HAZARDS:** N/D.**EXTINGUISHING MEDIA:** Use appropriate medium for underlying cause of fire.**FIRE FIGHTING INSTRUCTIONS:** Wear protective clothing and self-contained breathing apparatus.**6. ACCIDENTAL RELEASE MEASURES****SPILL OR RELEASE PROCEDURES:** Recover product. Place into appropriate container for disposal. Avoid dust. Ventilate and wash spill area.**7. HANDLING AND STORAGE****HANDLING:** N/D.**STORAGE:** Store in a cool, dry place.**SPECIAL PRECAUTIONS:** Wash thoroughly with soap and water after handling.**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****ENGINEERING CONTROLS:** Use local exhaust.**RESPIRATORY PROTECTION:** Air purifying respirator with dust/mist filter (N95), if needed.**SKIN PROTECTION:** Impervious.**EYE PROTECTION:** Goggles.**OTHER PROTECTION:** Wear tyvek coveralls during dusty operations.**9. PHYSICAL AND CHEMICAL PROPERTIES****APPEARANCE/PHYSICAL STATE:** Granules**ODOR:** Characteristic odor**BOILING POINT:** N/A**MELTING/FREEZING POINT:** N/A**VAPOR PRESSURE (mm Hg):** N/A**VAPOR DENSITY (Air=1):** N/A**EVAPORATION RATE:** N/D**BULK DENSITY:** N/A**SPECIFIC GRAVITY:** N/D**SOLUBILITY:** Partially suspends/soluble in water**pH:** N/A**VISCOSITY:** N/A**10. STABILITY AND REACTIVITY****CHEMICAL STABILITY:** N/D**INCOMPATIBILITIES:** Alkalinity inactivates product.**HAZARDOUS DECOMPOSITION PRODUCTS:** N/D.**HAZARDOUS POLYMERIZATION:** N/D.**11. TOXICOLOGICAL INFORMATION****ORAL TOXICITY:** N/D. LD50 > 5,000 mg/kg in rats for Bacillus sphaericus Technical Powder.**DERMAL TOXICITY:** N/D. LD50 > 2,000 mg/kg in rabbits for Bacillus sphaericus Technical Powder.**INHALATION TOXICITY:** N/D. Bacillus sphaericus Technical Powder was not lethal in an inhalation study at the maximum attainable concentration of 0.09 mg/L/4 hours.**CORROSIVENESS:** N/D**DERMAL IRRITATION:** Mildly irritating in a skin irritation test in rabbits; two animals with slight redness at 24 hours.**OCULAR IRRITATION:** Mild to moderate redness with mild swelling and slight discharge in an eye irritation test in rabbits.**DERMAL SENSITIZATION:** N/D
SPECIAL TARGET ORGAN EFFECTS: N/D
CARCINOGENICITY INFORMATION: N/D**12. ECOLOGICAL INFORMATION****ECOLOGICAL INFORMATION:** N/D**13. DISPOSAL CONSIDERATIONS****WASTE DISPOSAL METHODS:** Dispose of product in accordance with federal, state, and local regulations.**14. TRANSPORTATION INFORMATION****DOT****STATUS:** Not Regulated**PROPER SHIPPING NAME:** N/D**HAZARD CLASS:** N/D**UN NUMBER:** N/D**PACKING GROUP:** N/D**REPORTABLE QUANTITY:** N/D**IATA/ICAO****STATUS:** Not Regulated**PROPER SHIPPING NAME:** N/D**HAZARD CLASS:** N/D**UN NUMBER:** N/D**PACKING GROUP:** N/D**REPORTABLE QUANTITY:** N/D**IMO****STATUS:** Not Regulated**PROPER SHIPPING NAME:** N/D**HAZARD CLASS:** N/D**UN NUMBER:** N/D**PACKING GROUP:** N/D**REPORTABLE QUANTITY:** N/D**FLASH POINT:** N/A**15. REGULATORY INFORMATION****TSCA STATUS:** Exempt**CERCLA STATUS:** N/D**SARA STATUS:** N/D**RCRA STATUS:** N/D**PROP 65 (CA):** N/D**16. OTHER INFORMATION****LEGEND:**

N/A = Not Applicable

N/D = Not Determined

N/L = Not Listed

L = Listed

C = Ceiling

S = Short-term

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APPROVED BY: DCS

April 2001

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VectoLex® WDG

Biological Larvicide

ACTIVE INGREDIENT:

Bacillus sphaericus Serotype H5a5b, Strain

2362 dried concentrate 51.2% w/w

INERT INGREDIENTS 48.8% w/w

TOTAL 100.0% w/w

Potency: This product contains 650 BsIU/mg or 0.299 Billion BsIU/lb.

EPA Reg. No. 73049-57

EPA Est. No. 33762-IA-001

List No. 60201

INDEX:

- 1.0 Statement of Practical Treatment
- 2.0 Precautionary Statements
 - 2.1 Hazard to Humans (and Domestic Animals)
 - 2.2 Environmental Hazards
- 3.0 Directions for Use
 - 3.1 Chemigation
- 4.0 Storage and Disposal
- 5.0 Application Directions
- 6.0 Ground and Aerial Application
- 7.0 Notice to User

KEEP OUT OF REACH OF CHILDREN

CAUTION

For **MEDICAL** and **TRANSPORT** Emergencies

ONLY Call 24 Hours A Day 1-877-315-9819. For All Other Information Call 1-800-323-9597.

1.0 STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Flush with plenty of water. Call a physician if irritation persists.

2.0 PRECAUTIONARY STATEMENTS

2.1 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. As a general precaution when exposed to potentially high concentrations of living microbial products such as this, all 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.

2.2 ENVIRONMENTAL HAZARDS

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

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 or drinking water receptacles.

3.1 Chemigation

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

4.0 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 Disposal: Triple rinse (or equivalent). Then 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.

5.0 APPLICATION DIRECTIONS

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

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

<u>Habitats</u>	<u>Rate Range</u>
Wastewater: Sewage effluent, sewage lagoons, oxidation ponds, septic ditches, animal waste lagoons, impounded wastewater associated with fruit and vegetable processing	0.5-1.5 lbs/acre (8oz-24oz/acre)
Stormwater/Drainage Systems: Storm sewers, catch basins, drainage ditches, retention, detention and seepage ponds	0.5-1.5 lbs/acre (8oz-24oz/acre)
Marine/Coastal Areas: Salt marshes, mangroves, estuaries	0.5-1.5 lbs/acre (8oz-24oz/acre)
Water Bodies: Natural and manmade aquatic sites such as lakes, ponds, rivers, canals and streams	0.5-1.5 lbs/acre (8oz-24oz/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)	0.5-1.5 lbs/acre (8oz-24oz/acre)

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

<u>Habitats</u>	<u>Rate Range</u>
Rice, pastures/hay fields, orchards, citrus groves, irrigated crops	0.5-1.5 lbs/acre (8oz-24oz/acre)

Use higher rates (1 to 1.5 lbs/acre) in areas where extended residual control is necessary, or in habitats having deep water or dense surface cover.

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

*Mosquito species effectively controlled by VectoLex WDG:

<i>Culex</i> spp.	<i>Psorophora columbiae</i>
<i>Aedes vexans</i>	<i>Psorophora ferox</i>
<i>Aedes melanimon</i>	<i>Aedes triseriatus</i>
<i>Aedes stimulans</i>	<i>Aedes sollicitans</i>
<i>Aedes nigromaculis</i>	<i>Anopheles quadrimaculatus</i>
	<i>Coquillettidia perturbans</i>

6.0 GROUND AND AERIAL APPLICATION

VectoLex 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 the VectoLex 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 the VectoLex WDG.** Backpack and compressed air sprayers may be agitated by shaking after adding VectoLex WDG to the water in the sprayer. VectoLex 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 VectoLex WDG than can be used in a 48 hour period. AVOID CONTINUOUS AGITATION OF THE SPRAY MIXTURE DURING SPRAYING. For ground spraying, apply 8-24 oz./acre (227-680 g/acre) of VectoLex WDG in 5-100 gallons of water per acre using hand-pump, airblast, mist blower, or other spray equipment. For aerial application, apply 8-24 oz./acre (227-680 g/acre) of VectoLex WDG through fixed wing or helicopter aircraft equipped with either conventional boom and nozzle systems or rotary atomizers at a convenient dilution rate. For aerial application, apply 0.5-10 gallons/acre of the final spray mixture to provide uniform coverage of the target area. Rinse and flush spray equipment thoroughly following each use.

Amount of VectoLex WDG needed to treat small areas:

<u>Area To Treat</u>	<u>Rate of VectoLex WDG/Acre</u>		
	<u>8 oz.</u>	<u>16 oz.</u>	<u>24 oz.</u>
1/4 Acre	2 oz	4 oz	6 oz
1/2 Acre	4 oz	8 oz	12 oz
10 Acres	5 lb	10 lb	15 lb
20 Acres	10 lb	20 lb	30 lb

7.0 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.

VECTOLEX® WDGMSDS# BIO-0035 Rev. 1
ISSUED 12/23/03**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****MATERIAL NAME:** VectoLex® WDG

EPA Registration No.: 73049-57

Code Number: 82835

List Number: 60201

SYNONYMS: VectoLex® WG**MANUFACTURER:**

Valent BioSciences Corporation

870 Technology Way, Suite 100

Libertyville, Illinois 60048

EMERGENCY TELEPHONE NUMBERS**Emergency Health or Spill:**

Outside the United States: 651-632-6184

Within the United States: 877-315-9819

2. COMPOSITION/INFORMATION ON INGREDIENTS**INGREDIENT NAME:** Bacillus sphaericus**CONCENTRATION:** 51.20%**CAS NUMBER:** N/A**OSHA-PEL**

8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV

8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER LIMITS

8HR TWA: N/A

STEL: N/A

CEILING: N/A

INGREDIENT NAME: Other/Inert Ingredients - identity withheld as a Trade Secret**CONCENTRATION:** 48.80%**CAS NUMBER:** N/A**OSHA-PEL**

8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV

8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER LIMITS

8HR TWA: N/A

STEL: N/A

CEILING: N/A

3. HAZARDS INFORMATION**EMERGENCY OVERVIEW:** Product is non-toxic by ingestion, skin contact, or inhalation. Direct contact with eyes may cause mild irritation.**ROUTE(S) OF ENTRY:**

Skin: No

Inhalation: No

Ingestion: No

SKIN CONTACT: Non-irritant**SKIN SENSITIZATION:** Non-sensitizer**EYE CONTACT:** Non-irritant**TARGET ORGANS:** N/D**CARCINOGENICITY RATING:**

NTP: N/L

IARC: N/L

OSHA: N/L

ACGIH: N/L

None

SIGNS AND SYMPTOMS: Direct contact with eyes may cause mild irritation.**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** N/D**4. FIRST AID MEASURES****EYES:** Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.**SKIN:** Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.**INGESTION:** Remove from source of exposure. 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.**5. FIRE FIGHTING PROCEDURES****FLASH POINT:** N/A**FLASH POINT METHOD:** N/A**LOWER EXPLOSIVE LIMIT(%):** N/A**UPPER EXPLOSIVE LIMIT(%):** N/A**AUTOIGNITION TEMPERATURE:** N/A**FIRE & EXPLOSION HAZARDS:** Non-flammable and no explosive properties.**EXTINGUISHING MEDIA:** Use appropriate medium for the underlying cause of the fire.**FIRE FIGHTING INSTRUCTIONS:** Wear protective clothing and self-contained breathing apparatus.**6. ACCIDENTAL RELEASE MEASURES****SPILL OR RELEASE PROCEDURES:** Recover product and place in an appropriate container for disposal. Avoid breathing dust. Ventilate and wash the spill area.**7. HANDLING AND STORAGE****HANDLING:** N/D**STORAGE:** Store product in closed container in a cool and dry place.**SPECIAL PRECAUTIONS:** N/D**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****ENGINEERING CONTROLS:** Use local exhaust.**RESPIRATORY PROTECTION:** Not usually required. If necessary, use a MSHA/NIOSH approved (or equivalent) respirator with a dust/mist filter. 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.**SKIN PROTECTION:** Impervious gloves, clothing to minimize skin contact.**EYE PROTECTION:** Not usually required. If necessary, use safety glasses or goggles.**OTHER PROTECTION:** Wash thoroughly with soap and water after handling.**9. PHYSICAL AND CHEMICAL PROPERTIES****APPEARANCE/PHYSICAL STATE:** Fine brown granules**ODOR:** Faint organic/malt/musty odor**BOILING POINT:** N/A**MELTING/FREEZING POINT:** N/A**VAPOR PRESSURE (mm Hg):** N/A**VAPOR DENSITY (Air=1):** N/A**EVAPORATION RATE:** N/A**BULK DENSITY:** 0.4 ± 0.1 g/mL**SPECIFIC GRAVITY:** N/D**SOLUBILITY:** Suspends readily in water.**pH:** 4.5-6.5 as an aqueous solution.**VISCOSITY:** N/A**10. STABILITY AND REACTIVITY****CHEMICAL STABILITY:** Stable. No oxidizing or reducing properties.**INCOMPATIBILITIES:** Alkalinity inactivates product.**HAZARDOUS DECOMPOSITION PRODUCTS:** None that are known.**HAZARDOUS POLYMERIZATION:** Will not occur.**11. TOXICOLOGICAL INFORMATION****Acute Toxicity****ORAL LD50:** LD50 (rat) > 5,050 mg/kg**DERMAL LD50:** LD50 (rabbit) > 5,050 mg/kg**INHALATION LC50:** No lethality was observed in rats after a 4 hour exposure at the highest obtainable inhalation exposure chamber concentration.**CORROSIVENESS:** N/D. Not expected to have any corrosive properties.**DERMAL IRRITATION:** Transient, slight or mild irritation noted in a dermal toxicity study with this product.
OCULAR IRRITATION: Transient, redness and conjunctival irritation observed in test animals in a study with this product. No positive ocular effects were observed. Classified as a mild irritant.**DERMAL SENSITIZATION:** In a study with this product, no skin sensitization was observed.**SPECIAL TARGET ORGAN EFFECTS:** N/D
CARCINOGENICITY INFORMATION: N/D. None of the components are classified as carcinogens.**12. ECOLOGICAL INFORMATION****ECOLOGICAL INFORMATION:** N/D**13. DISPOSAL CONSIDERATIONS****WASTE DISPOSAL METHODS:** Dispose of product in accordance with federal, state and local regulations.**14. TRANSPORTATION INFORMATION****DOT**

STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

IATA/ICAO

STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

IMO

STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

FLASH POINT: N/D

15. REGULATORY INFORMATION**TSCA STATUS:** Exempt**CERCLA STATUS:** N/D**SARA STATUS:** N/D**RCRA STATUS:** N/D**PROP 65 (CA):** N/D**16. OTHER INFORMATION****REASON FOR ISSUE:** Updated Hazard Information (Section 3) and Toxicological Information (Section 11).**APPROVAL DATE:** 12/23/03**SUPERSEDES DATE:** 06/12/01**LEGEND:**

N/A = Not Applicable

N/D = Not Determined

N/L = Not Listed

L = Listed

C = Ceiling

S = Short-term

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VALENT BIOSCIENCES™ CORPORATION

870 Technology Way, Suite 100

Libertyville, IL 60048 - 800-323-9597

December 2003

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VID 3.22.04

VectoMax™ CG

Biological Larvicide

 FOR ORGANIC PRODUCTION

ACTIVE INGREDIENTS:

<i>Bacillus sphaericus</i> Serotype H5a5b, strain 2362 Fermentation Solids, Spores, and Insecticidal Toxins	2.7%
<i>Bacillus thuringiensis</i> Subsp. <i>israelensis</i> Serotype H-14, Strain AM65-52 Fermentation Solids, Spores, and Insecticidal Toxins	4.5%
OTHER INGREDIENTS	92.8%
TOTAL	100.0%

Potency: This product contains 50 BsIU/mg or 0.023 Billion BsIU/lb

Expiration Date: (Two years from date of manufacture)

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

Patent Pending

EPA Reg. No. 73049-429
EPA Est. No. 33762-IA-001

Net Contents: 40 lbs.

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID	
If in Eyes	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or 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.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if inhaled or absorbed through the skin. Causes moderate eye irritation. Prolonged or frequent repeated skin contact may cause allergic reactions in some individuals. Avoid breathing dust. Avoid contact with skin, eyes, or 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.

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.

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.

STORAGE AND DISPOSAL

Do not contaminate 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 DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. 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.

DIRECTIONS FOR USE

APPLICATION DIRECTIONS

MOSQUITO CONTROL

VectoMax™ CG is a selective microbial insecticide for use against mosquito larvae in a variety of habitats. VectoMax CG can be applied to areas that contain fish, other aquatic life, and plants. VectoMax CG can be applied to areas used by or in contact with humans, pets, horses, livestock, birds, or wildlife.

I. For control of mosquito larvae 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*
Storm Waters/Drainage Systems: Drainage ditches, roadside ditches, retention, detention, and seepage ponds.	5-20 lbs/acre*
Marine/Coastal Areas: Tidal water, salt marshes, mangroves, estuaries.	5-20 lbs/acre*
Water Bodies: Natural and manmade aquatic sites such as lakes, ponds, canals, rivers and streams (including river & stream edges), floodplains, swamps, marshes, irrigation ditches, flood water, woodland pools, snow melt pools and livestock watering ponds and troughs.	5-20 lbs/acre*
Waste Tires: Tires stockpiled in dumps, landfills, recycling plants, and other similar sites. 10.5-2 lbs/1000 sq ft	20-80 lbs/acre†

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

Habitat	Rate Range
Rice fields, pastures/hay fields, orchards (including citrus groves, peaches, almonds, dates, walnuts), asparagus fields, corn fields, cotton fields, alfalfa fields, vineyards.	5-20 lbs/acre*

Apply uniformly by aerial or conventional ground equipment. Reapply as needed (after 1-4 weeks under typical environmental conditions).

*Use higher rates (10 to 20 lbs/acre) in areas where 4th instar *Aedes* or *Ochlerotatus* spp. larvae predominate, or very high densities of late instar larvae are present, or under conditions where local experience indicates the need for higher rates to achieve extended residual control.

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.

Warranty and Disclaimer

To the fullest extent permitted by law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the 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.

©2008

LIST NO.:

DATE OF MANUFACTURE:

VALENT BIOSCIENCES
CORPORATION
870 Technology Way, Suite 100
Libertyville, IL 60048

04-5749/R2

MATERIAL SAFETY DATA SHEET

PAGE 1

VECTOMAX® CG, VECTOMAX® G
MSDS# BIO-0451 Rev. 0

ISSUED 05/30/08

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL NAME: VECTOMAX® G, VECTOMAX® CG
EPA Registration Number 73049-429

MANUFACTURER: Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, Illinois 60048

EMERGENCY TELEPHONE NUMBERS

Emergency Health or Spill:

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

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME: Bacillus sphaericus Serotype H5a5b, strain 2362

CONCENTRATION: 2.7%

CAS/RTECS NUMBERS: N/A / N/A

INGREDIENT NAME: Bacillus thuringiensis subsp. israelensis, strain AM65-52

CONCENTRATION: 4.95%

CAS/RTECS NUMBERS: N/A / N/A

OSHA-PEL 8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV 8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER 8HR TWA: N/A

LIMITS STEL: N/A

CEILING: N/A

INGREDIENT NAME: Inert Ingredients - identity withheld as a Trade Secret Information

CONCENTRATION: 92.8%

CAS/RTECS NUMBERS: N/A / N/A

OSHA-PEL 8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV 8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER 8HR TWA: N/A

LIMITS STEL: N/A

MATERIAL SAFETY DATA SHEET

PAGE 2

VECTOMAX® CG, VECTOMAX® G

MSDS# BIO-0451 Rev. 0

ISSUED 05/30/08

CEILING: N/A

VECTOMAX® CG, VECTOMAX® G
MSDS# BIO-0451 Rev. 0

ISSUED 05/30/08

2. COMPOSITION/INFORMATION ON INGREDIENTS, continued

EEC (European Community): N/A
Symbol Designation: N/A
Risk Phrases: N/A
Safety Phrases: N/A

3. HAZARDS INFORMATION

EMERGENCY OVERVIEW: Harmful if absorbed through the skin. Causes moderate eye irritation. Prolonged or frequent repeated skin contact may cause allergic reactions in some individuals.

SKIN CONTACT: Non-irritant

SKIN SENSITIZATION: Repeated exposure to high concentrations may cause allergic sensitizations.

EYE CONTACT: Causes moderate eye irritation.

TARGET ORGANS: N/D

CARCINOGENICITY RATING: NTP: N/L IARC: N/L OSHA: N/L ACGIH: N/L
None

SIGNS AND SYMPTOMS: Direct contact with eyes or skin may cause mild irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: N/D.

VECTOMAX® CG, VECTOMAX® G
MSDS# BIO-0451 Rev. 0

ISSUED 05/30/08

4. FIRST AID MEASURES

EYES: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

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

INGESTION: Remove from source of exposure. 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.

5. FIRE FIGHTING PROCEDURES

FLASH POINT: N/A

FLASH POINT METHOD: N/A

LOWER EXPLOSIVE LIMIT(%): N/D

UPPER EXPLOSIVE LIMIT(%): N/D

AUTOIGNITION TEMPERATURE: N/D

FIRE & EXPLOSION HAZARDS: Non-flammable and no explosive properties.

EXTINGUISHING MEDIA: Use appropriate medium for underlying cause of fire.

FIRE FIGHTING INSTRUCTIONS: Wear protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR RELEASE PROCEDURES: Recover product. Place into appropriate container for disposal. Avoid dust. Ventilate and wash spill area.

VECTOMAX® CG, VECTOMAX® G
MSDS# BIO-0451 Rev. 0

ISSUED 05/30/08

7. HANDLING AND STORAGE

HANDLING: N/D.

STORAGE: Store in a cool, dry place.

SPECIAL PRECAUTIONS: N/A

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local exhaust.

RESPIRATORY PROTECTION: Not usually required. However, 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.

SKIN PROTECTION: Impervious gloves, clothing to minimize skin contact.

EYE PROTECTION: Not usually required. If necessary, use safety glasses or goggles.

OTHER PROTECTION: Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Yellow/brown granular solid

ODOR: None discernible

BOILING POINT: N/A

MELTING/FREEZING POINT: N/A

VAPOR PRESSURE (mm Hg): N/A

VAPOR DENSITY (Air=1): N/A

EVAPORATION RATE: N/A

DENSITY: 32 ± 3 lbs/cu. ft.

SPECIFIC GRAVITY: N/D

SOLUBILITY: Not soluble in water

pH: N/D

VISCOSITY: N/A

VECTOMAX® CG, VECTOMAX® G
MSDS# BIO-0451 Rev. 0

ISSUED 05/30/08

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

INCOMPATIBILITIES: Alkalinity inactivates product.

HAZARDOUS DECOMPOSITION PRODUCTS: N/D.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

ORAL LD50: N/D LD50 (rat) > 5,000 mg/kg for a similar formulation.

DERMAL LD50: N/D LD50 (rabbit) > 5,000 mg/kg for a similar formulation.

INHALATION LC50: N/D.

CORROSIVENESS: N/D. Not expected to have any corrosive properties.

DERMAL IRRITATION: N/D. Transient, slight or mild irritation noted in a dermal toxicity study with a similar formulation.

OCULAR IRRITATION: N/D. A similar formulation was mildly irritating in an eye irritation test in rabbits.

DERMAL SENSITIZATION: N/D

SPECIAL TARGET ORGAN EFFECTS: N/D

CARCINOGENICITY INFORMATION: N/D. None of the components are classified as carcinogens.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: N/D

VECTOMAX® CG, VECTOMAX® G
MSDS# BIO-0451 Rev. 0

ISSUED 05/30/08

13. DISPOSAL CONSIDERATIONS

Do not contaminate potable water, food or feed by storage or disposal.
Dispose of product in accordance with federal, state, and local regulations.

WASTE DISPOSAL METHODS:

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

Container Disposal: Completely empty bag into application equipment. Then 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.

14. TRANSPORTATION INFORMATION

DOT STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
HAZARD CLASS: N/A
UN NUMBER: N/A
PACKING GROUP: N/A
REPORTABLE QUANTITY: N/A

IATA/ICAO STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
HAZARD CLASS: N/A
UN NUMBER: N/A
PACKING GROUP: N/A
REPORTABLE QUANTITY: N/A

IMO STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
HAZARD CLASS: N/A
UN NUMBER: N/A
PACKING GROUP: N/A
REPORTABLE QUANTITY: N/A
FLASH POINT: N/A

VECTOMAX® CG, VECTOMAX® G
MSDS# BIO-0451 Rev. 0

ISSUED 05/30/08

15. REGULATORY INFORMATION

TSCA STATUS: Exempt

RCRA STATUS: N/D

CERCLA STATUS: N/D

PROP 65 (CA): N/D

SARA STATUS: N/D

16. OTHER INFORMATION

REASON FOR ISSUE: New MSDS
APPROVAL DATE: 05/30/08
SUPERSEDES DATE: N/A

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

(TM) = Registered Trademark of Valent BioSciences

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870 Technology Way, Suite 100
Libertyville, IL 60048 - 800-323-9597

May 2008 © Valent BioSciences Corporation

Summit

B.t.i. BRIQUETS™

FLOATING SUSTAINED-RELEASE LARVICIDE FOR LONG-TERM CONTROL OF MOSQUITO AND PSYCHODID FLY LARVAE

BIOLOGICAL CONTROL OF MOSQUITOES & PSYCHODID FLIES

ACTIVE INGREDIENT: *Bacillus thuringiensis* subspecies *israelensis* solids, spores and insecticidal toxins.....10.31%

INERT INGREDIENTS:.....89.69%

7000 *Aedes aegypti* (AA) International Toxic Units (ITU) per milligram primary powder (Dry weight basis)

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

PRECAUTIONARY STATEMENTS

Keep Out Of Reach Of Children

CAUTION

Hazard to Humans: 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 or drinking water receptacles when the water is intended for human consumption.

FIRST AID

If in eyes
minutes.

Hold eye open and rinse slowly and gently for 15-20

first 5 minutes, then continue rinsing eye.

Remove contact lenses, if present, after the
Call poison control center or doctor for

treatment advise.

STORAGE AND DISPOSAL

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

Storage: Tightly close containers of unused briquets/dunks. Store in cool, dry well-ventilated place.

Disposal: Do not reuse empty carton or packaging material. Perforate or crush and discard carton according to local trash disposal regulations.

DIRECTIONS FOR USE

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

Summit *B.t.i.* BRIQUETS/DUNKS are formulated to release effective levels of Bti for a period of 30 days or more under typical environmental conditions. The floating action of the briquets/dunks will ensure that active material is released at the surface as well as gradually settle to the bottom.

These briquets/dunks may be used in all types of mosquito breeding areas. To prevent briquets/dunks from being flushed out of certain treatment sites, they can be anchored using string tied through the hole in the center or staked in place.

Summit *B.t.i.* BRIQUETS/DUNKS can also be used for pre-flood treatment. If the briquets/dunks are applied to dry areas which are known or suspected to become breeding sites when flooded, such as woodland pools and abandoned swimming pools, the briquets will float to the surface when flooding occurs and start releasing the active Bti material. Alternate wetting and drying will not reduce their effectiveness.

APPLICATION RATES

Mosquito Larvae:

Flooded larvae breeding sites: Use one (1) Summit *B.t.i.* BRIQUET/DUNKS for up to 100 sq. ft. of surface area, regardless of depth. In water with a high organic content, such as sewage disposal systems or waste lagoons, the application rate may have to be increased to as much as four (4) times the normal dosage based upon evaluation by the user.

When larval populations are high, aquatic vegetation dense, or the water highly polluted at the time of briquet/dunks use, pre-treatment with SUMMIT MOSQUITO BITS® is recommended. The briquet/dunks will then suppress larval development for up to 30 days or more. Some larvae which hatch after briquet/dunks application may partially develop before dying. Allow a minimum of 48 hours for their control.

Pre-Flood treatment: Apply one (1) Summit *B.t.i.* BRIQUET/DUNKS to each 100 sq. ft. of dry bed surface which is known or suspected breeding site when flooded.

Evaporative Coolers: Apply one (1) Summit *B.t.i.* BRIQUET/DUNKS to each 100 sq. ft. of Cooler box or for smaller Coolers refer to the table below for application rate.

SAFE FOR USE IN FISH HABITATS

**EACH DUNK KILLS MOSQUITOES FOR 30 DAYS OR LONGER
KILLS MOSQUITOES BEFORE THEY ARE OLD ENOUGH TO BITE**

Outdoor Use around the Household to kill Mosquito Larvae: Summit *B.t.i.*

BRIQUETS/DUNKS can be broken into portions for use in many outdoor applications near the household, such as standing water in bird baths, old automobile tires, rain barrels, ponds, abandoned or unused swimming pools (particularly above ground types), ditches, tree holes, roof gutters for collecting rainwater, flower pots, animal watering troughs or any other locations near the household where water collects and remains for periods of time. Summit *B.t.i.* BRIQUETS/DUNKS can be broken and used as shown in the following table, the amount dependent upon the surface area of water in the treatment site.

Surface area of standing water	1 to 5 square ft.	5 to 25 square ft.	25 to 100 square ft.	Above 100 square ft.
Use Quantity	1/4 Briquet /Dunk	1/2 Briquet /Dunks	1 Briquet /Dunks	1 Briquet/Dunks per100 sq. ft.

Preflood treatment around the Household: Apply Summit *B.t.i.* BRIQUETS/DUNKS to any dry surface which is known to become flooded after a rain. Use the correct amount in accordance with the above dosage table.

INDOOR USE: For use in areas that collect water from time to time areas such as elevator shafts, basements that flood, sump pumps and any drainage areas within buildings. Use the correct amount in accordance with the above dosage table.

Psychodid Fly Larvae (Filter Flies, Sewage Flies, Drain Flies):

Waste Water Treatment Plants: Place Summit *B.t.i.* BRIQUETS/DUNKS in a perforated basket, such as a minnow bait basket, and suspend the basket in the waste water stream before the water enters the trickling filter. Keep basket continuously filled with Briquets/Dunks to ensure a steady flow of Bti into the filter. The number of Briquets/Dunks needed for continuous, effective treatment in each facility will be dependent upon the volume and flow rate of the stream. This will have to be determined by the user.

U.S. Pat. No. 4,631,857

Patented in Canada, 1987

**Summit Chemical Co./SUMMIT RESPONSIBLE
SOLUTIONS
Baltimore, MD 21224**

EPA Registration No. 6218-47
EPA Est. No. 6218-MD-2

Net weight: 0.458 oz. per Briquet/Dunks
Or
13 grams per Briquet/Dunks
Contains 20 Briquets/Dunks
Lot. No:

Material Safety Data Sheet

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFIER
Summit B.T.I. Briquets/Mosquito Dunks USEPA Registration# 6218-47

WHMIS CLASSIFICATION
N/L

PRODUCT USE
Biological Mosquito Larvicide
 MANUFACTURERS NAME

SUPPLIER'S NAME

Summit Chemical Company
 STREET ADDRESS

STREET ADDRESS

235 South Kresson Street
 CITY PROVINCE
Baltimore MD
 POSTAL CODE EMERGENCY TELEPHONE
21224 800-424-9300
 DATE MSDS PREPARED MSDS PREPARED BY
10/30/2007 Jonathan S. Cohen

CITY PROVINCE
 POSTAL CODE EMERGENCY TELEPHONE
 PHONE NUMBER

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS (SPECIFIC)	%	CAS NUMBER	LD50 OF INGREDIENT (SPECIFY SPECIES AND ROUTE)	LD50 OF INGREDIENT (SPECIFY SPECIES)
<i>Bacillus thuringiensis</i> subspecies <i>israelensis</i> serotype H-14	10.31		N/D The acute oral toxicity in both male and female rats was >5,000mg/kg B.W. for technical material used to formulate end product; indicates that material is non-toxic in single doses	

SECTION 3 - HAZARDS IDENTIFICATION

ROUTE OF ENTRY
N/L
 EMERGENCY OVERVIEW
N/L
 WHMIS SYMBOLS
N/L
 POTENTIAL HEALTH EFFECTS
NONE

SECTION 4 - FIRST AID MEASURES

SKIN CONTACT	N/A
EYE CONTACT	If in eyes hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call poison control center of doctor for treatment advise.
INHALATION	Remove individual to fresh air. Seek medical if there is difficulty breathing.
INGESTION	N/A

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABILITY:
NON-FLAMABLE
 MEANS OF EXTINCTION
Use appropriate media for cause of fire
 FLASHPOINT (°C) AND METHOD

N/A
 UPPER FLAMMABLE LIMIT (% BY VOLUME)
N/A
 LOWER FLAMMABLE LIMIT (% BY VOLUME)
N/A
 AUTOIGNITION TEMPERATURE (°C)
N/A
 EXPLOSION DATA - SENSITIVITY TO IMPACT
N/A
 EXPLOSION DATA - SENSITIVITY TO STATIC DISCHARGE
N/A
 HAZARDOUS COMBUSTION PRODUCTS
None
 NFPA

NON-FLAMABLE

SECTION 8 - ACCIDENTAL RELEASE MEASURES

LEAK AND SPILL PROCEDURES

If product spills and becomes contaminated by another substance dispose of product according to local regulations.

If product remains uncontaminated by foreign matter, you may use according to label directions.

SECTION 7 - HANDLING AND STORAGE

HANDLING PROCEDURES AND EQUIPMENT

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

STORAGE REQUIREMENTS

Reseal unused portions of product. Store in cool, dry, well-ventilated location.

SECTION 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

EXPOSURE LIMITS:

N/A
ACGIH TLV OSHA PEL OTHER (SPECIFY)
N/L N/L

SPECIFY ENGINEERING CONTROLS (SUCH AS VENTILATION, ENCLOSED PROCESS)

None

PERSONAL PROTECTIVE EQUIPMENT

None

IF CHECKED PLEASE SPECIFY TYPE

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	ODOR AND APPEARANCE	ODOUR THRESHOLD (PPM)
Solid	Beige ring	N/A
SPECIFIC GRAVITY	VAPOUR DENSITY (AIR=1)	VAPOUR PRESSURE (MMHG)
N/A	N/A	N/A
EVAPORATION RATE	BOILING POINT (°C)	FREEZING POINT (°C)
N/A	N/A	N/A
PH	COEFFICIENT OF WATER/OIL DISTRIBUTION	SOLUBILITY IN WATER
N/A	N/A	N/A

SECTION 10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY IF NO UNDER WHAT CONDITIONS

Stable

INCOMPATIBILITY WITH OTHER SUBSTANCES IF YES WHICH ONES

Yes High alkaline liquids

REACTIVITY AND UNDER WHAT CONDITIONS?

None

HAZARDOUS DECOMPOSITION PRODUCTS

None

SECTION 11 - TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

None

EFFECTS OF CHRONIC EXPOSURE

None

IRRITANCY OF PRODUCT

Low

SKIN SENSITIZATION	RESPIRATORY SENSITIZATION
Appropriate skin sensitization studies in guinea pigs have indicated that the product is a non-sensitizing agent	N/D The LC50 in four hour inhalation studies in rats was 25.1 mg/l (actual) of air, the maximum attainable concentration.
CARCINOGENICITY- IARC	CARCINOGENICITY - ACGIH
NL	NL
REPRODUCTIVE TOXICITY	TERATOGENICITY
NL	NL
EMBRYOTOXICITY	MUTAGENICITY
NL	NL
NAME OF SYNERGIST PRODUCTS/EFFECTS	
N/A	

SECTION 12 - ECOLOGICAL INFORMATION

AQUATIC TOXICITY

The product is non-toxic to non-target aquatic organisms

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL

Dispose of product in accordance with Federal, State/Provincial, Local regulations.

SECTION 14 - TRANSPORT INFORMATION

SPECIAL SHIPPING INFORMATION

None

SECTION 15 - REGULATORY INFORMATION

WHMIS CLASSIFICATION OSHA

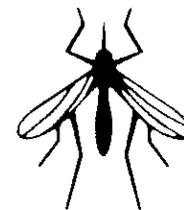
NL NL

SERA TSCA

NL NL

SECTION 16 - OTHER INFORMATION

Altosid[®] PELLETS WSP



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

- IDEAL WHEN TREATING HARD-TO-REACH STORMWATER SITES
- READY-TO-USE WATER SOLUBLE PACKS (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 100.0%

EPA Reg No. 2724-448

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE ADDITIONAL PRECAUTIONARY STATEMENTS

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 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

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*, *Coquillettia*, 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 packets 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*, *Coquillettidia*, *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 single containers or treatment sites of 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 DISPOSAL

Outer Foil Packets of Water Soluble Pouches:
Dispose of empty outer foil bag in the trash.

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.

Always read the label before using this product.

For information call **1-800-248-7763** or visit our web site: **www.altosid.com**



Wellmark International
Schaumburg, Illinois U.S.A.



Zoecon® A Wellmark International Brand
ALTOSID®, ZOECON®, and WELLMARK® are registered
trademarks of Wellmark International.

MATERIAL SAFETY DATA SHEET
ZOECON® ALTOSID PELLETS WSP

Manufacturer: Wellmark International
Address: 1501 E. Woodfield Rd., Suite 200-West, Schaumburg, IL 60173
Emergency Phone: 1-800-248-7763
Transportation Emergency Phone: CHEMTREC: 1-800-424-9300

1. CHEMICAL PRODUCT INFORMATION

Product Name: Zoecon® Altosid Pellets WSP
Chemical Name/Synonym: (S)-Methoprene; Isopropyl (2E,4E,7S)-11-methoxy-3,7,11-trimethyl-2,4-dodecadienoate
Chemical Family: Terpenoid
Formula: C₁₉ H₃₄ O₃
EPA Registration No.: 2724-448
RF Number: 330

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component (chemical, common name)</u>	<u>CAS Number</u>	<u>Weight</u>	<u>Tolerance</u>
(S)- Methoprene: Isopropyl (2E,4E,7S)-11-Methoxy-3,7,11-trimethyl-2,4-dodecadienoate	65733-16-6	4.25%	Not established
Inert ingredients: (nonhazardous and/or trade secret):		95.75%	

3. HAZARD INFORMATION

PRECAUTIONARY STATEMENT
Caution: Keep out of the reach of children.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

No adverse reactions have resulted from normal human exposure during research and testing. Adverse animal reactions to this product have not been shown.

PRIMARY ROUTE OF ENTRY Dermal/Eye: Yes Oral: No Inhalation: Yes

ACUTE TOXICITY

Oral: LD50 (rat): >34,000 mg/kg (HDT) (Based on (S)-Methoprene)
Dermal: LD50 (rabbit): >2,000 mg/kg (HDT) (Based on (S)-Methoprene)
Inhalation: LC50 (rat) >5.19 mg/L air (Based on (S)-Methoprene)

OTHER TOXICOLOGICAL INFORMATION

Skin Irritation: Non-irritating (rabbit) (Based on (S)-Methoprene)
Eye Irritation: Practically non-irritating (rabbit) (Based on (S)-Methoprene)
Sensitizer: Not a sensitizer (guinea pig) (Based on (S)-Methoprene)

4. FIRST AID MEASURES

- Eye:** Hold eye open and flush slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye.
- Skin:** Wash material off with copious amounts of water and soap. Remove contaminated clothing and footwear. See a physician if symptoms persist.
- Ingestion:** Drink 1-2 glasses of water and try to induce vomiting. Seek medical attention. Never give anything by mouth to an unconscious person.
- Inhalation:** Remove victim to fresh air. See a physician if cough or other respiratory symptoms develop

Note to Physician: Treat symptomatically

5. FIRE FIGHTING MEASURES

- NFPA Rating:** **Health:** 0 **Fire:** 0 **Reactivity:** 0
- Flammability Class:** N/A
- Flash Point:** Does not flash
- Explosive Limits (% of Volume):** N/A
- Extinguishing Media:** Water, foam, dry chemical
- Special Protective Equipment:** Firefighters should wear protective clothing, eye protection, and self contained breathing apparatus.
- Fire Fighting Procedures:** Normal procedures. Do not allow run-off to enter waterways inhabited by aquatic organisms
- Combustion Products:** None known
- Unusual Fire/Explosion Hazards:** None

6. ACCIDENTAL RELEASE MEASURES

- Steps to be taken:** Sweep up material and place in a container for disposal. Do not allow spill to enter waterways inhabited by aquatic organisms
- Absorbents:** None necessary due to product form and packaging
- Incompatibles:** None

7. HANDLING AND STORAGE

- Handling:** Avoid contact with eyes or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling.
- Storage:** Store closed containers of Altosid pellets in a cool, dry place. Do not contaminate water, food or feed by storage or by disposal.

8. EXPOSURE CONTROL / PERSONAL MEASURES

- Exposure Limits:** Not applicable
- Ventilation:** Use with adequate ventilation.
- Personal Protective Equipment:** Under ordinary use conditions, no special protection is required. If prolonged exposure is expected, it is recommended to wear a MSHA/NIOSH approved organic vapor/pesticide respirator, impervious gloves, chemical goggles or safety glasses with side shields.

13. DISPOSAL CONSIDERATIONS

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

DOT49CFR Description: Not regulated as hazardous by D.O.T.

Freight Classification: Insecticides, NOI other than poison in boxes or drums. NMFC 102120

15. REGULATORY INFORMATION

CERCLA (Superfund): Not regulated

RCRA: Not regulated as hazardous

SARA 311/312 HAZARD CATEGORIES

Immediate Health: Yes (irritant)

Delayed Health: No

Fire: No

Sudden Pressure: No

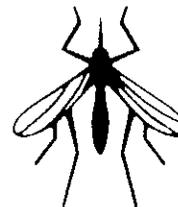
Reactivity: No

The information presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to the best of our knowledge is true and accurate. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations.

25 24 045

Altosid[®] XR

EXTENDED RESIDUAL BRIQUETS



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

SPECIMEN LABEL

ACTIVE INGREDIENTS:

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

EPA Reg No. 2724-421

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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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, 1 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 1 **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 1 **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 1 **ALTOSID XR BRIQUET** per 100 ft².

Culex sp. in storm water drainage areas, sewers, and catch basins: For catch basins, place 1 **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 1 briquet per 100 ft² of surface area up to 2 ft deep. In areas that are deeper than 2 feet, use 1 additional briquet per 2 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: 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.

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 an emergency, call 1-800-248-7763 or visit our Web site: www.altosid.com

Wellmark

Wellmark International
Schaumburg, Illinois U.S.A.

ZOECON
Professional
Products

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Made in USA

October 2005
Schaumburg, IL

MATERIAL SAFETY DATA SHEET
ZOECON ALTOSID® XR EXTENDED RESIDUAL BRIQUETS

Manufacturer: Wellmark International
Address: 1100 East Woodfield Road, Suite 500 Schaumburg, IL 60173
Emergency Phone: 1-800-248-7763
Transportation Emergency Phone: CHEMTREC: 1-800-424-9300

1. CHEMICAL PRODUCT INFORMATION

Product Name: Zoecon Altosid® XR Extended Residual Briquets
Chemical Name/Synonym: (S)-Methoprene; isopropyl (2E,4E,7S)-11-methoxy-3,7,11-trimethyl-2,4-dodecadienoate
Chemical Family: Terpenoid
Formula: C₁₉ H₃₄ O₃
EPA Registration No.: 2724-421
RF Number: 292A

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component (chemical, common name)</u>	<u>CAS Number</u>	<u>Weight</u>	<u>Tolerance</u>
(S)- Methoprene: Isopropyl (2E,4E,7S)-11-methoxy-3,7,11-trimethyl-2,4-dodecadienoate	65733-16-6	2.1%	Not established
Inert ingredients (non-hazardous and/or trade secret)		97.9%	

3. HAZARD INFORMATION

PRECAUTIONARY STATEMENT
Caution: Keep out of the reach of children.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

No adverse reactions have resulted from normal human exposure during research and testing. Adverse animal reactions to this product have not been shown.

PRIMARY ROUTE OF ENTRY Dermal/Eye: Yes Oral: Yes Inhalation: No

ACUTE TOXICITY

Oral: LD50 (rat): >34,000 mg/kg (highest dose level tested)(Based on (S)-Methoprene)

Dermal: LD50 (rabbit): >2,000 mg/kg (Hot) (highest dose level tested) (Based on (S)-Methoprene)

Inhalation: LC50 (rat): Not applicable to this product form

OTHER TOXICOLOGICAL INFORMATION

Skin Irritation: Non-irritating (rabbit) (Based on (S) Methoprene)

Eye Irritation: Mild/moderate irritation, corneal opacity at 1 hour - all animals clear by 72 hours (rabbit) (Based on (S) Methoprene)

Sensitizer: Not a sensitizer (guinea pig) (Based on (S) Methoprene)

4. FIRST AID MEASURES

- Eye:** Hold eye open and flush slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye.
- Skin:** Wash material off with soap and water. Remove contaminated clothing and footwear. See a physician if symptoms persist.
- Ingestion:** Drink 1-2 glasses of water and try to induce vomiting. Seek medical attention. Never give anything by mouth to an unconscious person.
- Inhalation:** Although this is not a primary route of entry, remove victim to fresh air. See a physician if cough or other respiratory symptoms develop
- Note to Physician:** Treat symptomatically

5. FIRE FIGHTING MEASURES

- NFPA Rating:** Health: 0 Fire: 0 Reactivity: 0
- Flammability Class:** N/A
- Flash Point:** Does not flash
- Explosive Limits (% of Volume):** N/A
- Extinguishing Media:** Water, foam, dry chemical
- Special Protective Equipment:** Firefighters should wear protective clothing, eye protection, and self contained breathing apparatus.
- Fire Fighting Procedures:** Normal procedures. Do not allow run-off to enter waterways inhabited by aquatic organisms
- Combustion Products:** None known
- Unusual Fire/Explosion Hazards:** None

6. ACCIDENTAL RELEASE MEASURES

- Steps to be taken:** Sweep up material and place in a container for disposal. Do not allow spill to enter waterways inhabited by aquatic organisms
- Absorbents:** Not necessary due to product form and packaging
- Incompatibles:** None

7. HANDLING AND STORAGE

- Handling:** Avoid contact with eyes or clothing. Do not remove briquets from container except for immediate use. Avoid breathing dust. Wash thoroughly with soap and water after handling.
- Storage:** Store in a cool, dry place. Do not contaminate food or feed by storage or disposal. Keep away from children.

8. EXPOSURE CONTROL / PERSONAL MEASURES

- Exposure Limits:** Not Applicable
- Ventilation:** Use with adequate ventilation.
- Personal Protective Equipment:** Under ordinary use conditions, no special protection is required. If prolonged exposure is expected, it is recommended to wear a MSHA/NIOSH approved organic vapor/pesticide respirator, impervious gloves, chemical goggles or safety glasses with side shields.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Grey to black solid with slight hydrocarbon odor.
Boiling Point:	N/A
Melting Point:	N/A
Vapor Pressure (mm Hg):	N/A
Vapor Density (Air = 1):	N/A
Specific Gravity:	1.8492 g/cc
Bulk Density:	N/A
Solubility:	1 ppm
Evaporation Rate:	N/A
pH:	N/A

10. STABILITY AND REACTIVITY

Stability:	Stable
Reactivity:	Non-reactive
Incompatibility w/ Other Materials:	None
Decomposition Products:	None
Hazardous Polymerization:	Will not occur

11. TOXICOLOGICAL INFORMATION

CHRONIC TOXICITY [Specific to Active Ingredient(s)]

Methoprene is not considered as an oncogenic compound. The NOEL for non-carcinogen effects in an 18-month mouse study was 250ppm.

DEVELOPMENTAL/REPRODUCTIVE TOXICITY [Specific to Active Ingredient(s)]

Methoprene is not a teratogenic compound. The NOEL for maternal and embryo toxicity in rabbits was 200/mg/kg/day. The NOEL for reproductive effects in rats was 500 ppm.

MUTAGENICITY [Specific to Active Ingredient(s)]

Methoprene is not a mutagenic compound.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE [Based on (RS)-Methoprene]

Hydrolysis:	T1/2 > 4 weeks
Photolysis:	T1/2 < 10 hours
Soil half life:	~ 10 days
Water solubility:	< 2 ppm

ECOTOXICITY [Based on (S)-Methoprene]

Acute Toxicity: fish:LC50 (trout): 760 ppb, (bluegill): > 370 ppb ((S)-Methoprene); aquatic invertebrates:LC50 (Daphnia): 360 ppb ((S)-Methoprene This product is toxic to aquatic dipteran.)

13. DISPOSAL CONSIDERATIONS

Dispose of empty bag in sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

DOT49CFR Description: Not regulated as hazardous by D.O.T.

Freight Classification: Insecticides, NOI other than poison in boxes or drums. NMFC 102120

15. REGULATORY INFORMATION

CERCLA (Superfund): Not regulated

RCRA: Not regulated as hazardous

SARA 311/312 HAZARD CATEGORIES

Immediate Health: Yes (irritation)

Delayed Health: No

Fire: No

Sudden Pressure: No

Reactivity: No

The information presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to the best of our knowledge is true and accurate. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations.

Aquabac® xt (EPA Reg. No. 62637-1)

Registrant Becker Microbial Products, Inc.		Address 5786 Northwest 119 th Drive, Coral Springs, FL 33076	
Container Size: 2.5 gal. (9.46 L)	Container Type: Plastic Bottle	Label Print Date: 12/02	Actual Dimensions: As Presented

The attached label is a full size copy of the actual label.



**Biolarvicide
Biological Larvicide Aqueous Suspension**

A microbial insecticide effective against mosquitoes, blackflies, nuisance flies (*Psychoda* spp. and *Chironomus* spp.) and nuisance aquatic midges (*Chironominae*) in a variety of habitats.

ACTIVE INGREDIENT: <i>Bacillus thuringiensis</i> subspecies <i>israelensis</i> , solids, spores and insecticidal toxins*	8.00%
OTHER INGREDIENTS:	92.00%
TOTAL:	100.00%

*Equivalent to 1,200 International Toxic Units (ITU/mg) (4.84 Billion ITU/gallon or 1.2 Billion ITU/liter). Potency units should not be used to adjust rates beyond those specified in the Directions for Use Section. Note: The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

KEEP OUT OF REACH OF CHILDREN – CAUTION

FIRST AID	
If inhaled	<ul style="list-style-type: none"> • 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 treatment advice.
If in eyes	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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. See back panel for additional precautionary statements and directions for use.	

EPA Reg. No. 62637-1

Net Contents: 2.5 gallons (9.46 liters)

EPA Establishment No. 68148-SC-001

MANUFACTURED FOR: Becker Microbial Products, Inc., 5786 N.W. 119th Drive, Coral Springs, FL 33076-4025

PRECAUTIONARY STATEMENTS – HAZARDS TO HUMANS AND DOMESTIC ANIMALS:

CAUTION: Harmful if inhaled or absorbed through skin. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Mixers/loaders and applicators 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. **USER SAFETY RECOMMENDATIONS:** Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. **ENVIRONMENTAL HAZARDS:** Do not contaminate water when disposing of equipment washwaters. Do not apply to treated, finished drinking water reservoirs or drinking water receptacles.

DIRECTIONS FOR USE

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

AQUABAC xt may be applied to any water sites except treated, finished drinking water reservoirs or drinking water receptacles.

MOSQUITOES: Habitat	Rate Required for Control
Flood water, roadside ditches, irrigation ditches, rice fields, pastures, woodland pools, snowmelt pools, standing pools	0.25-1.0 pts./A
Tidal water, salt marshes, catch basins, and storm water retention areas	0.50-1.0 pts./A
Polluted water (sewage lagoons, etc.) water with moderate organic matter, and water with a high concentration of suspended solids	1.0-2.0 pts./A

SPECIFIC APPLICATION INSTRUCTIONS: General: AQUABAC xt may be applied in conventional aerial and ground application equipment with sufficient water to provide thorough coverage of the target area. The amount of water needed will be dependent on weather, type of spray equipment and mosquito habitat.

Ground applications should be made in 5-100 gallons per acre in conventional equipment. As low as one gallon per acre surface area can be used when the target area is open with light vegetative cover.

Aerial applications may be done diluted or undiluted. For undiluted applications, apply 0.25 to 2.0 pts./A of AQUABAC xt through fixed wing aircraft or helicopters equipped with conventional boom and nozzles or rotary mist atomizers. For diluted applications, fill the mix tank or aircraft hopper with the appropriate volume of water and agitate before adding AQUABAC xt. Maintain agitation during loading and spraying. 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 grower are responsible for considering all of these factors when making decisions.

BLACKFLIES:

Suggested Concentration Range 0.50-75 ppm (0.50-75 mg/liter of stream water)
The concentration should be maintained in the stream for 15 minutes.

SPECIFIC APPLICATION INSTRUCTIONS: Apply with conventional ground and aerial application equipment or metered release systems from infested sites to achieve larvicidal concentrations. Insecticidal activity should occur within 24 hours. Reapply as needed. AQUABAC xt may be applied undiluted through appropriate ULV application equipment.

NUISANCE FLIES:

For control of the Nuisance Flies *Psychoda* spp. and *Chironomus* spp. in sewage treatment facilities utilizing trickling filter systems.

APPLICATION DIRECTIONS: Nuisance Fly Habitat	Suggested Use Rates'
---	-----------------------------

Trickling filter system of wastewater treatment plants 10-50 mg per liter of wastewater feed to the system per 30 minutes.
1. Use higher rates for control of *Chironomus* spp. Apply undiluted with a pre-calibrated pump or other device into the wastewater feeding into the filters for a minimum period of 30 minutes. Repeat applications as needed. Control of *Chironomus* spp. may take two weeks.

NUISANCE AQUATIC MIDGES:

For control of *Chironominae* midges (*Chironominae: Chironomini*) inhabiting shallow, man-made and natural lakes and ponds.

APPLICATION DIRECTIONS: Nuisance Midge Habitat	Suggested Rate Range'
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Shallow lakes and ponds per sewage oxidation ponds (less than an acre 6 feet deep) 1.0 gallon/acre (3.80 liters/acre)
1. Apply diluted with water in a total volume of 5 gallons/acre by pouring or spraying over the surface to be treated with a pre-calibrated device. Repeat applications as necessary. Control of *Chironomini* midges may take up to two weeks.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **Storage:** Store in a cool (59-86°F; 15-30°C), 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:** Triple rinse (or equivalent), then 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.

NOTICE TO USER

Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the 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 label instructions.

In case of an emergency endangering life or property involving this product, call collect, day or night, (800) 759-1602.

MATERIAL SAFETY DATA SHEET

AQUABAC xt

Manufacturer:

Becker Microbial Products, Inc.
5786 N. W. 119th Drive
Coral Springs, FL 33076
Tel: (954) 345 9321

Issue Date: January 1, 2002

TSCA Status: Exempt

Product Name: AQUABAC xt

Chemical Name: *Bacillus thuringiensis* subspecies *israelensis*

Dot Classification: Not Regulated

EPA Reg. NO.: 62637-1

EPA Establishment No.: 68148-SC-001

HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Name (CAS NO.)	OSHA PEL	ACGIH TLV
<i>Bacillus thuringiensis</i> subsp. <i>israelensis</i> Serotype H-14		
Mixture considered hazardous per OSHA Criteria	NL	NL

PHYSICAL PROPERTIES:

Appearance: Tan Liquid. Potency 1,200 ITU/mg.

Solubility: N/A

Boiling Point: 100 degrees C.

pH: 4.8

Vapor Density: N/A

Viscosity: N/A

Melting Point: N/A

Vapor Pressure: N/A

Specific Gravity: 1.04 – 1.12

FIRE AND EXPLOSION DATA:

Flash Point: N/A

Extinguishing Media: Use appropriate media for cause of fire.

Special Fire Fighting Procedures: Wear protective clothing and self-contained breathing apparatus.

Unusual fire and explosion hazards: N/D

REACTIVITY:

Incompatibility: Do not expose to solutions with high alkalinity.

Hazardous Decomposition or Bi-products: N/D

Conditions to Avoid: N/D

HEALTH HAZARD INFORMATION:

Routes of Entry: Inhalation – No

Skin - No

Ingestion - No

Oral Toxicity: N/D. The acute oral LD₅₀ in both male and female rats

was > 5,000 mg/kg b.w., for the technical powder used in the formulation

indicating that the material is non-toxic by ingestion in single doses.

Dermal Toxicity: N/D. The acute dermal LD₅₀ in both male and female rabbits was found to be > 2,000 mg/kg b.w. for the technical powder used in the formulation indicating that the material no more than slightly toxic by a single skin application.

Dermal and Eye Irritation: The product is considered to be non-irritating to rabbit eye and/or skin.

Dermal Sensitization: Appropriate skin sensitization studies in guinea pigs has indicated that the product is a non-sensitizing agent.

Inhalation Toxicity: N/D. The LC₅₀ in four hour inhalation studies in rats was 25.1 mg/L (actual) of air, the maximum attainable

concentration.

Corrosiveness: Non-corrosive.

AQUABAC xt Biological Larvicide Aqueous Suspension

Carcinogenicity: NTP - NL

IARC - NL

OSHA - NL

ACGIH - NL

Signs and Symptoms of Exposure: N/D

Medical Conditions Aggravated by Exposure: N/D. Pre-existing eye lesions or lung disease.

Emergency and First Aid Procedures: Remove individual to fresh air. Seek medical attention if there is difficulty in breathing. If skin or eye contact occurs flush with plenty of water. If irritation occurs, seek medical attention. No known antidote.

SPECIAL HANDLING AND STORAGE:

Tightly reclose containers of unused materials. Do not contaminate water, food, or feed by storage or disposal. Store in a secure, cool, dry, well-ventilated room, building or covered area. Avoid temperatures above 85 degrees F.

SPILL OR LEAK PROCEDURES:

Absorb spill with an inert material, such as clay, and place in a container for disposal.

WASTE DISPOSAL:

Dispose of product in accordance with federal, state, and local regulations.

ADDITIONAL REGULATORY INFORMATION:

Sara Title III Data:

Section 311 and 312 Hazard Categories:

Immediate Health Hazard - None

Delayed Health Hazard - None

Fire Hazard - None

Reactive Hazard - None

Sudden Pressure Release Hazard - None

Section 302: Extremely Hazardous Substances - None

Section 313: Toxic Chemicals - None

CERCLA Reportable Quantity - Not Listed

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 particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.

Legend:

N/A = Not Applicable

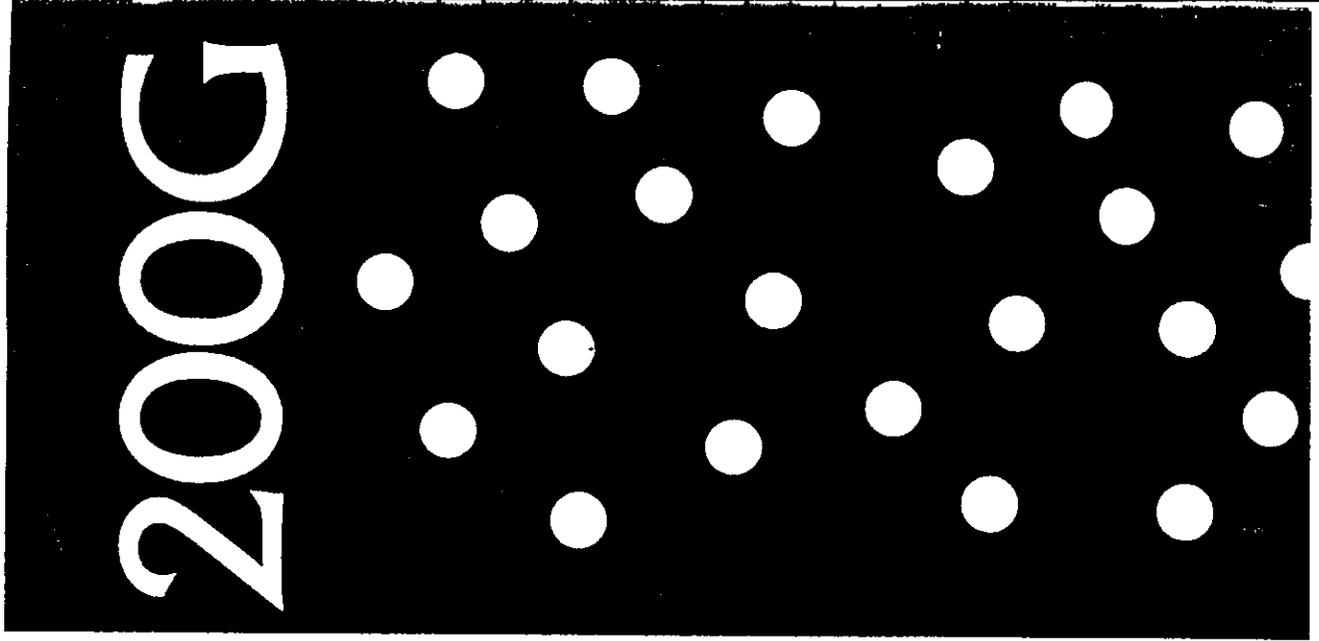
N/D = Not Determined

N/L = Not Listed

Aquabac® 200G (EPA Reg. No. 62637-3)

Registrant Becker Microbial Products, Inc.		Address 5786 Northwest 119 th Drive; Coral Springs, FL 33076	
Container Size: 40 lbs. (18.1 kg)	Container Type: Plastic Bag	Label Print Date: 01/03	Actual Dimensions: 20 5" (h) x 15" (w)

The attached label is a 36% reduction of the actual bag.



AQUABAC[®]

Mosquito Biolarvicide Granule

*AQUABAC is a
microbial insecticide
effective against
mosquitoes in a variety
of habitats*

ACTIVE INGREDIENT:

Bacillus thuringiensis sub-species *israelensis*, 7000 International Toxic Units (ITU) per milligram (equivalent to 0.091 billion ITU per pound)..... 2.86%

Potency units should not be used to adjust rates beyond those specified in the Directions for Use section.

INERT INGREDIENTS..... 97.14%

TOTAL..... 100.00%

EPA Reg. No. 62637-3

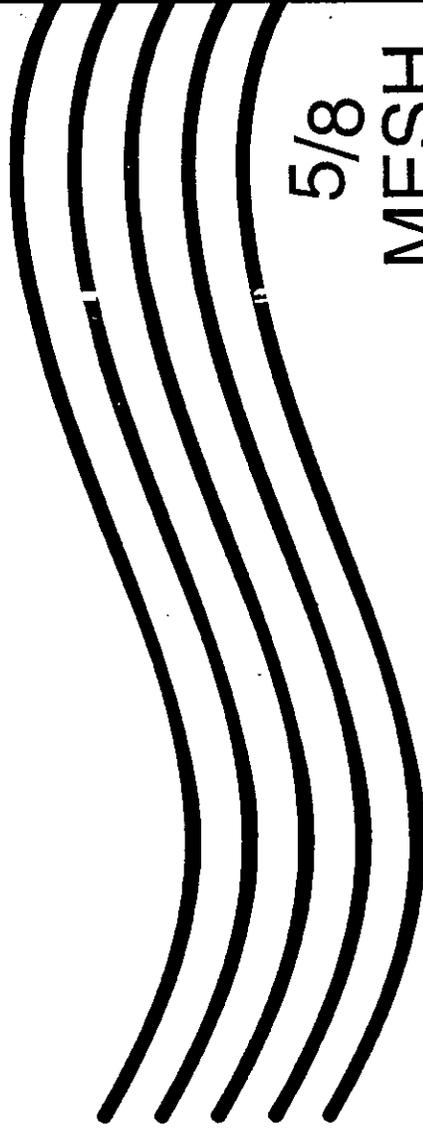
EPA Est. No. 9198-OH-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

See Additional Precautionary Statements on Back

In case of emergency endangering life or property involving this product, call collect day or night: (954) 474-7590.



5/8

MESH

Net Contents: 40 Lbs. (18.1 kg)

AQUABAC® 200G

Mosquito Biolarvicide Granule

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

STATEMENTS OF PRACTICAL

TREATMENT:

IF ON SKIN: Wash with plenty of soap and water. Get medical treatment.

AQUABAC (200 G) is a highly selective microbial insecticide effective against mosquitoes in a variety of habitats.

DIRECTIONS FOR USE:

It is a violation of Federal Law to use this

SPECIFIC APPLICATION INSTRUCTIONS:

AQUABAC (200 G) should be applied uniformly in conventional aerial and ground equipment. A seven to fourteen-day interval between applications should be employed. Longer periods of mosquito population suppression may result where sufficient numbers of non-target aquatic invertebrate parasites and predators are present, since these are not affected by AQUABAC (200 G) and contribute to mosquito population reduction.

STORAGE AND DISPOSAL:

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

Storage:

Store in a 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:

DIRECTIONS FOR USE:

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. AQUABAC (200 G) may be applied to any water sites except treated, finished water reservoirs or drinking water receptacles. Application to irrigation water is permissible.

MOSQUITOES:

Habitat
Rate Required for Control*

Flood water, roadside
ditches, irrigation
ditches, rice fields,
pastures, woodland
pools, snow melt pools,
tidal water, salt marshes,
catch basins, storm water
retention areas

2.5 -10
pounds/acre

*When late third and early fourth instar larvae predominate, larval populations are high, or water is heavily polluted and/or algae are prevalent, use 10-20 pounds/acre.

Container Disposal:

Completely empty bag into application equipment. Then 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.

NOTICE TO USER:

Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the 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 label instructions.

Manufactured for:

Becker Microbial Products, Inc.
5786 Northwest 119th Dr.
Coral Springs, FL 33076
1-800-759-1602

EPA Registration Number: 62637-3
EPA Establishment Number: 9198-OH-1

5/8
MESH

AQB240.3
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ACQUITA **BAC[®] 2000C**

Mosquito Biolarvicide Granule

Back Panel

SPECIFIC APPLICATION INSTRUCTIONS:
AQUABAC (200 G) should be applied uniformly in conventional aerial and ground equipment. A seven to fourteen-day interval between applications should be employed. Longer periods of mosquito population suppression may result where sufficient numbers of non-target aquatic invertebrate parasites and predators are present, since these are not affected by AQUABAC (200 G) and contribute to mosquito population reduction.

STORAGE AND DISPOSAL:
Do not contaminate water, food, or feed by storage or disposal.

Storage:
Store in a 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:
Completely empty bag into application equipment. Then 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.

NOTICE TO USER:
Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the 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 label instructions.

Manufactured by:
Becker Microbial Products, Inc.
5766 Northwest 119th Dr.
Coral Springs, FL 33076
1-800-755-1602
EPA Registration Number: 62887-3
EPA Establishment Number: 6198-OH-1

5/8
MESH

ACB240.3
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Side Panel

AQUABAC® 200G

Mosquito Bolarvicide Granule

Front Panel



Mosquito Bolarvicide Granule

*AQUABAC is a
microbial insecticide
effective against
mosquitoes in a variety
of habitats*



Net Contents: 40 Lbs. (18.1 kg)

Side Panel

BAC® 200G

Mosquito Bolarvicide Granule

200G

ACTIVE INGREDIENT:
Genetic microorganism which produces a toxin (BT) per microgram (weight) of 500 Billion (TU per pound)..... 2.0%

INERT INGREDIENTS:..... 98.0%

NET WEIGHT:..... 40 LBS.

REPORT OF RECALL OF CHILDREN
CAUTION:
This product contains a bioactive ingredient which may be harmful to children if ingested. Do not allow children to play with or ingest this product.

Back Panel

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
CAUTION
Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

STATEMENTS OF PRACTICAL TREATMENT:
IF ON SKIN: Wash with plenty of soap and water. Get medical treatment.

AQUABAC (200 G) is a highly selective microbial insecticide effective against mosquitoes in a variety of habitats.

DIRECTIONS FOR USE:
It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. AQUABAC (200 G) may be applied to any water sites except treated, finished water reservoirs or drinking water receptacles. Application to irrigation water is permissible.

MOSQUITOES:
Rate Required for Control*
2.5 -10 pounds/acre

Habitat
Flood water, rotabside ditches, irrigation ditches, rice fields, pastures, woodland pools, snow melt pools, tidal water, salt marshes, catch basins, storm water retention areas

*When late third and early fourth instar larvae predominate, larval populations are high, or water is heavily polluted and/or algae are prevalent, use 10-20 pounds/acre.

MATERIAL SAFETY DATA SHEET

AQUABAC 200 G

Manufacturer:
Becker Microbial Products, Inc.
5786 N. W. 119th Drive
Coral Springs, Florida 33076
Tel: (800) 759-1602
Issue Date: November 20, 2001
TSCA Status: Exempt
Product Name: AQUABAC (200 G)
Chemical Name: *Bacillus thuringiensis* subspecies *israelensis*
Dot Classification: Not Regulated

HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Name (CAS NO.)	OSHA PEL	ACGIH TLV
<i>Bacillus thuringiensis</i> subsp. <i>israelensis</i> Serotype H-14		
Mixture considered hazardous per OSHA Criteria	NL	NL

PHYSICAL PROPERTIES:

Appearance: Corn cob granule; Potency : 200 ITU/mg.
Solubility: N/A
Boiling Point: N/A.
pH: N/A
Vapor Density: N/A
Viscosity: N/A
Melting Point: N/A
Vapor Pressure: N/A
Bulk Density: 22-26-lbs/cubic foot

FIRE AND EXPLOSION DATA:

Flash Point: N/A
Extinguishing Media: Use appropriate media for cause of fire.
Special Fire Fighting Procedures: Wear protective clothing and self
-contained breathing apparatus.
Unusual fire and explosion hazards: N/D

REACTIVITY:

Incompatibility: Do not expose to solutions with high alkalinity.
Hazardous Decomposition or BI-products: N/D
Conditions to Avoid: N/D

HEALTH HAZARD INFORMATION:

Routes of Entry: Inhalation - No
Skin - No
Ingestion - No
Oral Toxicity: N/D. The acute oral LD₅₀ in both male and female
rats
was > 5,000 mg/kg b.w. for the technical powder used in the
formulation
indicating that the material is non-toxic by ingestion in single doses.

Dermal Toxicity: N/D. The acute dermal LD₅₀ in both male and
female rabbits was found to be > 2,000 mg/kg b.w. for the technical
powder used in the formulation indicating that the material no more
than slightly toxic by a single skin application.

Dermal and Eye Irritation: The product is considered to be non-
irritating to rabbit eye and/or skin.

Dermal Sensitization: Appropriate skin sensitization studies in guinea
pigs have indicated that the product is a non-sensitizing agent.

Inhalation Toxicity: N/D. The LC₅₀ in four-hour inhalation studies in
rats was 25.1 mg/L (actual) of air, the maximum attainable
concentration.

Corrosiveness: Non-corrosive.
AQUABAC (200 G) MOSQUITO BIOLARVICIDE GRANULE

Carcinogenicity: NTP - NL
IARC - NL
OSHA - NL
ACGIH - NL

Signs and Symptoms of Exposure: N/D
Medical Conditions Aggravated by Exposure: N/D. Pre-existing
eye lesions or lung disease.

Emergency and First Aid Procedures: Remove individual to fresh
air. Seek medical attention if there is difficulty in breathing. If skin or
eye contact occurs flush with plenty of water. If irritation occurs, seek
medical attention. No known antidote.

SPECIAL HANDLING AND STORAGE:

Tightly reclose containers of unused materials. Do not contaminate
water, food, or feed by storage or disposal. Store in a secure, cool,
dry, well-ventilated room, building or covered area. Avoid
temperatures above 85 degrees F.

SPILL OR LEAK PROCEDURES:

Absorb spill with an inert material, such as clay, and place in a
container for disposal.

WASTE DISPOSAL:

Dispose of product in accordance with federal, state, and local
regulations.

ADDITIONAL REGULATORY INFORMATION:

Sara Title III Data:

Section 311 and 312 Hazard Categories:

- Immediate Health Hazard - None
- Delayed Health Hazard - None
- Fire Hazard - None
- Reactive Hazard - None
- Sudden Pressure Release Hazard - None

Section 302: Extremely Hazardous Substances - None

Section 313: Toxic Chemicals - None

CERCLA Reportable Quantity - Not Listed

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 particular purpose of any information or products referred to
herein. **NO WARRANTY OF FITNESS FOR A PARTICULAR
PURPOSE IS MADE.**

Legend:

- N/A = Not Applicable
- N/D = Not Determined
- N/L = Not Listed

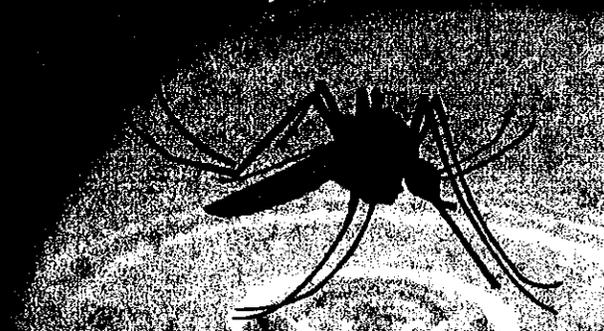
AGNIQUE[®] MMF

MOSQUITO LARVICIDE & PUPICIDE

Monomolecular Surface Film for Control of Immature Mosquitoes and Midges

CAN BE USED IN: • Habitats Containing Birds, Fish, Pets and Wildlife
• Ponds • Pools • Ditches • Irrigation Water • Potable Water Containers
• Flood Water Areas • Other Areas Where Mosquitoes Breed and Develop

STOP MOSQUITOES BEFORE THEY START



ACTIVE INGREDIENT

Poly (oxy-1,2-ethanediyl), α -Isooctadecyl- ω -hydroxyl (100%)

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID (TREATMENT)

IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none">• 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 IN EYES:	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with plenty of 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMAN AND DOMESTIC ANIMALS

CAUTION: Avoid contact with skin, eyes or clothing.
Wash thoroughly with soap and water after handling.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.
Pesticide Storage: Do not allow storage containers to rust. Rust contaminants may clog spray nozzles. Do not allow product to freeze.

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: Triple rinse, then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by state or local authorities.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. To be used in governmental mosquito control program, by professional pest control operators, by homeowners, or in other mosquito or midge control operations.

APPLICATION DIRECTIONS

This product may be applied by both ground and aerial applications. To use, calculate the desired rate based on water surface area. The water depth is not a factor in rate determination. Spray the desired rate of AGNIQUE[®] MMF onto the surface of the water. No dilution is required and a fan spray is recommended. The MMF will spread to cover hard to access areas. For large areas with dense vegetation it is recommended that application is made in several locations to assist in the spreading action. Do not pour or inject a stream spray directly into water. AGNIQUE[®] MMF is not visible on the surface of the water. Excess MMF on the water surface will form a white globule.

NOTICE

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



Cognis Corporation

4900 Este Avenue
Cincinnati, OH 45232-1419
1-800-254-1029

24 HOUR EMERGENCY PHONE
CHEMTREC 1-888-329-2626

For information on this pesticide product (including health) concerns, medical emergencies or pesticide incidents, call the National Pesticide Telecommunication Network at 1-800-858-7378.

EPA Reg. No. 53263-28 EPA Est. No. 53263-SC-01

© 2004, Cognis Corporation

SPECIMEN LABEL

AGNIQUE[®] MMF

MOSQUITO LARVICIDE & PUPICIDE

Stop Mosquitoes
Before They Start

APPLICATION SITES

This product is for the control of immature mosquitoes and midges in areas where they breed and develop. This product may be used in habitats including potable water and irrigation waters, permanent and semi-permanent waters, irrigated croplands and pastures, and waters with outlets to natural water bodies. The following habitats provide examples of where the product can be applied but is not intended to be all inclusive.

Polluted Waters: Sewage lagoons, percolation ponds, animal waste effluent lagoons, septic ditches, waste treatment facility areas, etc.

Fresh and Brackish Water: fresh water and salt marshes, ponds, lakes, storm water, drainage systems and retention & detention basins, roadside ditches, grassy swales, flooded fields and pastures, potable water containers, reservoirs, irrigated croplands, temporary and semi-permanent woodland pools, tidal water, and other areas where water accumulates.

Residential Areas: Ponds, storm water basins, tree holes, rain barrels, landscape and ornamental ponds, tires, storm drains, stationary flower pots, pot holes, gutters, tarps, potable water containers and residential areas where water accumulates and provides ideal breeding habitats for mosquitoes or midges.

Application Rates	Suggested Rate Range	
	MOSQUITO HABITAT	MIDGE HABITAT
Fresh and Brackish Water*	0.2-1.0 gallons/acre* 2 - 10 liters/hectare*	0.5-1.0 gallons/acre [^] 5 - 10 liters/hectare [^]
Polluted Waters**	0.35-1.0 gallons/acre** 3.5-10 liters/hectare**	0.5-1.0 gallons/acre [^] 5 - 10 liters/hectare [^]

* The lower rate (0.2 gallons/acre) is recommended when only pupae control is desired and in sites with no emergent vegetation and low organic content
 * Use higher rates when emergent or surface vegetation is present, due to the wicking action of the product. The more vegetation or the drier the vegetation, the higher the required rate.
 ** Use higher rates in polluted water habitats for effective control
 ^ Reapplication is recommended every two weeks during the midge season

(Suggested application rates for the trigger applicator spray bottle)

Surface Area of Standing Water	Suggested Quantity of AGNIQUE [®] MMF
1 to 75 square feet	One full trigger application of the spray bottle containing AGNIQUE [®] MMF*
75-100 square feet	Two full trigger applications of the spray bottle containing AGNIQUE [®] MMF*
Every additional 100 square feet	Two to three full trigger applications of the spray bottle containing AGNIQUE [®] MMF*
1,000 square feet	20-25 full trigger applications (1-1.5 oz.)

* The application rate can vary between 1 and 3.0 oz. per 1000 sq. ft. (0.1 to 0.3 oz. /100 sq. ft.). Maximum application rate is 3.0 oz per 1000 sq. ft.

APPLICATION NOTES

Rate of Kill: The rate of kill when using MMF is dependent on the species, the life stage, the habitat and the temperature. Pupicidal action will typically result in 24 hours. Larvicidal action will usually result in 24-96 hours. If the film is present, control will be achieved.

Persistence: The AGNIQUE[®] MMF surface film typically persists on the water's surface for 5 to 22 days. Polluted waters will cause more rapid degradation of the film. Higher application rates will prolong film life and extend the interval between retreatment.

Species: Mosquitoes and midges that require little or no surface contact for breathing will be affected by the product during the pupae and emerging adult life stages.

Wind: The high end of the dosage rate is recommended when spraying habitats where multi-directional winds of 10mph (16km/hr) or greater are expected to persist. While the film will be pushed by the winds, it will re-spread quickly once the winds have subsided. If persistent unidirectional winds of 10 mph (16km/hr) or greater are expected, the displacement of the surface film may result in poor control.

Spray Tanks: Thoroughly clean and dry the spray system of contaminants such as petroleum oils, water, detergents and conventional toxicants prior to adding AGNIQUE[®] MMF. Detergents will destroy the film-forming of the AGNIQUE[®] MMF; other contaminants (water and oil) can result in the formation of an unsprayable paste.

Dilution: AGNIQUE[®] MMF is typically applied to the water's surface without dilution. However, if it is desired to spray higher volumes of liquid, AGNIQUE[®] MMF may be diluted using a high shear injection system that dilutes the MMF at the nozzle to a maximum of 10% in water. Do not add AGNIQUE[®] MMF to water in non-agitated spray systems. Conventional bypass recirculation will not provide adequate agitation to effectively mix MMF in water.

Expanding Waters: Significant expansion of the habitat's surface due to rain or tidal fluxes can be compensated for by using a dosage that is based on the largest expected surface area. This will ensure complete coverage, and eliminate the need for re-treatment of the flooded area.

cognis

Cognis Corporation
4900 Este Avenue
Cincinnati, OH 45232-1419
1-800-254-1029

SPECIMEN LABEL

Cognis Corporation

Material Safety Data Sheet

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Revised: 07/11/2006
Supercedes: 07/11/2006

PRODUCT NAME: AGNIQUE MMF MOSQUITO
LARVICIDE & PUPICIDE
PRODUCT DESCRIPTION: Ethoxylated Alcohol
CASRN: 881022-11-3
MANUFACTURER: Cognis Corporation
4900 Este Avenue
CINCINNATI, OH 45232
Phone: 888-329-2626 Fax: 513-482-5515
EMERGENCY NUMBERS:
CHEMTREC: 800-424-9300

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL	CONCENTRATION (Wt.%)	EXPOSURE LIMITS
Poly (oxy-1,2-ethanediyl), alpha-(C16-20 branched and linear alkyl)-w-hydroxy		
CASRN 881022-11-3	100.0	None Established

SECTION 3: HAZARDS IDENTIFICATION

***** Emergency *****
***** Overview *****

WARNING!

May cause minor eye irritation on prolonged or repeated contact.

Light Yellow Liquid

SKIN CONTACT:

This material is not classified as a skin irritant.

EYE CONTACT:

May cause minor eye irritation on prolonged or repeated contact.

INHALATION:

Considered to be non-toxic by animal tests.

INGESTION:

Similar materials are not considered toxic.

CHRONIC EFFECTS:

None Known.

OTHER HEALTH EFFECTS:

None known.

PRIMARY ROUTES OF EXPOSURE: Inhalation, Skin

SECTION 4: FIRST AID MEASURES

SKIN CONTACT:

Wash affected area with soap and water.

EYE CONTACT:

Immediately flush eyes with plenty of cool water for at least 15 minutes. Do not let victim rub eyes. Get medical attention if irritation develops.

INHALATION:

If overexposure to vapor or mist occurs, immediately remove victim to fresh air. If victim has stopped breathing give artificial respiration, preferably mouth to mouth. Get medical attention immediately.

INGESTION:

If swallowed, get medical assistance. Do not induce vomiting.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: 365 Deg F ()

LFL: Not Determined

UFL: Not Determined

AUTOIGNITION TEMPERATURE Not Determined

RECOMMENDED EXTINGUISHING MEDIA:

Carbon dioxide, Dry chemical, Foam, Water spray

SPECIAL FIRE FIGHTING PROCEDURES:

Use water spray, dry chemical, foam or carbon dioxide. Water may be ineffective but should be used to keep fire exposed containers cool. If a spill or leak has not ignited, use water spray to disperse the vapors. Water spray may be used to flush spills away from fire.

UNUSUAL FIRE OR EXPLOSION HAZARDS:

Perform only those fire fighting procedures for which you have been trained. Firefighters should wear self contained breathing apparatus in the positive pressure mode with a full facepiece when there is a possibility of exposure to smoke, fumes or hazardous decomposition products.

HAZARDOUS COMBUSTION PRODUCTS:

Decomposition may produce carbon monoxide and carbon dioxide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

STEPS TO TAKE IN CASE OF SPILL OR LEAK:

Add dry material to absorb spill (if large spill, dike to contain).
Using recommended protective equipment, pick up bulk of spill and
containerize for recovery or disposal. Flush area with water to remove
residues.

SECTION 7: HANDLING AND STORAGE

Container disposal: Triple rinse then offer for recycling or
reconditioning, or puncture and dispose in a sanitary landfill or by
other procedures approved by state or local authorities.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION:

Safety glasses with side shields

SKIN PROTECTION:

Rubber gloves

RESPIRATORY PROTECTION:

Not applicable with adequate ventilation.

ENGINEERING CONTROLS:

General ventilation.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

APPEARANCE: Light Yellow Liquid

ODOR: Mild

ODOR THRESHOLD: Not Determined

pH: 6.9 @ 1 %

MELTING POINT: <25 Deg C

BOILING POINT: >100 Deg C

SPECIFIC GRAVITY: 0.890

SOLUBILITY IN WATER: Slight (0.1 to 1 %)

PERCENT VOLATILES (by Wt.): Not Determined

VAPOR DENSITY: Heavier than Air

VAPOR PRESSURE: Not Determined

EVAPORATION RATE (N-BUTYL ACETATE=1): Not determined

VOC CONTENT (EPA Method 24): Not Determined

Ethoxylate), ERG# 171 ATTACHED, INSECTICIDES,
FUNGICIDES, INSECT/ANIMAL REPELLENTS, NOI NMFC:
102120

The information provided is for domestic highway transportation only.
This product may be regulated differently when shipped in other types
of containers or by modes other than that addressed by this section of
the MSDS. For information, please contact Regulatory Affairs at
513/482-5022.

For RQ applicability, please see Section XV.

SECTION 15: REGULATORY INFORMATION

TSCA INVENTORY STATUS:

This product is excluded pursuant to Section 3(2)(B)(ii) of the Toxic
Substances Control Act.

TSCA 12(b) COMPONENTS:

None

SARA 311/312 HAZARD CATEGORIES: Acute

SARA 313 TOXIC CHEMICALS:

None

SARA 302 EXTREMELY HAZARDOUS SUBSTANCES:

Ethylene Oxide(75-21-8) < 0.0010 %

CERCLA HAZARDOUS SUBSTANCES:

Ethylene Oxide(75-21-8) < 0.0010 %

1,4-Dioxane(123-91-1) < 0.0100 %

CALIFORNIA PROPOSITION 65 COMPONENTS:

WARNING ! This product contains a chemical (or chemicals) known to the
State of California to cause cancer, birth defects and/or other
reproductive harm.

Ethylene Oxide(75-21-8) < 0.0010 %

1,4-Dioxane(123-91-1) < 0.0100 %

SECTION 16: OTHER INFORMATION

HMIS RATINGS: HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

NFPA RATINGS: HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0 OTHER: None

THE FOLLOWING WARNING INFORMATION IS PROVIDED ON THE LABEL FOR THIS PRODUCT:

WARNING!

May cause minor eye irritation on prolonged or repeated contact.

FIRST AID - INHALATION:

If overexposure to vapor or mist occurs, immediately remove victim to fresh air. If victim has stopped breathing give artificial respiration, preferably mouth to mouth. Get medical attention immediately.

FIRST AID - SKIN CONTACT:

Wash affected area with soap and water.

FIRST AID - EYE CONTACT:

Immediately flush eyes with plenty of cool water for at least 15 minutes. Do not let victim rub eyes. Get medical attention if irritation develops.

FIRST AID - INGESTION:

If swallowed, get medical assistance. Do not induce vomiting.

HANDLING AND STORAGE:

Container disposal: Triple rinse then offer for recycling or reconditioning, or puncture and dispose in a sanitary landfill or by other procedures approved by state or local authorities.

ABBREVIATIONS USED:

ND or N/D = Not Determined

NA or N/A = Not Applicable or Not Available

NE or N/E = Not Established

N/AP = Not Applicable

All information, recommendations, and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable. However, it is the user's responsibility to determine the safety, toxicity, and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, express or implied, is made by Cognis Corporation as to the effects of such use, the results obtained, or the safety and toxicity of the product nor does Cognis Corporation assume any liability arising out of use, by others, of the product referred to herein. The information herein is not to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

PREPARED BY:

Robert E. Borgerding
Cognis Corporation
Product Safety/Regulatory Affairs
4900 Este Avenue
Cincinnati, OH 45232

513/482-2820 (Voice) 513/482-2862 (Fax)

Mosquito Larvicide GB-1111

**Precautionary Statements
Hazards to Humans
(& Domestic Animals)**

**CAUTION
COMBUSTIBLE**

Contains Petroleum Distillate

Contact May Irritate Skin.

Causes Eye Irritation.

May be Fatal if Swallowed.

Potential Inhalation Hazard.

Avoid contact with eyes, skin and clothing. Wear goggles and rubber gloves. Use with adequate ventilation. Avoid breathing vapor or spray mist. Wash thoroughly after handling. Remove contaminated clothing and wash before re-use. Respiratory protection may be required.

Environmental Hazards:

This product is toxic to fish and other aquatic organisms. Do not apply directly to water (except when applied for mosquito larvae control); then only around the borders of these areas and in-shallow water. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. Consult your State Fish and Game Agency before applying this product.

Physical and Chemical Hazards:

COMBUSTIBLE—Do not use, store, pour or spill near flames or excessive heat. In case of fire, use water spray, foam, CO₂ or dry chemical.

ACTIVE INGREDIENT

Aliphatic Petroleum Hydrocarbons 98.7%

INERT INGREDIENTS 1.3%

**KEEP OUT OF REACH
OF CHILDREN**

CAUTION

First Aid: Contains Petroleum Distillate. If swallowed, do NOT cause vomiting. Call a physician immediately. Vomiting may cause aspiration into lungs.

If on skin, wash with soap and water. If irritation develops, call a physician. If irritated, remove victim to fresh air. Call a physician in case of eye contact, flush with plenty of water for 15 minutes. Call a physician. See side panel for additional precautionary statements.

EPA Reg. No. 8898-16
EPA Est. No. 8898-CA-2

Net Gal.
(Liters)

Batch No.

Directions for use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. To be used in governmental mosquito control programs and by professional pest control operators.

This product is for control of mosquito larvae in swamps, floodwater areas, and other areas where mosquitoes develop. It should be applied at normal uniform rates of 3 gal./acre or less. Under special circumstances, such as extremely dense vegetation or water of high organic content, rates to a maximum of 5 gal./acre may be used. Petroleum oils may produce an unsightly appearance and should not be used when this condition is objectionable. Avoid application to surfaces when damage may occur. Use particular care to avoid damage when spraying over areas containing fish or wildlife.

STORAGE AND DISPOSAL

Do not use, store, pour or spill near flames or excessive heat. If drum is leaking, move drum to stop the leak. Absorb spilled materials with sand, clay or vermiculite and sweep up.

Prohibitions:

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

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:

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

WITCO MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE CONCERNING THIS PRODUCT AND EXPRESSLY DISCLAIMS LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, WHETHER BASED ON WARRANTY OR NEGLIGENCE. BUYER'S SOLE REMEDY SHALL BE REFUND OR REPLACEMENT.

Witco

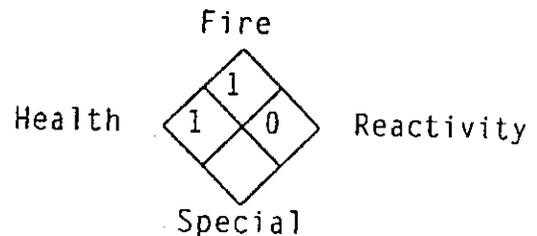
Witco Corporation, Golden Bear Division
P.O. Box 5446, Oildale, CA 93388-5446 (805) 393-7110

WITCO MATERIAL SAFETY DATA SHEET

PRODUCT NAME: GB-1111

PAGE 1

NFPA HAZARD RATING
 4 - Extreme
 3 - High
 2 - Moderate
 1 - Slight
 0 - Insignificant



=====
 DIVISION AND LOCATION---SECTION I
 =====

Division: GOLDEN BEAR
Location: OILDALE, CA
 P.O. BOX 5446, MANOR & NORRIS ROADS, OILDALE, CA, 93388-5446
Emergency Telephone Number: (805) 393-7110
Transportation Emergency: CHEMTREC 1-(800) 424-9300 (U.S. and Canada)

=====
 CHEMICAL AND PHYSICAL PROPERTIES---SECTION II
 =====

Chemical Name:

petroleum hydrocarbon

Formula: not applicable

Hazardous Decomposition Products:

carbon monoxide and carbon dioxide from burning.
 oxides of nitrogen
 oxides of sulfur

Incompatibility (Keep away from):

strong oxidizers such as hydrogen peroxide, bromine, and chromic acid.

Toxic and Hazardous Ingredients:

hydrotreated light naphthenic distillate (petroleum)
 (if used in applications where a mist may be generated)

CAS #
 64742-53-6

Form: Oily liquid

Odor: no objectionable odor

Appearance:

Color:

Specific Gravity (water=1): .8 to .92

Boiling Point: greater than 190°C (374°F)

Melting Point: not applicable

Solubility in Water (by weight %): 0

Volatile (by weight %): less than .01 at 25 °C

Evaporation Rate: (water = 1) less than .01

Vapor Pressure (mm Hg at 20°C): less than 1

Vapor Density (air=1): less than .1

pH (as is): not applicable

Stability: Product is stable under normal conditions

Viscosity SUS at 100°F: Less than 100

Other physical properties:

Viscosity =or less than 18.6 cSt at 40C

(Continued on next page)

WITCO MATERIAL SAFETY DATA SHEET

PRODUCT NAME: GB-1111

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=====

FIRE AND EXPLOSION DATA---SECTION III

=====

Special Fire Fighting Procedures:

Avoid use of water

Unusual Fire and Explosion Hazards:

Dense smoke. Fire fighters should wear an approved self-contained breathing apparatus.

Flashpoint: (Method Used) Cleveland Open Cup greater than 95°C (203°F)

Flammable limits %:

no data available

Extinguishing agents:

Drychemical or Waterspray or CO₂ or Foam

Water may cause frothing.

Water may be ineffective.

Closed containers exposed to fire may be cooled with water.

=====

HEALTH HAZARD DATA---SECTION IV

=====

Permissible concentrations (air):

If used in applications where a mist may be generated, observe a TWA/PEL of 5 mg/m³ for mineral oil mist (OSHA and ACGIH).

Chronic effects of overexposure:

Prolonged contact may cause dermatitis (skin irritation).

This product is not listed as, or anticipated to be a potential carcinogen by the National Toxicology Program (NTP), International Agency for Research on Cancer (IARC) or the Occupational Safety and Health Administration (OSHA).

Acute toxicological properties:

no data available

Emergency First Aid Procedures:

Eyes: Immediately flush with large quantities of water for at least 15 minutes and call a physician.

Skin Contact: Wash with soap and water.

Inhalation: Remove victim to fresh air.

If Swallowed: Call a physician immediately. DO NOT induce vomiting. (Vomiting may cause aspiration into lungs resulting in chemical pneumonia.)

ROUTES OF ENTRY:

Ingestion and, if a mist is generated, inhalation.

TARGET ORGAN(S):

Skin. Respiratory tract if a mist is generated. (The respiratory tract may become irritated).

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

(Continued on next page)

PRODUCT NAME: GB-1111

PAGE 3

Persons susceptible to dermatitis (skin rash) may aggravate their condition by skin contact with this product.

=====
SPECIAL PROTECTION INFORMATION---SECTION V
=====

Ventilation Type Required (Local, mechanical, special):

Local if necessary to maintain allowable PEL(permissible exposure limit) or TLV(threshold limit value)

Respiratory Protection (Specify type):

Use NIOSH/MSHA certified respirator with organic vapor cartridge if vapor concentration exceeds permissible exposure limit

Protective Gloves:

oil resistant

Eye Protection:

chemical safety goggles

Other Protective Equipment:

none

=====
HANDLING OF SPILLS OR LEAKS---SECTION VI
=====

Procedures for Clean-Up:

In case of spill or leak absorb on an inert material such as earth, sand or vermiculite; sweep up and dispose of in accordance with federal, state and local regulations. If spilled into water, remove bulk of the product by skimming.

Waste Disposal:

Dispose of in accordance with all applicable federal, state and local regulations.

=====
SPECIAL PRECAUTIONS---SECTION VII
=====

Precautions to be taken in handling and storage:

Avoid prolonged or repeated contact with skin or breathing of vapors, mists or fumes. Launder contaminated clothing before reuse. Keep containers tightly closed. Avoid strong oxidizers. Eliminate all sources of ignition such as flames or sparks.

=====
TRANSPORTATION DATA---SECTION VIII
=====

D.O.T.: Not Regulated

Reportable Quantity: not applicable

Freight Classification: 65 Petroleum Oil, n.o.i.b.n.

Special Transportation Notes:

none

(Continued on next page)

WITCO MATERIAL SAFETY DATA SHEET

PRODUCT NAME: GB-1111

PAGE 4

ENVIRONMENTAL/SAFETY REGULATIONS---SECTION IX

Section 313 (Title III Superfund Amendment and Reauthorization Act):

This product does not contain any chemical 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.

COMMENTS

Observe good industrial hygiene and safety precautions when handling this product.

Prepared by: J.T. Cook
Title: MANAGER OF QUALITY CONTROL
Original Date: 05/29/86 Sent to: CURTIS BEST
Revision Date: 06/24/94 COMMONWEALTH OF MASS.
Supersedes: 03/22/91
Date Sent: 04/20/95

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

Valent BioSciences

Teknar® G

Biological Larvicide

HIGH POTENCY LARVICIDE FOR MOSQUITOES

ACTIVE INGREDIENT:
Bacillus thuringiensis subspecies *israelensis* 1.7%
 OTHER INGREDIENTS 98.3%

TOTAL 100.0%

Equivalent to 200 ITU/mg.

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

EPA Reg. No. 73049-403

EPA Est. No. 33762-1A-001

List No. 13600

**KEEP OUT OF REACH OF CHILDREN
 CAUTION**

1.0 FIRST AID	
If on skin or clothing	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. 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.	

2.0 PRECAUTIONARY STATEMENTS

Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

2.1 Personal Protective Equipment (PPE)

Mixer/loaders and applicators 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 reactions.

3.0 DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Teknar G may be applied to any water sites except treated, finished water reservoirs or drinking water receptacles.

Teknar G is a highly selective microbial insecticide effective against mosquitoes in a variety of habitats.

MOSQUITOES: Habitat	Rate Required for Control*
Aquatic/Wetland areas including: Ponds, Small Lakes, Irrigation Ditches, Rice Fields, Pastures, Woodland Pools, Woodland Ponds, Snow Melt Pools, Tidal Water, Salt Marshes, Catch Basins, Storm Water Retention Areas	2.5-10.0 pounds/acre
All Wastewater(s): sewage treatment areas such as sewage effluent, sewage lagoons, oxidation ponds, septic ditches, sewage pipes, animal waste lagoons	2.5-20.0 pounds/acre

*When late third and early fourth instar larvae predominate, larval populations are high, or water is heavily polluted and/or algae are prevalent, use 10-20 pounds/acre.

4.0 SPECIFIC APPLICATION INSTRUCTIONS

Teknar G should be applied uniformly in conventional aerial and ground equipment. A seven to fourteen-day interval between applications should be employed. Longer periods of mosquito population suppression may result where sufficient numbers of non target aquatic invertebrate parasites and predators are present, since these are not affected by Teknar G and contribute to mosquito population reduction.

5.0 STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Storage: Store in a 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: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by burning. If burned, stay out of smoke.

6.0 WARRANTY

VALENT BIOSCIENCES warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the insect problem, condition of the crop, incompatibility with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage or handling of this material not in strict accordance with the directions given herein. NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.

Teknar is a registered trademark of Valent BioSciences Corporation.

VALENT BIOSCIENCES® CORPORATION
 870 TECHNOLOGY WAY
 LIBERTYVILLE, IL 60048—800-323-9597
 04-4695/R1

© Valent BioSciences Corporation August, 2004

VID 7.14.05

TEKNAR G

MSDS# BIO-0294 Rev. 1
ISSUED 06/19/03

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL NAME: Teknar G
EPA Registration No. 73049-403
MANUFACTURER:
Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, Illinois 60048
EMERGENCY TELEPHONE NUMBERS
Emergency Health or Spill:
Outside the United States: 651-632-6184
Within the United States: 877-315-9819

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME: Bacillus thuringiensis, subsp. israelensis (Bti)

CONCENTRATION: 1.70%

CAS/RTECS NUMBERS: 68038-71-1 / N/A

OSHA-PEL

8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV

8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER LIMITS

8HR TWA: N/A

STEL: N/A

CEILING: N/A

INGREDIENT NAME: Inert Ingredients - identity withheld as a Trade Secret

CONCENTRATION: 98.30%

CAS/RTECS NUMBERS: N/A / N/A

OSHA-PEL

8HR TWA: N/L

STEL: N/L

CEILING: N/L

ACGIH-TLV

8HR TWA: N/L

STEL: N/L

CEILING: N/L

OTHER LIMITS

8HR TWA: N/A

STEL: N/A

CEILING: N/A

EEC (European Community): N/A

Symbol Designation: N/A

Risk Phrases: N/A

Safety Phrases: N/A

3. HAZARDS INFORMATION

EMERGENCY OVERVIEW: Product is non-toxic by ingestion, skin contact, or inhalation. Direct contact with eyes or skin may cause mild irritation.

ROUTE(S) OF ENTRY:

Skin: No

Inhalation: No

Ingestion: No

SKIN CONTACT: Non-irritant

SKIN SENSITIZATION: N/D

EYE CONTACT: Non-irritant

TARGET ORGANS: N/D

CARCINOGENICITY RATING:

NTP: N/L

IARC: N/L

OSHA: N/L

ACGIH: N/L

None

SIGNS AND SYMPTOMS: Direct contact with eyes or skin may cause mild irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: N/D.

4. FIRST AID MEASURES

EYES: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or

signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

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

INGESTION: Remove from source of exposure. 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.

5. FIRE FIGHTING PROCEDURES

FLASH POINT: N/A

FLASH POINT METHOD: N/D

LOWER EXPLOSIVE LIMIT(%): N/D

UPPER EXPLOSIVE LIMIT(%): N/D

AUTOIGNITION TEMPERATURE: N/D

FIRE & EXPLOSION HAZARDS: Non-flammable and no explosive properties.

EXTINGUISHING MEDIA: Use appropriate medium for underlying cause of fire.

FIRE FIGHTING INSTRUCTIONS: Wear protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR RELEASE PROCEDURES: Recover product. Place into appropriate container for disposal. Avoid dust. Ventilate and wash spill area.

7. HANDLING AND STORAGE

HANDLING: N/D.

STORAGE: Store in a cool, dry place.

SPECIAL PRECAUTIONS: N/A

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local exhaust.

RESPIRATORY PROTECTION: Not usually required. However, 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.

SKIN PROTECTION: Impervious gloves, clothing to minimize skin contact.

EYE PROTECTION: Not usually required. If necessary, use safety glasses or goggles.

OTHER PROTECTION: Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Brown granular solid.

ODOR: Mild

BOILING POINT: N/A

MELTING/FREEZING POINT: N/A

VAPOR PRESSURE (mm Hg): N/A

VAPOR DENSITY (Air=1): N/A

EVAPORATION RATE: N/D

BULK DENSITY: 26 ± 4 lb/cu.ft.

SPECIFIC GRAVITY: N/D

SOLUBILITY: N/A

pH: N/D

VISCOSITY: N/A

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable

INCOMPATIBILITIES: Alkalinity inactivates product.

HAZARDOUS DECOMPOSITION PRODUCTS: N/D.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

ORAL LD50: LD50 (rat) > 5,000 mg/kg

DERMAL LD50: LD50 (rabbit) > 5,000 mg/kg

INHALATION LC50: N/D. No lethality was observed in rats after a 4 hour exposure at the highest obtainable inhalation exposure chamber concentration (2.84 mg/l) to Bti Technical Powder.

CORROSIVENESS: N/D. Not expected to have any corrosive properties.

DERMAL IRRITATION: N/D. Transient, slight or mild irritation noted in a dermal toxicity study with Bti Technical Powder.

OCULAR IRRITATION: N/D. Bti Technical Powder was mildly irritating in an eye irritation test in rabbits.

DERMAL SENSITIZATION: N/D

SPECIAL TARGET ORGAN EFFECTS: N/D

CARCINOGENICITY INFORMATION: N/D. None of the components are classified as carcinogens.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: N/D

13. DISPOSAL CONSIDERATIONS

Do not contaminate potable water, food or feed by storage or disposal. Dispose of product in accordance with federal, state, and local regulations.

WASTE DISPOSAL METHODS:

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

Container Disposal: Completely empty bag into application equipment. Then 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.

14. TRANSPORTATION INFORMATION

DOT

STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

IATA/ICAO

STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

IMO

STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

HAZARD CLASS: N/A

UN NUMBER: N/A

PACKING GROUP: N/A

REPORTABLE QUANTITY: N/A

FLASH POINT: N/A

15. REGULATORY INFORMATION

TSCA STATUS: Exempt

CERCLA STATUS: N/D

SARA STATUS: N/D

RCRA STATUS: N/D

PROP 65 (CA): N/D

16. OTHER INFORMATION

REASON FOR ISSUE: Updated Hazard Information (Section 3) and Toxicological Information (Section 11).

APPROVAL DATE: 06/19/03

SUPERSEDES DATE: 03/14/03

MSDS Number: BIO-0294

LEGEND:

N/A = Not Applicable

N/D = Not Determined

N/L = Not Listed

L = Listed

C = Ceiling

S = Short-term

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June 2003

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VID 9.10.03



5% SKEETER ABATE®

AN INSECTICIDE FOR CONTROL OF MOSQUITO AND MIDGE LARVAE

Active Ingredient:

Temephos (O,O'-(thiodi-4, 1-phenylene) O,O',O'-tetramethyl phosphorothiolate)	5%
Inert Ingredients	95%
Total	100%

EPA Reg. No. 8329-15

EST. EPA NO. 8329-IL-01

KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

See Below for Additional Precautionary Statements

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

FIRST AID

IF SWALLOWED: Call a physician or Poison Control Center. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

IF IN EYES: Hold eyelids open and flush with steady gentle stream of water for 15 minutes. Get medical attention.

NOTE TO PHYSICIANS: This product may cause cholinesterase inhibition. Atropine is antidotal. Pralidoxime chloride (2-PAM; PROTOPAM chloride) may be effective as an adjunct to atropine. Probable mucosal damage may contraindicate the use of gastric lavage.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

Causes substantial but temporary eye injury. Harmful if absorbed through the skin. Do not get in eyes or on clothing. Avoid contact with skin. Wear goggles or face shield. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

ENVIRONMENTAL HAZARDS

This product is toxic to birds and fish. Fish and other aquatic organisms in water treated with this product may be killed. You must consult your State Fish and Game Agency before applying this product to waters or wetlands. Do not contaminate water by cleaning of equipment or disposing of wastes.

DIRECTIONS FOR USE

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

STORAGE AND DISPOSAL

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

STORAGE: Store in a cool, dry place. Reseal opened containers immediately after using. If product container is broken, contact manufacturer. If spill occurs, sweep up and apply product according to labeled directions. Store only in original containers, in a locked area, away from other pesticides, fertilizers, food, and feed.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of 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: Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

GENERAL: Consult Federal, state or local disposal authorities for approved alternative procedures.

For control of mosquito and midge larvae, apply 5% SKEETER ABATE as specified below:

Areas of Treatment	Lbs. Per Acre
Standing water, shallow ponds, lakes, woodland pools, catch basins	2
Tidal waters, marshes, swamps and waters high in organic content	4
Highly polluted water	10

May be applied as a spot treatment to catch basins and similar areas where mosquitoes may breed.

Apply uniformly and repeat applications as necessary. Do not use on crops used for food, forage or pasture.

This product may also be applied as a pre-hatch to areas which will breed mosquitoes.

This product may also be applied by suitable aerial equipment. Apply product uniformly according to the above chart. Do not apply this product above the application rates stated on this label.

DISCLAIMER

The label instructions for the use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the use or application of the product contrary to label instructions, all of which are beyond the control of Clarke Mosquito Control Products, Inc. All such risks shall be assumed by the user.

Clarke Mosquito Control Products, Inc. warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above.

Any damages arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages such as loss of profits or values or any other special or indirect damages.

Clarke Mosquito Control Products, Inc. makes no other express or implied warranty, including any other express or implied warranty of FITNESS or of MERCHANTABILITY.

IN CASE OF EMERGENCY, CALL INFO TRAC 1-800-535-5053

© Registered trademark of American Cyanamid Company

CLARKE MOSQUITO CONTROL PRODUCTS, INC.

159 N. GARDEN AVENUE
ROSELLE, ILLINOIS 60172

Net Contents:
LOT NO.

01/05

Material Safety Data Sheet

Date last revised: 2 January 2003

I. General Information

Chemical Name and Synonyms Temephos	Trade Name & Synonyms 5% Skeeter Abate (Pellets)
Chemical Family Organophosphate	EPA Registration Number 8329-15
Proper DOT Shipping Name Agricultural Insecticide, N.O.I., Other than Liquid	DOT Hazard Classification Non-Hazardous
Manufacturer Clarke Mosquito Control Products, Inc.	Manufacturer's Phone Number (630) 894-2000
Manufacturer's Address 159 North Garden Avenue Roselle, Illinois 60172	INFOTRAC (Transportation/Spill Emergency) 1-800-553-5053 Polson Control Center (Medical Emergency) 1-800-214-7753

WARNING: Causes substantial but temporary eye injury. Harmful if absorbed through the skin. Do not get in eyes or on clothing. Avoid contact with skin. Wear goggles or face shield. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

II. Ingredients

Principal Hazardous Components	CAS #	OSHA PEL-TWA	Percent
Temephos	003383-96-8	15mg/m3	5.0%

III. Physical Data

Boiling Point (°F): Not Applicable	Specific Gravity (H₂O = 1):
Vapor Pressure (mm Hg.): Negligible	Vapor Density (Air = 1): Not Available
Solubility in Water: Negligible	Odor: Mercaptan-like odor
Appearance: White colored, free flowing pellets	

IV. Fire & Explosion Hazard Data

Flash Point (Test Method): Not Applicable
Extinguishing Media: Extinguish using an agent suitable for the surrounding fire. (Material itself does not burn or burns with difficulty).
Special Fire Fighting Procedures: Wear self-contained, positive pressure breathing apparatus and full fire fighting protective clothing. Keep unnecessary people away. Use as little water as possible. Dike area of fire to prevent pesticide run-off. Use spray or fog – solid stream may cause spreading. Do not decontaminate personnel or equipment, or handle broken packages or containers without protective equipment as specified in the Exposure Control Section. Decontaminate emergency personnel with soap and water before leaving the fire area.
Unusual Fire & Explosion Hazards: Avoid breathing dusts, vapors and fumes from burning materials. Control run-off water. If water enters a drainage system, advise the authorities downstream.

V. Health Hazard Data

Toxicity*: Oral LD ₅₀ : > 1,500 mg/kg Dermal LD ₅₀ : > 2,000 mg/kg	This product is considered to be practically nontoxic by ingestion in single doses. This product is considered to be no more than slightly toxic by single skin applications.
* Toxicity data based on ABATE Technical	
Teratogenicity: No teratogenic or fetotoxic effect was observed at all dose levels tested in both rabbits and rats	Carcinogenicity: Temephos is not listed as a human carcinogen by the IARC, OSHA, or NTP.
Mutagenicity: No mutagenic activity was observed in ABATE Tech by all test methods used. (Bacterial/Microsome Reverse Mutation (AMES) Test, Chemical Induction of Chromosome Aberration using Monolayer Cultures or Chinese Hamster Ovary (CHO) Cells with and without Metabolic Activity, Rat Hepatocyte Primary Culture/DNA Repair Test, and Mammalian Cell CHO/Hypoxanthine Guanine Phosphoribosyl Transferase (HGPRT) Mutagenicity Test)	
Medical Conditions Aggravated by Exposure: Knowledge of the available toxicology information and of the physical and chemical properties of the material suggest that overexposure is unlikely to aggravate existing medical conditions.	
Symptoms of Overexposure (Note to Physicians): This product may inhibit activity of cholinesterase. Atropine is antidotal. Pralidoxime chloride (2-PAM; PROTOPAM Chloride) may be effective as an adjunct to atropine.	
EMERGENCY FIRST AID	
Skin Contact: Wash with plenty of soap and water.	Inhalation: Remove to fresh air.
Eye: Causes substantial but temporary eye injury. 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. Call a poison control center or doctor for treatment advice.	
Ingestion: Drink promptly a large quantity of milk, egg white, gelatin solution, or, if these are not available, large quantities of water. Avoid alcohol.	

Material Safety Data Sheet

5% Skeeter Abate (Pellets)

Date last revised: 2 January 2003

VI. Reactivity Data

Stability:		Unstable	Conditions to Avoid: Storage above 60 °C
	X	Stable	
Incompatibility		May Occur	Conditions to Avoid: Strong alkalis and some oxidizing agents
	X	Will Not Occur	
Hazardous Decomposition Products	Decomposition may produce oxides of carbon, phosphorous, and sulfur		

VII. Environmental Protection Procedures

Spill Response: Wear protective equipment per Exposure Control Methods Section. Shovel spill into a closed metal container.

Storage: Do not contaminate water, food, or feed by storage or disposal. Store in a secure, dry, well-ventilated room, building or covered area.

Waste Disposal: Dispose in accord with local, state, and federal regulation.

VIII. Special Protection Information

Exposure Control Methods: During formulation, it is recommended to wear protective clothing, rubber gloves, and goggles to prevent exposure to skin and eyes. Wear an approved toxic-dust respirator when such exposure could exceed the PEL.

Other Protection: Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

IX. Additional Regulatory Information**SARA Title III Data****Section 311 and 312 Hazard Categories**

Immediate Health Hazard	Y	Reactive Hazard	N
Delayed Health Hazard	N	Sudden Pressure	N
Fire Hazard	N	Release Hazard	N

Section 302 Extremely Hazardous Substances: None

Section 313 Toxic Chemicals:

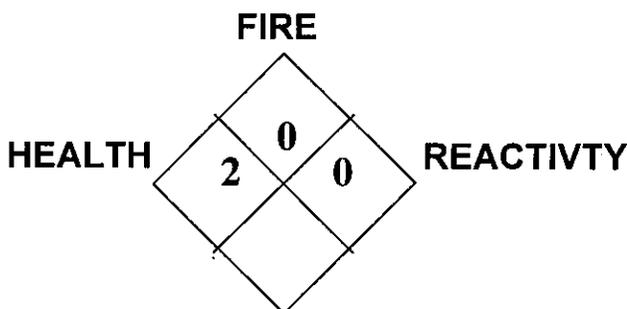
Temephos

CAS# 3383-96-8

5.0% by weight

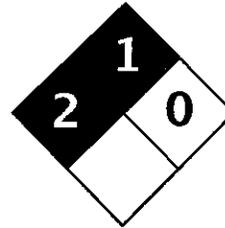
CERCLA Reportable Quantity:

None

**NFPA Code Key**

- 4 = Severe
- 3 = Serious
- 2 = Moderate
- 1 = Slight
- 0 = Minimal

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.**



Health	2
Fire	1
Reactivity	0
Personal Protection	H

Material Safety Data Sheet Piperonyl Butoxide MSDS

Section 1: Chemical Product and Company Identification

Product Name: Piperonyl Butoxide

Catalog Codes: SLP2218

CAS#: 51-03-6

RTECS: XS8050000

TSCA: TSCA 8(b) inventory: Piperonyl Butoxide

CI#: Not available.

Synonym:

4,5-Methylenedioxy-2-propylbenzyl-diethyloneglycol butyl ether

Chemical Name: Piperonyl Butoxide

Chemical Formula: C19-H30-O5

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: 1-800-901-7247
International Sales: 1-281-441-4400

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Piperonyl Butoxide	51-03-6	100

Toxicological Data on Ingredients: Piperonyl Butoxide: ORAL (LD50): Acute: 6150 mg/kg [Rat]. 2600 mg/kg [Mouse].
DERMAL (LD50): Acute: 200 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant).
Severe over-exposure can result in death.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Classified 4 (No evidence.) by NTP. 3 (Not classifiable for human.) by IARC.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Development toxin [POSSIBLE].

The substance may be toxic to blood, kidneys, lungs, liver, skin, central nervous system (CNS).

Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human

organs.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: CLOSED CUP: 171°C (339.8°F).

Flammable Limits: Not available.

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Poisonous liquid.

Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Odorless.

Taste: Bitter. (Slight.)

Molecular Weight: 338.45 g/mole

Color: Yellow.

pH (1% soln/water): Not applicable.

Boiling Point: 180°C (356°F)

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: 1.059 (Water = 1)

Vapor Pressure: Not available.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties:

Partially dispersed in methanol.

Is not dispersed in cold water, hot water.

See solubility in methanol.

Solubility:

Partially soluble in methanol.

Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Slightly reactive to reactive with oxidizing agents.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

Acute oral toxicity (LD50): 2600 mg/kg [Mouse].

Acute dermal toxicity (LD50): 200 mg/kg [Rabbit].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified 4 (No evidence.) by NTP. 3 (Not classifiable for human.) by IARC.

DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Development toxin [POSSIBLE].

May cause damage to the following organs: blood, kidneys, lungs, liver, skin, central nervous system (CNS).

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Toxic Liquid, n.o.s (Piperonyl Butoxide) UNNA: 2810 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Piperonyl Butoxide

Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):

CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).

CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R24- Toxic in contact with skin.

R40- Possible risks of irreversible effects.

R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 11:29 AM

Last Updated: 11/06/2008 12:00 PM

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Dual-action Adulticide

A quick knockdown oil soluble synergized synthetic pyrethroid for effective control of adult MOSQUITOES, GNATS, BITING and NON-BITING MIDGES, and BLACK FLIES in outdoor residential and recreational areas.

Active Ingredients

Prallethrin: (RS)-2-methyl-4-oxo-3-(2-propynyl) cyclopent-2-enyl-(1RS)-cis.trans-chrysanthematate	1.00%
Sumithrin®: 3-Phenoxybenzyl-(1RS, 3RS; 1RS, 3SR)-2.	
2-dimethyl-3-(2-methylprop-1-enyl) cyclopropanecarboxylate	5.00%
Piperonyl Butoxide, Technical *	5.00%
Other Ingredients **	89.00%
	100.00%

Contains 0.085 pounds of Technical Prallethrin/Gallon, 0.37 pounds of Technical Sumithrin®/Gallon, and 0.37 pounds Technical Piperonyl Butoxide/Gallon

* Equivalent to 4.00% (butylcarbityl) (6-propylpiperonyl) ether and 1.00% related compounds.

** Contains petroleum distillate

CAUTION

KEEP OUT OF REACH OF CHILDREN

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

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 a doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

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 1-888-746-8712.

NOTE TO PHYSICIAN: Contains petroleum distillate - vomiting may cause aspiration pneumonia.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This product 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. 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.

BEE WARNING: This product is 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.

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.

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.

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.

PROHIBITION ON AERIAL USE: Not for aerial application in Florida unless specifically authorized by the Bureau of Entomology, Florida Department of Agriculture and Consumer Services.

Do not contaminate food, feed or drinking water. Do not spray this product on or allow it to drift on pastureland, rangeland, cropland, poultry ranges, or potable water supplies. In treatment of corrals, feed lots, swine lots and zoos, cover any exposed drinking water, drinking water fountains and animal feed before application.

Wear long sleeved shirt and long pants, socks and shoes.

DUET™ Dual-action Adulticide cannot be diluted in water. Dilute this product with light mineral oil if dilution is preferred.

USE AREAS: For use in mosquito adulticiding programs involving outdoor residential and recreational areas where adult mosquitoes are present in annoying numbers, and in vegetation surrounding parks, woodlands, swamps, marshes, overgrown areas and golf courses. For best results, apply when mosquitoes are most active and meteorological conditions are conducive to keeping the spray cloud 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. Do not treat a site with more than 0.0036 pounds of sumithrin or 0.0008 pounds of prallethrin per acre in a 7-day period. More frequent applications may be made if adult mosquitoes have reinfested the treatment area and 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. Do not exceed 0.094 pounds of sumithrin or 0.021 pounds of prallethrin in any site in a year.

SPRAY DROPLET SIZE DETERMINATION

Ground-based Application: Spray equipment must be adjusted so that the volume median diameter (VMD) is between 8 and 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 Application: 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 115 microns (Dv 0.9 < 115 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

To control Mosquitoes and other listed insects, apply DUET™ Dual-action Adulticide at a flow rate of 2.5 to 7.5 fluid ounces per minute at an average vehicle speed of 10 mph using a swath width of 300 feet for acreage calculations (see chart below). Under normal residential conditions a flow rate of 4.5 fluid ounces per minute is recommended. If a different vehicle speed is used, adjust rate accordingly. These rates are equivalent to 0.0003 to 0.0008 pounds of Prallethrin and 0.0012 to 0.0036 pounds of Sumithrin® and piperonyl butoxide per acre. Vary flow rate according to vegetation density and mosquito population. Use higher flow rate in heavy vegetation or when populations are high. For proper application, mount the applicator so the nozzle is at least 41/2 feet above ground level and directed out the back of the vehicle. Failure to follow the above directions may result in reduced effectiveness. DUET™ Dual-action Adulticide may also be diluted with a suitable solvent such as mineral oil and applied by GROUND U.L.V. equipment so long as 1.24 fluid ounces per acre of DUET™ Dual-action Adulticide is not exceeded. Refer to the tables below for flow rate calculations for diluted end-use formulations of DUET™ Dual-action Adulticide.

Use the following table to calculate application rates:

Prallethrin	Pounds a.i./Acre		DUET™ Fl.oz./Acre	Flow Rates in fluid oz./minute at truck speeds of:			
	Sumithrin®	PBO		5 MPH	10 MPH	15 MPH	20 MPH
0.0008	0.0036	0.0036	1.24	3.8	7.5	11.3	15.0
0.0025	0.0022	0.0022	0.75	2.3	4.5	6.8	9.1
0.0004	0.0018	0.0018	0.62	1.9	3.8	5.6	7.5
0.0003	0.0012	0.0012	0.41	1.2	2.5	3.7	5.0

DUET Dual-action Adulticide may also be applied undiluted with non-thermal, portable, motorized backpack equipment adjusted to deliver ULV particles of 50 to 100 microns VMD. Use 0.41 to 1.24 fl.oz. of the undiluted spray per acre (equal to 0.0012 to 0.0036 lb. sumithrin/acre) as a 50 ft (15.2 m) swath while walking at a speed of 2 mph (3.2 kph).

DUET Dual-action Adulticide may be applied for urban ULV mosquito control. For control of resting or flying adult mosquitoes, biting flies and 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. DUET Dual-action Adulticide may be applied using mechanical foggers, hand-held or truck mounted ULV equipment, non-thermal foggers or other spray equipment suitable for this application. Apply DUET Dual-action Adulticide at rates up to but not exceeding 0.0036 pounds sumithrin per acre in a 7-day period (not to exceed 0.094 pounds sumithrin per acre in any site in any year).

AERIAL APPLICATION

Application shall be made when ground wind speed is equal to or greater than 1 mph. Applications shall be made when surface temperature exceeds 50°F. Application shall be made at 75 feet to 300 feet for rotary aircraft and 100 to 300 feet for fixed-wing aircraft. Flow rate and swath width shall be set so as to achieve 0.41 to 1.24 fluid ounces of DUET™ Dual-action Adulticide per acre. Appropriate spray systems include rotary atomizers, flat fan, high pressure, and high pressure impaction nozzles characterized and oriented to achieve the droplet characteristics above.

DUET™ Dual-action Adulticide may also be diluted with a suitable solvent such as mineral oil and applied by aerial U.L.V. equipment so long as 1.24 fluid ounces per acre of DUET™ Dual-action Adulticide is not exceeded. Refer to the tables below for flow rate calculations for diluted end-use formulations of DUET™ Dual-action Adulticide.

DUET™ Dual-action Adulticide (Prallethrin + Sumithrin® + PBO) Formulation Dilution Table

UNDILUTED DUET™ DUAL-ACTION ADULTICIDE

Dosage Description	Pounds a.i./Acre			% Conc*	DUET™ Fl.oz./Acre	Flow Rates in fluid oz./minute at truck speeds of:			
	Prallethrin	Sumithrin®	PBO			5 MPH	10 MPH	15 MPH	20 MPH
High Population	0.0008	0.0036	0.0036	5.0	1.24	3.8	7.5	11.3	15.0
Recommended	0.0005	0.0022	0.0022	5.0	0.75	2.3	4.5	6.8	9.1
Light Population	0.0004	0.0018	0.0018	5.0	0.62	1.9	3.8	5.6	7.5
Population	0.0003	0.0012	0.0012	5.0	0.41	1.2	2.5	3.7	5.0

DILUTION CALCULATIONS

Dosage Description	Pounds a.i./Acre			% Conc*	DUET™ Fl.oz./Acre	Flow Rates in fluid oz./minute at truck speeds of:			
	Prallethrin	Sumithrin®	PBO			5 MPH	10 MPH	15 MPH	20 MPH
High Population	0.0008	0.0036	0.0036	4.0	1.55	4.7	9.4	14.1	18.8
Recommended	0.0005	0.0022	0.0022	4.0	0.94	2.8	5.7	8.5	11.4
Light Population	0.0004	0.0018	0.0018	4.0	0.78	2.3	4.7	7.0	9.4
Population	0.0003	0.0012	0.0012	4.0	0.52	1.6	3.2	4.7	6.3

Dosage Description	Pounds a.i./Acre			% Conc*	DUET™ Fl.oz./Acre	Flow Rates in fluid oz./minute at truck speeds of:			
	Prallethrin	Sumithrin®	PBO			5 MPH	10 MPH	15 MPH	20 MPH
High Population	0.0008	0.0036	0.0036	3.0	2.07	6.3	12.5	18.8	25.1
Recommended	0.0005	0.0022	0.0022	3.0	1.25	3.8	7.6	11.4	15.2
Light Population	0.0004	0.0018	0.0018	3.0	1.04	3.1	6.3	9.4	12.5
Population	0.0003	0.0012	0.0012	3.0	0.69	2.1	4.2	6.3	8.4

Dosage Description	Pounds a.i./Acre			% Conc*	DUET™ Fl.oz./Acre	Flow Rates in fluid oz./minute at truck speeds of:			
	Prallethrin	Sumithrin®	PBO			5 MPH	10 MPH	15 MPH	20 MPH
High Population	0.0008	0.0036	0.0036	2.0	3.10	9.4	18.8	28.2	-
Recommended	0.0005	0.0022	0.0022	2.0	1.88	5.7	11.4	17.0	22.7
Light Population	0.0004	0.0018	0.0018	2.0	1.55	4.7	9.4	14.1	18.8
Population	0.0003	0.0012	0.0012	2.0	1.03	3.1	6.2	9.4	12.5

Dosage Description	Pounds a.i./Acre			% Conc*	DUET™ Fl.oz./Acre	Flow Rates in fluid oz./minute at truck speeds of:			
	Prallethrin	Sumithrin®	PBO			5 MPH	10 MPH	15 MPH	20 MPH
High Population	0.0008	0.0036	0.0036	1.0	6.20	18.8	-	-	-
Recommended	0.0005	0.0022	0.0022	1.0	3.80	11.5	23.0	-	-
Light Population	0.0004	0.0018	0.0018	1.0	3.10	9.4	18.8	28.2	-
Population	0.0003	0.0012	0.0012	1.0	2.07	6.3	12.5	18.8	25.1

* based on Sumithrin Concentration

STORAGE & DISPOSAL

Do not contaminate water, food or feed by storage or 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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of container 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.

DUET™ is a Trademark of Clarke Mosquito Control Products, Inc.

Sumithrin™ is a Trademark of Sumitomo Company, Ltd.

FOR MORE INFORMATION CALL: 1-800-323-5727

Manufactured For

CLARKE MOSQUITO CONTROL PRODUCTS, INC.

Roselle, Illinois 60172 U.S.A.

EPA Reg. No.: 1021-1795-8329

Net Contents: 55 GAL

EPA Est. No.: 1021-MN-2

Lot/Batch:

Material Safety Data Sheet

Date last revised: 10 October 2005

I. General Information

Chemical Name and Synonyms None: mixture/blend	Trade Name & Synonyms DUET[®] Dual-action Adulticide
Chemical Family Synergized Synthetic Pyrethroid	EPA Registration Number 1021-1795-8329
Proper DOT/ICAO/IATA Shipping Name Insecticides, Insect or Animal Repellent, Liquid, N.O.S.	DOT/ICAO/IATA Hazard Classification Non-Hazardous
Registrant Clarke Mosquito Control Products, Inc.	Registrant's Phone Number (630) 894-2000
Address 159 North Garden Avenue Roselle, Illinois 60172	INFOTRAC (Transportation/Spill Emergency) 1-800-553-5053 Poison Control Center (Medical Emergency) 1-888-740-8712

II. Ingredients

Principal Hazardous Components	Wt. %	CAS #	EINECS#
Prallethrin (ETOC [®])	1.0	023031-36-9	245-387-9
d-Phenothrin (Sumithrin [®])	5.0	026002-80-2	247-404-5
Piperonyl Butoxide	5.0	000051-03-6	200-076-7
Aromatic Hydrocarbon	15-25	070693-06-0	Not Avail.
Hydrotreated Paraffinic Oil	50-75	072623-84-8	Not Avail.

COMMENTS: Ingredients not identified are proprietary or non-hazardous. Values are not product specifications.

III. Physical Data

Boiling Point (°F): Not Available	Specific Gravity (H₂O = 1): 0.904 at 20 °C (68 °F)
Vapor Pressure (mm Hg.): Not Available	Vapor Density (Air = 1): Heavier than air
Solubility in Water: Immiscible in water	pH: Not Determined
Appearance: Clear, light yellow liquid (Gardner Scale 2)	Odor: Aromatic solvent
Viscosity: 17 CPS at 24 °C (75.2 °F) Brookfield	(VOC): < 1%

IV. Fire & Explosion Hazard Data

Flash Point (Test Method): > 93.3 °C (200 °F) TAG Closed Cup
Flammable Class: This product is NOT classified as flammable or combustible by OSHA
Extinguishing Media: Foam, carbon dioxide, or dry chemical
Hazardous Combustion Products: This product is classified as Non-Combustible, however in the extreme temperatures that fires may produce, some of the constituents of this formula may decompose to give off such gases as carbon dioxide, carbon monoxide, and nitrogen oxides.
Special Fire Fighting Procedures: Treat as an oil fire. Use a full-faced self-contained breathing apparatus along with full protective gear. Keep nearby containers and equipment cool with a water stream.
Sensitive to Static Discharge: Yes, use proper bonding and/or grounding procedures

V. Health Hazard Data

EMERGENCY OVERVIEW: CAUTION. Harmful if swallowed. Contains petroleum distillates; vomiting may cause aspiration pneumonia. Take prudent precautions to avoid contact with skin, eyes, and clothing. Do not use or store near heat or open flame.

POTENTIAL HEALTH EFFECTS & EMERGENCY FIRST AID

Skin Contact: Can cause skin irritation. Can cause a burning or prickling sensation on more sensitive areas (face, eyes, mouth). May be harmful if absorbed through the skin. 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.

Eye: May cause temporary irritation, tearing, and blurred vision. 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 the eye. Call a poison control center or doctor for treatment advice.

Inhalation: Excessive inhalation of mists can cause nasal and respiratory irritation. Remove affected person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Material Safety Data Sheet

DUET® Dual-action Adulticide

Date last revised: 10 October, 2005

Ingestion: Harmful if swallowed. Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe lung injury. 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 a doctor. Never give anything by mouth to an unconscious person.

Chronic: None known

NOTES TO PHYSICIAN: Contains pyrethroids and petroleum distillates; vomiting may pose an aspiration pneumonia hazard. For skin effects, a highly efficient therapeutic agent for pyrethroid exposure is topical application of Tocopherol Acetate (Vitamin E).

VI. Reactivity Data

Stable:	YES
Incompatibility	Strong acidic or alkaline materials. Not compatible with strong oxidizers.
Hazardous Polymerization:	NO

VII. Environmental Protection Procedures

Spill Response: Stop release, if possible without risk. Dike or contain release, if possible, and if immediate response can prevent further damage or danger. Isolate and control access to the release area. Take actions to reduce vapors. For large spills, collect product into drums, storage tanks, etc. via drains, pumps, etc. Absorb with appropriate absorbent such as sand, or vermiculate. Clean spill area of residues and absorbent.

Environmental Precautions: Water Spill: Contains pyrethroids which are toxic to fish and other aquatic invertebrates. Contaminated absorbent and wash water should be disposed of according to local, state/provincial and federal/national regulations.

Storage: Store in a cool, dry place. Keep container closed. Do not contaminate water, food or feedstuffs by storage, handling, or by disposal.

Disposal Considerations: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Triple rinse (or equivalent) empty containers and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved State and Local procedures

RCRA/EPA Waste Information: None of the ingredients in this product appear on the RCRA lists (40 CFR 261.24, 40 CFR 251.33) or CERCLA Hazardous Substance list (40 CFR Part 302 Table 302.4).

VIII. Special Protection Information

Exposure Guidelines (TWA)	OSHA PEL	ACGIH TLV	Supplier OEL
Prallethrin (ETOC®)	None	None	None
d-Phenothrin (Sumithrin®)	None	None	None
Piperonyl Butoxide	None	None	None
Aromatic Hydrocarbon	None	None	17 ppm - 100 mg/m3
Hydrotreated Paraffinic Oil	5 mg/m3	5 mg/m3	None

Eye Protection: Take prudent precautions to avoid contact with eyes.

Skin Protection: Take prudent precautions to avoid contact with skin and clothing.

Respiratory Protection: Wearing a respirator is not normally required when handling this product. Use in well ventilated areas. Take prudent precautions to avoid breathing vapors and/or spray mists of this product.

Engineering Controls: Mechanical ventilation should be used when handling this product in enclosed spaces. Local exhaust ventilation may be necessary.

Work/Hygienic Practices: DO NOT SMOKE, EAT, OR DRINK, OR APPLY COSMETICS IN WORK AREA. Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking, or using the toilet.

IX. Toxicological Information

Acute Dermal LD50 > 5000 mg/kg (albino rabbit) | Acute Oral LD50 > 5000 mg/kg (albino rat)

Inhalation LC50: The acute inhalation LC50 of this material places it in EPA toxicity category IV.

Eye Effects: Irritation clearing in 24 hours.

Skin Effects: Slight irritation at 72 hours. Irritation index = 0.9

Sensitization: Negative; Not considered to be a dermal sensitizer.

COMMENTS: None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA, or ACGIH as being carcinogens.

Material Safety Data Sheet**DUET® Dual-action Adulicide**

Date last revised: 10 October, 2005

X. Additional Regulatory Information**SARA Title III (Superfund Amendments and Reauthorization Act)**

311/312 Hazard Categories:

FIRE: NO	PRESSURE GENERATING: NO	REACTIVITY: NO	ACUTE: YES
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313 Reportable Ingredients (Component, CAS#, Max %):

Piperonyl butoxide, 000051-03-6, 5.0

d-Phenothrin (Sumithrin®), 026002-80-2, 5.00

302/304 Emergency Planning

Emergency Plan: There are no SARA Title III Section 302 extremely hazardous substances present in this formulation (40 CFR 355).

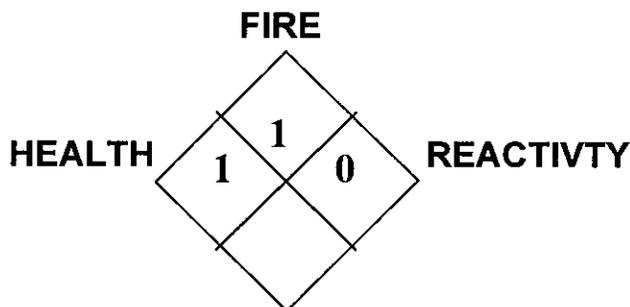
There are no components that are subject to emergency requirements under CERCLA Section 103(a) (40 CFR 302.4) in this formulation.

TSCA (Toxic Substance Control Act)

TSCA Status: All chemical substances found in this product comply with the Toxic Substances Control Act's inventory reporting requirements.

State Regulations

Volatile Organic Compounds (VOC): This product contains less than 1% VOCs.

**NFPA Code Key**

- 4 = Severe
- 3 = Serious
- 2 = Moderate
- 1 = Slight
- 0 = Minimal

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.**

Zenivex™

E20

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, AND BLACK FLIES
- FOR USE AS A SPACE SPRAY BY AIR AND GROUND APPLICATION TO CONTROL ADULT MOSQUITOES
- CAN BE USED UNDILUTED OR DILUTED
- CONTROLS ADULT MOSQUITOES THAT MAY CARRY WEST NILE VIRUS, EASTERN EQUINE ENCEPHALITIS, ST. LOUIS ENCEPHALITIS
- CONTROLS NON-BITING MIDGES, NUISANCE AND BITING FLIES
- QUICK PERMANENT KNOCKDOWN OF ADULT MOSQUITOES

SPECIMEN LABEL

ACTIVE INGREDIENT:

Etofenprox (CAS #80844-07-1) 20%

OTHER INGREDIENTS*: 80%

Total: 100%

Contains 1.48 lbs Etofenprox per gallon

*Contains petroleum distillates

EPA Reg No. 2724-791

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional Precautionary Statements, First Aid Treatments, and Directions for Use

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. 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

Call a poison control center or doctor immediately 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 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 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/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. **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.

GENERAL

Zenivex™ is an effective insecticide used at low volumes to control adult mosquitoes, non-biting midges, biting and non-biting flies. Use Zenivex™, either undiluted as Ultra-Low Volume (ULV) or diluted with mineral oil or other suitable oil diluent, 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. Do not spray on or allow drift onto pastureland, cropland, or potable water supplies. In the treatment of corrals, feedlots, swine lots, and zoos, cover any exposed drinking water, drinking water fountains, and animal feed before application. Apply Zenivex™ aerially (both fixed and rotary aircraft) for low volume applications or through mist-blowers, backpack, and handheld sprayers for ground applications. Zenivex™ will control flies and mosquitoes and can be used as part of a total integrated pest management program for controlling disease vectors. Apply Zenivex™ at rates from 0.00175 to 0.0070 pounds of etofenprox per acre.

Dilute this product with oil (10-50 cps) only; do not mix with water. Apply when wind is ≥ 1 mph. 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 retreat a site more than once in three days; make no more than two applications to a site in any one week or 25 applications in one 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.

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 altering the dilution rate of Zenivex™. Refer to the following chart for examples.

Application rate pound A.I. per acre	Vehicle Speed MPH	Flow rates			
		Undiluted Oz/minute	Diluted 1 to 1 Oz/minute	Diluted 1 to 2 Oz/minute	Diluted 1 to 4.5 Oz/minute
0.00175	10	0.9	1.8	2.74	4.57
	15	1.4	2.7	5.40	9.90
	20	1.8	3.6	7.20	13.20
0.00350	10	1.8	3.6	5.48	9.14
	15	2.7	5.4	10.80	19.80
	20	3.6	7.2	14.40	26.40
0.00700	10	3.6	7.2	10.78	19.80
	15	5.4	10.8	16.18	39.60
	20	7.2	14.4	21.50	52.80

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™ diluted or 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™ using mechanical foggers, hand-held or truck-mounted ULV equipment, thermal foggers or other spray equipment suitable for this application. Apply Zenivex™ 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 ($D_{v0.5} < 60\mu$) and 90% of the spray is contained in droplets smaller than 100 microns ($D_{v0.9} < 100\mu$).

AERIAL APPLICATION

Apply Zenivex™ aerially, either diluted or 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 ($D_{v0.5} < 60\mu$) and that 90% of the spray is contained in droplets smaller than 100 microns ($D_{v0.9} < 100\mu$). 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™ 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. **In Florida:** Do not apply by aircraft except with the approval of the Florida Department of Agriculture and Consumer Services.

PESTICIDE STORAGE AND DISPOSAL

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

STORAGE AND SPILL PROCEDURES: Store upright at room temperature. 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: 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 $\frac{1}{4}$ full with water. 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 $\frac{1}{4}$ full of water 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.

To the extent consistent with applicable law, seller makes no warranty, expressed or implied, concerning the use 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 emergency call
1-800-248-7763.

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



MATERIAL SAFETY DATA SHEET
Zenivex E20

Manufacturer: Wellmark International
Address: 1501 East Woodfield Road, Suite 200-West Schaumburg, IL 60173
Emergency Phone: 800-248-7763
Transportation Emergency Phone: CHEMTREC: 1-800-424-9300

1. CHEMICAL PRODUCT INFORMATION

Product Name: Zenivex E20
Chemical Name/Synonym: Etofenprox
Chemical Family: Non-ester Pyrethroid
Formula: C₂₅H₂₈O₃
EPA Registration No.: 2724-791
RF Number: RF2056

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component (chemical, common name)</u>	<u>CAS Number</u>	<u>Weight</u>	<u>Tolerance</u>
Etofenprox: 1-[[2-(4-ethoxyphenyl)-2-methylpropoxy]methyl]-3-phenoxybenzene	80844-07-1	20.0%	None established
Other ingredients (non-hazardous and/or trade secret)		80.0%	PEL & TLV: 5 mg/m ³

3. HAZARD INFORMATION

PRECAUTIONARY STATEMENTS
KEEP OUT OF REACH OF CHILDREN
CAUTION
HAZARDOUS TO HUMANS AND DOMSTIC ANIMALS

PRIMARY ROUTE OF ENTRY Dermal/Eye: Yes. Oral: No. Inhalation: Yes.

ACUTE TOXICITY
Oral: No specific hazard identified.
Dermal: No specific hazard identified.
Inhalation: No specific hazard identified.

OTHER TOXICOLOGICAL INFORMATION

Skin Irritation: Repeated exposure to etofenprox can cause skin irritation.
Eye Irritation: Causes moderate eye irritation.
Sensitizer: Not a dermal sensitizer.

4. FIRST AID MEASURES

Eye: 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.
Note to Physician: Contains petroleum distillates. Vomiting may cause aspiration pneumonia.

5. FIRE FIGHTING MEASURES

NFPA Rating:	Health: 2	Fire: 2	Reactivity: 0
Flammability Class:	Class III A Combustible Liquid.		
Flash Point:	178° F (81°C).		
Explosive Limits (% of Volume):	Not available.		
Extinguishing Media:	Dry chemical, CO ₂ , foam, water fog. Do not use water jet, handle as an oil fire.		
Special Protective Equipment:	Firefighters should wear full protective clothing including self-contained breathing apparatus.		
Fire Fighting Procedures:	Use water fog to cool fire exposed containers. USE WATER CAREFULLY NEAR EXPOSED/BURNING LIQUIDS. May cause frothing and splashing of hot material. Handle as an oil fire. Do not allow run-off to enter waterways or sewers. This product is toxic to aquatic organisms.		
Combustion Products:	Oxides of carbon.		
Unusual Fire/Explosion Hazards:	Burning fluid may evolve irritating/noxious fumes.		

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken:	Use appropriate personal protective equipment. Eliminate sources of ignition. Floor may be slippery: use care to avoid falling. Absorb spill with an inert material. Place in container for disposal. Do not allow spill to enter waterways or sewers. This product is toxic to aquatic organisms.
Absorbents:	Clay granules, sawdust, dirt, or equivalent.
Incompatibles:	Strong oxidants and acidic agents.

7. HANDLING AND STORAGE

Handling:	Wash hands with soap and water after handling material. Avoid contact with skin, eyes, or clothing.
Storage:	Do not contaminate water, food, or feed, by storage. Store upright at room temperature. Avoid exposure to extreme temperatures.

8. EXPOSURE CONTROL / PERSONAL MEASURES

Exposure Limits:	Severely hydrotreated paraffinic oil. OSHA PEL 5 mg/m ³ . ACGIH TLV 5 mg/m ³ .
Ventilation:	Use with ventilation adequate to maintain airborne concentrations below recommended exposure limits.
Personal Protective Equipment:	Use appropriate precautions to avoid contact with skin, eyes or clothing. Use splash goggles or safety glasses. Chemical resistant gloves are recommended. If ventilation is inadequate, or airborne concentrations exceed recommended exposure limits, respiratory protection suitable for use with oil mists may be required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Clear, pale yellow liquid with citrus odor.
Boiling Point:	Not known.
Melting Point:	Not applicable.
Vapor Pressure (mm Hg):	Not known.
Vapor Density (Air = 1):	Not known.
Specific Gravity:	0.891.
Bulk Density:	7.4 lbs per gallon.
Solubility:	Not soluble in water.
Evaporation Rate:	Not known.
pH:	Not applicable.

10. STABILITY AND REACTIVITY

Stability:	Stable.
Reactivity:	Not reactive.
Incompatibility w/ Other Materials:	No incompatibilities known except with strong oxidants such as hypochlorites.
Decomposition Products:	Oxides of carbon from combustion.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Acute oral toxicity (rat): LD50 >5,000 mg/kg
Acute dermal toxicity: LD50 >5,000mg/kg
Acute inhalation toxicity: 4-hr LC50 >2 mg/L
Skin irritation: Very slight irritation
Eye irritation: Minimally irritating
Dermal Sensitization: Not a sensitizer

SUBCHRONIC TOXICITY [Specific to Active Ingredient(s)]

Etofenprox is a mild skin irritant after 4-weeks of treatment. No systemic toxicity from dermal exposure was observed at doses up to 1000 mg/kg/day.

CHRONIC TOXICITY [Specific to Active Ingredient(s)]

Etofenprox is not listed as a carcinogen by NTP or IARC and is not regulated by OSHA.

In rats the target organs are the liver and thyroid. The NOAEL for chronic toxicity is 3.7 mg/kg/day for male rats. The target organ in mice is the kidney. The NOAEL is 3.1 mg/kg/day for mice.

DEVELOPMENTAL/REPRODUCTIVE TOXICITY [Specific to Active Ingredient(s)]

Etofenprox is not a teratogen. It does not have adverse effects on reproduction.

MUTAGENICITY [Specific to Active Ingredient(s)]

Etofenprox is not a mutagen.

12. ECOLOGICAL INFORMATION

Toxic to aquatic organisms, including fish and invertebrates.
The product is toxic to bees exposed to direct treatment on blooming crops and weeds.

ECOTOXICITY [Active Ingredients Only]

Etofenprox

Acute Toxicity: fish: LC₅₀ (trout): 3.3 ppb, (bluegill): 8.5 ppb.

13. DISPOSAL CONSIDERATIONS

Wastes resulting from use of this product should be disposed of in accordance with all federal, state and local requirements. For additional regulatory information, see section 15 of this document.

14. TRANSPORT INFORMATION

DOT49CFR Description: Not Regulated.

Freight Classification: Insecticide NOI NMFC 102120 cl. 60.

15. REGULATORY INFORMATION

CERCLA (Superfund): Not regulated.

RCRA: Not a characteristic or listed hazardous waste.

SARA 311/312 HAZARD CATEGORIES

Immediate Health: Yes.

Delayed Health: Yes.

Fire: Yes.

Sudden Pressure: No.

Reactivity: No.

The information presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to the best of our knowledge is true and accurate. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations.



ANVIL® 10+10 ULV

www.clarkemosquito.com

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.

ACTIVE INGREDIENTS:

3-Phenoxybenzyl-(1RS, 3RS; 1RS, 3SR)-2,2-dimethyl-3-(2-methylprop-1-enyl) cyclopropanecarboxylate*	10.00%
Piperonyl Butoxide, Technical**	10.00%
OTHER INGREDIENTS***	80.00%
	100.00%

Contains 0.74 pounds of Technical SUMITHRIN®/Gallon and 0.74 pounds Technical Piperonyl Butoxide/Gallon

* Sumithrin®

** Equivalent to 8.00% (butylcarbityl) (6-propylpiperonyl) ether and 2.00% related compounds

*** Contains petroleum distillate

SUMITHRIN™ Trademark of Sumitomo Company, Ltd.

ANVIL® - Registered trademark of Clarke Mosquito Control Products, Inc.

CAUTION

KEEP OUT OF REACH OF CHILDREN

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

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 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.

NOTE TO PHYSICIAN: Product contains a 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 or clothing. In case of contact, flush with plenty of water. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This product 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. Do not apply over permanent 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.

BEE WARNING: This product is 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.

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.

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 requirements exist.

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.

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.

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 conditions is to be avoided. Apply only when ground wind speed is greater than 1 mph. Air temperature should be greater than 50F when conducting all types of applications.

Do not treat a site with more than 0.0036 pounds of Sumithrin® per acre in a 24-hour period. Do not exceed 1.0 pounds of Sumithrin® per acre in any site in any 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. Do not contaminate food, feed or drinking water. Do not spray this product on or allow it to drift onto pastureland, rangeland, cropland, poultry ranges or potable water supplies. In treatment of corrals, feed lots, swine lots, and zoos, cover any exposed drinking water, drinking water fountains and animal feed before application.

Note: ANVIL 10+10 ULV can not 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 8 to 30 microns (8 ≤ 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 115 microns (Dv 0.9 < 115 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 10+10 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.

Dosage Rate	Flow Rates in fluid oz./minute at truck speeds of:				
	Fl. oz. ANVIL				
Lbs Sumithrin®/acre	10+10 ULV per Acre	5MPH	10MPH	15MPH	20MPH
0.0036	0.62	1.9 oz.	3.8 oz	5.7 oz	7.6 oz
0.0024	0.42	1.3 oz.	2.5 oz	3.8 oz	5.1 oz
0.0012	0.21	0.6 oz	1.3 oz	1.9 oz	2.5 oz

ANVIL 10 + 10 ULV may also be applied undiluted with non-thermal, portable, motorized backpack equipment adjusted to deliver ULV particles of 50 to 100 microns VMD. Use 0.21 to 0.62 fl.oz. of the undiluted spray per acre (equal to 0.0012 to 0.0036 lb.ai./acre) as a 50 ft (15.2 m) swath while walking at a speed of 2 mph (3.2 kph).

ANVIL 10+10 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.

ANVIL 10+10 ULV may be applied for Urban ULV mosquito control. For control of resting or flying adult mosquitoes, biting flies and 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. ANVIL 10+10 ULV may be applied using mechanical foggers, hand-held or truck mounted ULV equipment, thermal foggers or other spray equipment suitable for this application. Apply ANVIL 10+10 ULV at rates up to but not exceeding 0.0036 pounds sumithrin per acre per twenty-four hour period (not to exceed 1.0 pounds sumithrin per acre in any site in any year).

AERIAL APPLICATION

Prohibition on aerial use: Not for aerial application in Florida unless specifically authorized by the Bureau of Entomology, Florida Department of Agriculture and Consumer Service.

ANVIL 10+10 ULV may be applied at rates of 0.21 to 0.62 fluid ounces of ANVIL 10+10 ULV per acre by fixed wing or rotary aircraft equipped with suitable ULV application equipment. ANVIL 10+10 ULV may also be diluted with a suitable solvent such as mineral oil and applied by aerial ULV equipment so long as 0.62 fluid ounces per acre of ANVIL 10+10 ULV is not exceeded. Application shall be made at 75 to 300 feet for rotary aircraft and 100 to 300 feet for fixed-wing aircraft.

Dosage Rate	Flow Rates in fluid oz./acre:
Lbs Sumithrin®/acre	ANVIL® 10 + 10 ULV
0.0036	.62 oz
0.0024	.42 oz
0.0012	.21 oz

STORAGE & DISPOSAL

Do not contaminate water, food or feed by storage or 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: Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved state and local procedures.

E.P.A. EST. No. 8329-IL-01

EPA Reg. No. 1021-1688-8329

NET CONTENTS: 55 GAL

LOT NO. _____

MANUFACTURED FOR

CLARKE MOSQUITO CONTROL

PRODUCTS, INC.

159 N. GARDEN AVENUE • ROSELLE, ILLINOIS 60172

NOTICE: To the extent provided 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/or handling of this material when use and/or handling is contrary to label instructions.

**FOR MORE INFORMATION CALL:
1-800-323-5727**

Material Safety Data Sheet

Date last revised: 4 February 4, 2009

I. General Information

Active Ingredient(s) d-Phenothrin (SUMITHRIN®); Piperonyl Butoxide	Trade Name & Synonyms ANVIL® 10+10 ULV
Product Description A mosquito control insecticide for outdoor residential and recreational areas	EPA Registration Number 1021-1688-8329
Proper Shipping Name (DOT, ICAO/IATA) (non-bulk shipments) Insecticides, Insect or Animal Repellent, Liquid, N.O.S.	Primary Hazard Classification/Division (DOT, ICAO/IATA) Non-Hazardous (non-bulk shipments)
Manufacturer Clarke Mosquito Control Products, Inc.	Manufacturer's Phone Number (630) 894-2000
Manufacturer's Address 159 North Garden Avenue Roselle, Illinois 60172	INFOTRAC (Transportation/Spill Emergency) 1-800-553-5053 Medical Emergency or Incident 1-888-740-8712

II. Composition / Ingredients

Chemical Name	CAS #	Exposure Limits	Wt. %
d-Phenothrin (SUMITHRIN®)	026002-80-2	None	10
Piperonyl Butoxide	000051-03-6	None	10
Petroleum Distillates		200 mg/m ³ [1]	<5
Mineral Oil		5 mg/m ³ [2]	50-75

[1] ACGIH TLV, TWA, skin exposure

[2] OSHA PEL/ACGIH TLV, TWA, oil mist

COMMENTS: Ingredients not identified are proprietary or non-hazardous. Values are not product specifications.

III. Hazards Identification

Physical State: liquid **Color:** colorless **Odor:** mineral oil

CAUTION! Harmful if absorbed through the skin. Contains petroleum distillate – Vomiting may cause aspiration pneumonia. Avoid contact with skin, eyes, and clothing.

Signs and Symptoms of Acute Exposure

Eye contact May cause temporary eye irritation, tearing, and blurred vision. Irritation clearing within 48 hours.

Skin contact Can cause mild skin irritation (irritation index 0.04). No irritation noted at 72 hours. Can cause a burning or prickling sensation on more sensitive areas (face, eyes, mouth). Harmful if absorbed through the skin. Not a dermal sensitizer.

Ingestion May be harmful if swallowed. Product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe lung injury.

Inhalation No significant adverse health effects are expected to occur upon short-term exposure.

Chronic effects No significant signs or symptoms indicative of any adverse health effects are expected to occur.

Conditions aggravated by exposure None known

Target organs None

Toxicological Information: Acute Dermal LD50: > 2.0 gm/kg (Albino rabbit)

Oral LD50: > 5.0 gm/kg (Albino rat)

Inhalation LC50: 3.76 mg/L (4 hr, rat)

Carcinogenic potential None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as being carcinogens.

Marginally higher incidences of benign liver tumors in mice were observed following lifetime high dose exposures to piperonyl butoxide (PBO). The significance of these observations is questionable and under review. The doses at which tumors were observed for PBO greatly exceeded potential human exposure from labeled uses. Doses at which these effects were observed greatly exceed anticipated human dietary intake. At anticipated dietary exposure levels, it is highly unlikely that this product will result in carcinogenic effects.

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ANVIL 10+10 ULV

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IV. First Aid Measures

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.

SKIN: 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.

INGESTION: 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.

INHALATION: Remove affected person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

NOTES TO PHYSICIAN: Contains Pyrethroids and Petroleum Distillates; vomiting may pose an aspiration pneumonia hazard. For skin effects, a highly efficient therapeutic agent for pyrethroid exposure is topical application of Tocopherol Acetate (Vitamin E).

V. Fire Fighting Measures

Flammability Classification: This product is NOT classified as flammable or combustible by OSHA.

Flash Point (Test Method): >200 °F, >93.3 °C (TAG Closed Cup)

Hazardous combustion products: Carbon dioxide, carbon monoxide, smoke, fumes, and unburned hydrocarbons

Hazardous Combustion Products: Under fire conditions this product may support combustion and may decompose to give off toxic gases such as carbon monoxide, carbon dioxide, and nitrogen oxides.

Extinguishing Media: Foam, carbon dioxide or dry chemical.

Fire Fighting Procedures: Treat as an oil fire. Use a full-faced self-contained breathing apparatus along with full protective gear. Keep nearby containers and equipment cool with a water stream.

Sensitive to Static Discharge: Yes, use proper bonding and/or grounding procedures.

VI. Physical and Chemical Properties

Appearance: Clear, colorless liquid

Odor: odor of mineral oil

Specific Gravity (H₂O = 1): 0.887 at 20 °C

Vapor Density (Air = 1): heavier than air

Melting/Freezing point: Not determined

(VOC): <1.000%

Solubility in Water: Immiscible in water

pH: Not applicable

Viscosity #1: 25 CPS at 24 °C (Brookfield)

Density: 7.4 Lbs/Gal

VII. Stability and Reactivity

Stable Yes

Hazardous Polymerization No

Conditions to Avoid Not compatible with strong acids or bases. Not compatible with strong oxidizers.

VIII. Accidental Release Measures

Stop release, if possible without risk. Dike or contain release, if possible, and if immediate response can prevent further damage or danger. Isolate and control access to the release area. Take actions to reduce vapors.

Small Spill Absorb with appropriate absorbent such as sand or vermiculate. Clean spill area of residues and absorbent.

Large Spill Collect product into drums, storage tanks, etc., via drains, pumps, etc. Absorb with appropriate absorbent such as sand or vermiculate. Clean spill area of residues and absorbent.

Environmental Precautions: Water Spill: Contains pyrethroids which are toxic to fish and other aquatic invertebrates. Contaminated absorbent and wash water should be disposed of according to local, state/provincial and federal/national regulations.

IX. Handling and Storage

General Procedures: Do not use or store near heat, sparks, open flame, or any other ignition sources.

Handling: Take prudent precautions to avoid contact with skin, eyes, and clothing. Mechanical ventilation should be used when handling this product in enclosed spaces. Do not contaminate water, food or feedstuffs, by storage, handling, or by

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disposal. Read and observe all precautions and instructions on the label.

Storage: Store in a cool, dry place. Keep container closed. KEEP OUT OF REACH OF CHILDREN.

Electrostatic Accumulation Hazard: This product contains petroleum distillates for which there is potential for the accumulation of static electricity. Consideration should be given to bonding and grounding of equipment during loading, unloading, and transfer of this product.

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

Empty Container: Triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of container in a sanitary landfill, or by other procedures approved by State and Local authorities.

RCRA/EPA Waste Information: None of the ingredients in this product appear on RCRA lists (40 CFR 261.24, 40 CFR 251.33) or CERCLA Hazardous Substance list (40 CFR Part 302 Table 302.4).

X. Exposure Controls / Personal Protection

Engineering Controls: Mechanical ventilation should be used when handling this product in enclosed spaces. Local exhaust ventilation may be necessary.

Personal Protective Equipment: Personal protective equipment should be selected based upon the conditions under which this material is used.

Eyes and Face: Take prudent precautions to avoid contact with eyes.

Skin: Take prudent precautions to avoid contact with skin and clothing.

Work Hygienic Practices: DO NOT SMOKE, EAT, OR DRINK, OR APPLY COSMETICS IN WORK AREA! Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking, or using the toilet.

XI. Other Regulatory Information

TSCA Inventory All chemical substances in this product comply with the TSCA inventory reporting requirements.

SARA Title III

Section 311/312 Hazard Categories:

FIRE: No PRESSURE GENERATING: No REACTIVITY: No ACUTE: Yes

Section 302/304 Extremely Hazardous Substances: None

Section 313 – Reportable Ingredients:

Sumithrin (d-Phenothrin), 026002-80-2, 10.00 wt%
Piperonyl butoxide, 000051-03-6, 10.00 wt%

DOT (Department of Transportation): This material is not regulated by the DOT as a hazardous material when shipped in Non-Bulk quantities (i.e., less than 119 Gal / 450 Liter).

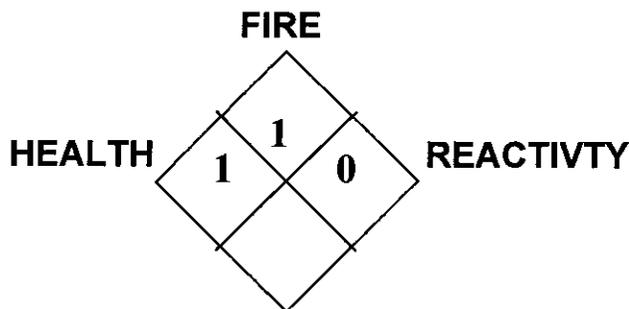
DOT Shipping Name (bulk quantity) and IMO/IMDG (Vessel) shipping classification:

Environmentally Hazardous Substance, Liquid, N.O.S. Marine Pollutant (d-Phenothrin) 9 UN 3082 III

US States Regulatory Reporting

CA Prop 65: This product is not known to contain any substances known to the State of California to cause cancer, birth defects, or other reproductive harm.

Volatile Organic Compounds (VOC): This product contains less than 1% VOC.



NFPA Code Key

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

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.

Suspend® SC Insecticide

- * ONLY FOR SALE TO, USE AND STORAGE BY PEST CONTROL OPERATORS AND/OR COMMERCIAL APPLICATORS
- * TO BE APPLIED BY OR UNDER THE DIRECT SUPERVISION OF COMMERCIAL APPLICATORS RESPONSIBLE FOR INSECT CONTROL PROGRAMS
- * FOR RESIDENTIAL, INDUSTRIAL AND INSTITUTIONAL CONTROL OF MAJOR NUISANCE PESTS LISTED ON THE LABEL
- * CONTROLS NUMEROUS PESTS IN AND AROUND HOUSEHOLDS AND OTHER STRUCTURES
- * WILL NOT DAMAGE PAINTS, PLASTICS, FABRICS OR OTHER SURFACES WHERE WATER ALONE CAUSES NO DAMAGE
- * FOR INSECT CONTROL ON COMMERCIAL AND RESIDENTIAL TURF AND LANDSCAPE ORNAMENTAL PLANTS
- * CONTAINS DELTAGARD® INSECTICIDE

ACTIVE INGREDIENT:

*Deltamethrin 4.75%

OTHER INGREDIENTS: 95.25%
100.00%

*Contains 0.42 lb deltamethrin per gallon.
Suspend SC is a registered trademark of AgrEvo Environmental Health, Inc.
DeltaGard is a registered trademark of AgrEvo Environmental Health, Inc.

PRECAUCION AL USARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente. (TO THE USER: If you cannot read English, do not use this product until the label has been fully explained to you.)

EPA Reg. No.: 432-763 EPA Est. No.:

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID

If Inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

See Side Panel for Additional Precautions

IN CASE OF MEDICAL EMERGENCIES OR HEALTH AND SAFETY INQUIRIES, OR IN CASE OF FIRE, LEAKING, OR DAMAGED CONTAINERS, INFORMATION MAY BE OBTAINED BY CALLING 1-800-471-0660.

FOR PRODUCT INFORMATION, CALL TOLL-FREE:
1-800-331-2867.

NET CONTENTS:

PRECAUTIONARY STATEMENTS

Hazards To Humans & Domestic Animals

CAUTION

Harmful if inhaled. Avoid breathing vapor or spray mist. Contact with product may result in transient tingling and reddening of the skin. Remove contaminated clothing and wash before reuse.

Environmental Hazards

This product is extremely toxic to fresh water and estuarine fish and invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Use with care when applying in areas adjacent to any body of water. Do not contaminate water when disposing of equipment washwater.

This pesticide is highly toxic to bees exposed to direct treatment. Do not apply or allow it to drift to crops or weeds on which bees are actively foraging.

Physical & Chemical Hazards

Do not use water-based sprays of Suspend SC Insecticide in conduits, motor housings, junction boxes, switch boxes, or other electrical equipment because of possible shock hazard.

DIRECTIONS FOR USE

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

Not for use on turf being grown for sale or other commercial use as sod, or for commercial seed production, or for research purposes.

GENERAL INFORMATION:

Suspend SC is a suspended concentrate insecticide containing 0.42 lb active ingredient per gallon. Suspend SC is designed for use both indoors and outdoors and will provide effective knock-down and long residual control of the pests listed on this label.

Mixing Instructions:

Suspend SC is intended to be mixed with water and applied with hand pressurized or power operated sprayers, such as Actisol® or similar equipment, as a coarse spray or with conventional hydraulic boom-type sprayer or other suitable equipment for outdoor broadcast applications. Shake container well before using. When diluting, it is recommended to add approximately half the water to the spray tank, then add the proper amount of Suspend SC Insecticide in accordance with the rates in the appropriate Application Rate table. Agitate, then add the remaining water slowly to avoid excess foam. Thoroughly agitate the sprayer before using to insure proper suspension. If spraying is interrupted when using a back-pack or hand-held spray equipment, re-invert sprayer before use. If spray screens are used, they should be 50 mesh or larger. Dilute Suspend SC insecticide only with water. Prepare spray solution when ready to make applications.

Tank Mixing:

Suspend SC insecticide may be tank-mixed with other currently registered pesticides unless expressly prohibited by the product label. A small volume mixing test with other products is recommended to ensure compatibility. Observe all restrictions and precautions which appear on the labels of these products.

Application Rates:

Pests	Concentration of Active Ingredient ¹	Dilution Rate ²
ants, firebrats, gnats, midges, centipedes, millipedes, pantry pests, silverfish	0.01% - 0.03%w/w	0.25-0.75 fl oz/gal 12.5 fl - 37.5oz/ 50 gals 25-75 fl oz/ 100 gals
bees, bedbugs, carpet beetles, cockroaches, crickets, fleas, flies (including such flies as stable, house, cluster and horseflies) , hornets, killer bees, lice, mosquitoes, pillbugs, scorpions, sowbugs, spiders, ticks, yellowjackets, wasps	0.03% - 0.06%w/w	0.75 - 1.5 fl oz/gal 37.5-75 fl oz/ 50 gals 75 -150 fl oz/ 100 gals
Termites (formosan & Eastern subterranean - localized control only)	0.06% w/w	1.5 fl oz/ gal 75 fl oz/50 gals 150 fl oz/100 gals
Carpenter ants	0.03% w/w	0.75 fl oz/gal 37.5 fl oz/50 gals 75 fl oz/100 gals

¹The recommended rate for maintenance treatments is 0.01% and for cleanout treatments is 0.03%. For control of severe infestations and longer residual control use the 0.06% rate. In addition, more frequent applications may be needed on concrete surfaces.

² 0.25 fl. oz = 7.5 milliliters
0.75 fl. oz = 22.7 milliliters
1.5 fl. oz = 45.4 milliliters

GENERAL PEST CONTROL INDOORS

Treatment Sites: When used in accordance with label directions, Suspend SC may be applied in and around residential and non-residential buildings and structures including residential kitchens and all types of food/feed handling establishments. This product can be applied to walls, floors, ceilings, in and around cabinets, between, behind and beneath equipment and appliances, around floor drains, window and door frames and around plumbing, sinks and other possible pest harborage sites. Permitted areas of use include, but are not limited to, the food/feed and non-food/non-feed areas of:

- | | |
|---------------------|---|
| Aircraft | Installations |
| Apartment buildings | Kitchens |
| Bakeries | Laboratories |
| Bottling facilities | Mausoleums |
| Breweries | Meat, poultry & egg processing & packaging plants |
| Buses | Mobile & motor homes |
| Cafeterias | Nursing homes |
| Candy plants | |
| Canneries | |

- | | |
|---------------------------------|-----------------|
| Dairy product Processing plants | Offices |
| Food manufacturing plants | Railcars |
| Food processing plants | Restaurants |
| Food service establishments | Schools |
| Granaries & grain mills | Ships & vessels |
| Hospitals | Trailers |
| Hotels | Trucks |
| Houses | Warehouses |
| Industrial buildings | Wineries |

Treatments may be applied at 21-day intervals or as necessary to maintain adequate control. Remove pets and cover aquariums and terrariums before spraying. Do not apply to classrooms when in use. Do not use in aircraft cabins.

Treat specific areas that insects inhabit or where they are frequently found. Use 0.25 to 1.5 fluid ounces of Suspend SC in one gallon of water and apply to adequately cover 1000 square feet. Do not allow dripping or run-off to occur. Under conditions of severe pest infestation, when quick knockdown and/or longer residual control is desired, use one gallon of 0.06% Suspend SC per 1,000 sq. ft.

Premise Pest Control: Cockroaches, Ants, Crickets, Silverfish, Firebrats, Centipedes, Millipedes, Cloth Moths, Earwigs, Pillbugs, Sowbugs, Scorpions and Spiders: Apply as a coarse, low pressure spot or crack and crevice spray to areas that these pests normally inhabit. Pay particular attention to dark corners of rooms and closets; floor drains; cracks and crevices in walls; along and behind baseboards; beneath and behind sinks, stoves, refrigerators, and cabinets; around plumbing and other utility installations; doors, windows and in attics and crawl spaces. Applications may be made to floor surfaces along baseboards and around air ducts. Let surfaces dry before allowing children or pets to contact surfaces.

Pantry Pest Control: To kill adult and accessible stages of insect pests such as *Lesser Grain Borers, Grain Weevils, Flour Beetles, Saw-toothed Grain Beetles, Cigarette Beetles, Merchant Grain Beetles, Angoumois Grain Moths, Mediterranean Flour Moths, Indian Meal Moths, Grain Mites* and *Spider Mites*: Make applications to cupboards, shelving and storage areas. Remove all foodstuffs, all utensils, shelf paper and other objects before spraying. Allow all treated surfaces to dry and cover shelves with clean paper prior to replacing foodstuffs, utensils or other items. Any foodstuff accidentally contaminated with any spray solution should be discarded.

Crawling and Flying Insect Pests such as flies, gnats, midges, mosquitoes, cockroaches, ants and silverfish): Apply directly to walls, ceilings, window screens and other resting areas as a residual surface treatment. May be used inside residential buildings, as well as in and around carports, garages, storage sheds, unoccupied horse stables and pet kennels.

Ants: (including Pharaoh Ants): Apply to trails, around doors and windows and other areas where ants inhabit or enter premises.

Bedbugs and Lice: Remove linens and wash before reuse. Apply to mattresses, especially tufts, folds, and edges until moist. Apply to the interior of the frame. Allow to dry before remaking bed.

Fleas, Carpet Beetles and Ticks: A total management program is recommended. It is suggested that infested areas be thoroughly vacuumed prior to treatment. These areas include all carpet, upholstered furniture, baseboards and other indoor areas frequented by pets. The vacuum cleaner bag should be discarded in an outdoor trash container upon completion. Pet bedding should be cleaned or replaced. Thoroughly apply Suspend SC to rugs, carpets, upholstered furniture, pet beds, floor coverings, pet resting areas and other infested habitats. The quantity of finished spray required is dependent upon carpet/fabric density. Provide uniform coverage, apply until infested area is moist. Effective flea control includes controlling the source of flea infestations. This can require treatment of pets with a product registered by EPA for such use and treating outside areas frequented by pets. Suspend SC can also be applied out-of-doors for flea control. Do NOT treat pets with this product. Do not allow pets to contact treated areas until spray has dried.

Pet Kennels: For residual control of crawling and flying insects in and around these structures, apply as a general surface and/or crack and crevice spray. Optimal control results if facilities to be treated are clean and if the exterior perimeter is concurrently treated with Suspend SC. Apply only to areas of facility where animals are not present. Allow spray to dry before allowing re-entry of animals into treated areas. Do not apply to animal feed or watering equipment.

Food/Feed Handling Establishments:

For control of all labeled pests, applications are permitted in food/feed and non-food/non-feed areas of food/feed handling and processing establishments as a general surface, spot or crack and crevice treatment. Not for use in Federally Inspected Meat and Poultry Plants.

Food/Feed handling establishments are defined as places other than private residences in which exposed food/feed is held, processed, prepared or served. Included also are areas for receiving, storing, packing (canning, bottling, wrapping, boxing), preparing, edible waste storage and enclosed processing systems (mills, dairies, edible oils, syrups) of food/feed. Serving areas where food/feed is exposed and the facility is in operation are also considered food/feed areas.

Non-Food/Non-Feed Areas: Examples of non-food/non-feed areas include garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, mop closets and storage (after packaging, canning or bottling). All areas that insects inhabit or through which insects may enter should be treated.

General Surface Applications: Do not use this application method in the food/feed handling areas of the facility when the facility is in operation or foods/feeds are exposed. Do not apply directly to food/feed products. Cover or remove all food/feed processing and/or handling equipment during application. After application in food/feed processing plants, cafeterias and similar facilities, wash all equipment, benches, shelving and other surfaces which food/feed will contact. Clean food/feed handling or processing equipment and thoroughly rinse with clean, fresh water. After application in bakeries, clean all food contact surfaces thoroughly with appropriate equipment.

Spot or Crack & Crevice Applications: Except in federally

inspected meat and poultry plants, spot or crack and crevice applications may be made while the facility is in operation provided exposed food is covered or removed from area being treated prior to application. Do not apply directly to food or food-handling surfaces.

In the home, do not allow spray to contact food/feed surfaces. If it does, clean surfaces with soap and water.

GENERAL PEST CONTROL OUTDOORS

Use Suspend SC to control outdoor pests by application as either a perimeter treatment, residual spray or broadcast application to lawns, grounds and ornamental plantings.

Treatment Sites: When used in accordance with label directions, Suspend SC may be applied as a perimeter treatment or as a residual spray around residential and non-residential settings. Begin applications when pests are noticed and repeat as needed.

Residual Spray: Apply Suspend SC as a coarse low-pressure spray at the rate of 0.75 to 1.5 fl oz to surfaces of buildings, porches, screens, window frames, eaves, patios, refuse dumps, garages and lawns. Repeat as needed.

Perimeter Treatments: To help prevent infestation of buildings, apply Suspend SC where pests are active and may find entrance. It is recommended to treat a band of soil or lawn up to 6 - 10 feet wide around and adjacent to buildings and treat the building foundation to a height of 2 to 3 feet. Apply as a coarse spray at the rate of 0.25 to 1.5 fl oz of Suspend SC per gallon of water. (See Application Rate table). Use an adequate volume to thoroughly and uniformly wet the barrier area but do not allow runoff to occur. Repeat as needed.

Fleas and Ticks: Apply Suspend SC as a coarse wet spray to areas where fleas and ticks are most likely to be found, such as but not limited to, dog houses, kennels, runways, cracks and crevices in sidewalks, paths or patios, under plants, shrubs, bushes, trees, or other shaded, moist areas where pests may rest.

Fire Ants: Apply Suspend SC as a drench. Dilute 1.5 oz per one gallon of water. Gently sprinkle 1 to 2 gallons of the diluted insecticide over the surface of each mound and surrounding area to a 2-foot diameter. For best results, apply in cool weather, 65 to 80°F or in early morning or late evening hours. Treat new mounds as they appear. Pressurized sprays may disturb the ants and cause migration, reducing product effectiveness.

Wood-Infesting Insects:

For control of wood-infesting beetles on surfaces in homes and other structures, apply a 0.06% suspension of Suspend SC. For treatment of small areas, apply by brushing or spraying the suspension evenly on wood surfaces. For large or overhead areas of homes, apartment buildings, etc., apply as a coarse spray to thoroughly cover the area. Cover all surfaces below the area being sprayed with plastic sheeting or other material which can be disposed of by placing in trash if contamination from dripping occurs. Sprayed surfaces should be avoided until the treated area is completely dry.

For control of above-ground termites and wood-infesting beetles in localized areas, apply a 0.06% suspension or sufficient volume of foam of Suspend SC to voids and galleries in damaged wood

and in spaces between wooden structural members and between the sill plate and foundation where wood is vulnerable. Applications may be made to inaccessible areas by drilling and then injecting the suspension or foam with a suitable directional injector into the damaged wood or wall voids. All treatment holes drilled in construction elements in commonly occupied areas of structures must be securely plugged.

Termite carton nests in building voids may be injected with 0.06% suspension or foam using a pointed injection tool. Multiple injection points to varying depths may be necessary. It is desirable to physically remove carton nest material from building voids when such nests are found.

Application to attics, crawl spaces, unfinished basements, or man-made voids may be made with a coarse fan spray of 0.06% suspension to control exposed worker and winged reproductive forms of termites. For control of swarming or reproductive stages of termites, apply a 0.06% suspension to the swarm or area on which they collect.

The purpose of such applications of Suspend SC is to kill workers or winged reproductive forms which may be present at the time of treatment. Such applications are not a substitute for mechanical alteration, soil treatment or foundation treatment but are merely a supplement.

Do not apply solution until location of heat or air conditioning ducts, vents, water and sewer lines and electrical conduits are known and identified. When located, applications may be made around these structures. However, caution must be taken to avoid contamination of these structural elements and airways.

For control of above-ground termites inside trees, utility poles, fencing and decking materials and similar structural members, drill to find the interior infested cavity and inject 0.06% suspension or foam using an appropriate treatment tool with a splash-back guard.

Termite carton nests in trees may be injected with 0.06% suspension or foam using a pointed injection tool. Multiple injection points to varying depths may be necessary. It is desirable to physically remove carton nest material from trees when such nests are found.

For protection of firewood from carpenter ants and termites, treat soil beneath firewood prior to stacking with a 0.06% suspension at 1 gallon per 8 square feet to prevent carpenter ant or termite infestation. DO NOT treat firewood with this product.

For control of carpenter ants in houses and other structures, use a 0.06% suspension and apply as a general surface, spot, crack and crevice or wall void application. Repeat treatments when necessary. Apply around doors and windows and other places where carpenter ants may enter the premises. Spray or foam into cracks and crevices through small drilled holes into voids where these ants or their nests are present. Use a sufficient amount of coarse spray or foam to cover the area. Do not exceed 1 gallon of dilute suspension per 1000 square feet of treated surface.

For control of carpenter ants inside trees, utility poles, fencing and decking materials and similar structural members, drill to find the interior infested cavity and inject 0.06% suspension or foam using an appropriate treatment tool with a splashback guard. Retreat as needed.

For control of tunneling carpenter ants in soil, apply a 0.06% suspension as a drench or inject the suspension or foam at intervals of 8 to 12 inches. Establish a uniform vertical barrier at the edge of walls, driveways or other hard surfaces where ants are tunneling beneath the surfaces.

For control of carpenter bees in structures, apply a 0.06% suspension or sufficient volume of foam directly into gallery entrance holes. Following treatment, the entrance holes may be left open 24 hours to be certain that returning adult bees are killed. When there is no activity, the hole may be sealed with a suitable sealant.

Foam Application Use Directions: Suspend SC can be converted to a foam and the foam used to treat structural voids to control insect and arthropod pests in walls, under slabs or in other void areas. Mix end-use dilution of Suspend SC with manufacturer's recommended volume of foaming agent. Use the recommended rate suspension converted to a foam to achieve the desired foam expansion ratios. Verify before treatment that the foaming agent is compatible with Suspend SC.

Turfgrass Applications:

Suspend SC controls a broad spectrum of insects on turfgrasses and ornamental plants in outdoor areas such as athletic fields, recreational areas, residential landscapes, parks, and public and commercial sites. Uniform coverage is essential. Begin applications when pests are evident and repeat as needed.

Apply Suspend SC as a broadcast application using a conventional hydraulic boom-type sprayer or other suitable equipment for turfgrass pests according to the rates listed in the Application Rates for Turfgrass Sites table. Apply using a minimum of 2 gallons of water per 1000 sq. ft. Higher volumes (4 to 10 gallons of water per 1000 sq. ft.) may be needed for adequate coverage of dense turfgrass canopies and/or turfgrasses maintained under high mowing heights.

Target insects must be exposed to the insecticide to be controlled. For optimum control of surface-feeding insects, delay irrigation or mowing for 24 hours after application. For subsurface-feeding insects, irrigate with 0.25 to 0.5 inch of water immediately after application.

Tank Mixing: Suspend SC Insecticide has been found to be compatible with many commonly used pest control and fertilizer products. When tank-mixing Suspend SC, observe all restrictions and precautions and limitations which appear on the label of each product. For any tank-mixture which has not been previously tested, mix the correct proportion of products and water in a quart jar to ensure proper physical compatibility of the mixture. Tank mixtures of Suspend SC with silicone surfactants may improve the control of some insects.

Application Rates For Turfgrass Sites:

Sites	Pests	Rates	Remarks
Athletic fields, recreational areas, lawns & grounds, residential areas, parks, public and commercial sites	Ants, armyworms, centipedes, chiggers, cockroaches, crickets,	0.4 to 0.6 fl oz/1000 sq. ft	Apply when pests become evident.
	cutworms, fleas, (adult), grasshoppers, ground beetles, Japanese beetles (adults), leafhoppers, mealybugs, pillbugs, scorpions, sod webworms, sowbugs, springtails, spiders, ticks	or 17.5 to 26 fl oz/Acre or 0.06 to 0.08 lb ai/A	Apply as a broadcast spray in a minimum of 2 gallons of water per 1000 sq. ft. Delay irrigation or mowing for 24 hours after application for optimum control of surface-feeders such as cutworms and web-
worms.	Annual bluegrass	0.6 to 0.9 fl oz/1000 sq. ft weevil (adult),	For subsurface-feeders, such as mole billbugs (adult), black tur-
crickets, or fgrass (adult), chinch bugs, mites*, mole crickets lb ai/A	irrigate with 26 to 39 fl oz/Acre	0.25 to 0.5 inch of water immediately after application.	ataenius
cricket control.	The addition of a silicone surfactant may enhance mole cricket control.		

*Suppression Only

Landscape Ornamental Treatments:

Suspend SC Insecticide provides control of a wide range of insects on landscape ornamentals. Mix Suspend SC with the required amount of water according to the Application Rates for Ornamentals table below. Thoroughly apply the finished spray to upper and lower leaf surfaces to ensure adequate coverage, but prior to dripping. Be sure to penetrate dense foliage to wet leaves, trunk and branches.

Plant safety testing has been conducted on many species of ornamental plants under a wide range of environmental and cultural conditions and no injury has been observed. If local use information is not available, it is advisable to pre-spray a few plants.

Application Rates for Ornamentals:

Sites	Pests	Rate	Remarks
Landscape ornamentals including trees, shrubs, evergreens and foliage plants	Adelgids, ants, aphids, azalea lace bugs, bagworms, boxelder bugs, cankerworms, cardamom thrips cockroaches, crickets, elm leaf beetles, elm spanworms, European pine sawflies, fall webworms, flea beetles, flies, fungus gnats, grasshoppers, greenstriped mapleworm, Gypsy moth (larvae), imported willow leaf beetles, Japanese beetles (adults)*, June beetles (adults), lace bugs, leaf-feeding caterpillars, leafhoppers, leaf rollers, loopers, leaf skeletonizers, mealybugs, midges, mimosa webworms, mites**, orangestriped oakworms, pillbugs, pine shoot beetles, pine tip moths, pinyon spindlegall midges, plant bugs, redhumped caterpillar, red imported fire ants, sawfly larvae, sowbugs, spiders, springtails, spanworms, scale insects (crawlers), tent caterpillars, ticks, webworms, yellownecked caterpillar	4 to 8 oz/100 gallons of water	Apply when pests become evident. Thorough coverage is required for best results. Apply with sufficient water to ensure coverage of upper and lower leaf surfaces.

*Will provide anti-feedant properties on treated ornamentals against Japanese beetles.

**Suppression only.

NOTES:

- DO NOT apply Suspend SC through any type of irrigation system.
- DO NOT apply this product to edible crops.

STORAGE & DISPOSAL

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

Storage: Mix as needed. Store in original container in a secured dry storage area. Avoid extremes in temperatures. Prevent cross-contamination with other pesticides and fertilizers. If the container is leaking and/or material is spilled, on floor or paved surfaces, absorb on sawdust or other commercially available absorbing material, sweep up and remove to chemical waste area for your disposal. Concentrate is stable at normal storage temperatures.

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

Container Disposal: [less than one gallon] Securely wrap container in several layers of newspaper and discard in trash. [Non-Refillable] Triple rinse (or equivalent) then offer for recycling or reconditioning, 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. [Refillable] Replace the dry disconnect cap if applicable, and seal all openings which have been opened during use. Return the empty container to a collection site designated by AgrEvo Environmental Health. If the container has been damaged and cannot be returned according to the recommended procedures, contact the Customer Service Department at 1-800-843-1702 to obtain proper handling instructions.

NOTICE: Buyer assumes all responsibility for safety and use not in accordance with directions.

AgrEvo Environmental Health
95 Chestnut Ridge Road
Montvale, NJ 07645



MSDS Number: 00000000205

SUSPEND® SC INSECTICIDE

MSDS Version 1.2

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name SUSPEND® SC INSECTICIDE
Chemical Name
Synonym
MSDS Number 205
Chemical Family Mixture
Chemical Formulation Mixture
EPA Registration No. 432-763
Canadian Registrat. No.

Bayer Environmental Science
95 Chestnut Ridge Road
Montvale, NJ 07645
USA

For Product Use Information: (800)331-2867 Monday through Friday(CRLF) 8:00AM-4:30PM(CRLF) For Medical Emergency contact DART: (800) 334-7577 24 Hours/Day(CRLF) For Transportation Emergency CHEMTREC: (800) 424-9300 24 Hours/Day

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
Deltamethrin	52918-63-5	4.7500	
Inert ingredients		95.2500	

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview Caution. Keep out of the reach of children. Harmful if inhaled. Contact with product may result in transient tingling and reddening of the skin. This product is extremely toxic to fresh water and estuarine fish and invertebrates.

Physical State liquid

Odor odorless

Appearance white

Material Safety Data Sheet

SUSPEND® SC INSECTICIDE

MSDS Number: 00000000205
MSDS Version 1.2

Routes of Exposure	Inhalation.
Immediate Effects	
Eye	May cause slight irritation.
Skin	Contact with product may result in transient tingling and reddening of the skin.
Inhalation	Harmful if inhaled.
Signs and Symptoms	Acute overexposure may result in respiratory irritation and transient paresthesia. Chronic overexposure produced pale kidneys and discoloration of the lungs in rats.

SECTION 4. FIRST AID MEASURES

Inhalation	Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.
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SECTION 5. FIRE FIGHTING MEASURES

Flash Point	> 93 °C / > 199 °F
Suitable Extinguishing Media	carbon dioxide (CO2), dry chemical, foam, water
Fire Fighting Instructions	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

General and Disposal	Soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.
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SECTION 7. HANDLING AND STORAGE

Handling Procedures	Avoid breathing vapors and spray mist.
Storing Procedures	Do not contaminate water, food, or feed by storage or disposal. Mix as needed. Store in original container in a secured, dry storage area. Avoid exposure to extreme temperatures. Prevent cross-contamination with other pesticides and fertilizers.
Work/Hygienic Procedures	Wash with soap and water after handling. Remove and wash contaminated clothing before re-use.

Material Safety Data Sheet

SUSPEND® SC INSECTICIDE

MSDS Number: 00000000205
MSDS Version 1.2

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye/Face Protection	safety glasses or goggles
Body Protection	Long-sleeved shirt and long pants impervious gloves
Exposure Limits	None Established

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white
Physical State	liquid
Odor	odorless
pH	6.6 in suspension
Specific Gravity	1.05 at 20 °C
Solubility (in water)	Suspends

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Conditions to Avoid	Keep away from sources of ignition.
Incompatibility	strong reducing agents strong oxidizing agents
Hazardous Products of Decomposition	Decomposition Type: thermal carbon dioxide (CO ₂) carbon monoxide

Material Safety Data Sheet

SUSPEND® SC INSECTICIDE

MSDS Number: 00000000205
MSDS Version 1.2

Hazardous Polymerization
(Conditions to avoid) Will not occur

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity Rat: LD50: > 15,000 mg/kg
Acute Dermal Toxicity Rabbit: LD50: > 10,000 mg/kg
Acute Inhalation Toxicity Rat: LC50: > 1.02 mg/l 4 h
Rat: LC50: > 4.08 mg/l 1 h
for DOT purposes
Skin Irritation Rabbit: Slightly irritating
Eye Irritation Rabbit: Very slightly irritating.
Sensitization Guinea pig: Negative
Chronic Toxicity Deltamethrin technical is not carcinogenic based on animal studies.

Assessment Carcinogenicity

ACGIH

None

NTP

None

IARC

Deltamethrin

52918-63-5

3

OSHA

None

Reproductive & Developmental Toxicity Deltamethrin is not considered to be a reproductive toxin based on animal studies.

Teratogenicity Deltamethrin is not considered to be teratogenic based on animal studies.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions This product is extremely toxic to fresh water and estuarine fish and invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Use with care when applying in areas adjacent to any body of water. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues

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remaining on the treated areas. Do not apply this product or allow drift when bees are actively visiting the treatment area. Do not apply it or allow it to drift to crops or weeds on which bees are actively foraging.

SECTION 13. DISPOSAL CONSIDERATIONS

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

Container Disposal Container One Gallon and Smaller: Wrap container in several layers of newspaper and discard in trash.

Non-refillable Container: Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

Refillable Container: Replace the dry disconnect cap if applicable, and seal all openings which have been opened during use. Return empty container to a collection site designated by Bayer. If container has been damaged and cannot be returned according to the recommended procedures, contact Bayer to obtain proper handling instructions.

RCRA Classification Not Regulated under this Statute

SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: Not DOT regulated

SECTION 15. REGULATORY INFORMATION

US Federal

EPA Registration No. 432-763

TSCA list

None

TSCA 12b export notification

None

SARA Title III - section 302 - notification and information

None

SARA Title III - section 313 - toxic chemical release reporting

None

US States Regulatory

CA Prop65

This product does not contain any substances known to the State of California to cause cancer.

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This product does not contain any substances known to the State of California to cause reproductive harm.

US State right-to-know ingredients

None

Canadian Regulations

Canadian Registrat. No.

Canadian Domestic Substance List

None

Environmental

CERCLA

None

Clean Water Section 307 Priority Pollutants

None

Safe Drinking Water Act Maximum Contaminant Levels

None

International Regulations

EU Classification

Deltamethrin

R Phrases

S Phrases

52918-63-5 Toxic Dangerous for the environment
Also toxic by inhalation and if swallowed. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Keep locked-up and out of the reach of children. Avoid contact with the skin. After contact with skin, wash immediately with plenty of water. Wear suitable protective clothing, gloves and eye/face protection. In case of insufficient ventilation, wear suitable respiratory equipment. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

European Inventory of Existing Commercial Substances (EINECS)

Deltamethrin

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SECTION 16. OTHER INFORMATION

	Health	Flammability	Reactivity	Others
HMS	1	1	0	B
NFPA	1	1	0	

REVISED SECTIONS:

MSDS REVISION INDICATOR: Company name change.

Print Date: 12/09/2002

Supersedes MSDS, which is older than: 12/09/2002

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer AG. Bayer Environmental Science

PRECAUTIONARY STATEMENTS

Hazards To Humans & Domestic Animals

CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Do not get on skin or clothing. Avoid contact with eyes. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

Environmental Hazards

This pesticide is highly toxic to fish. For terrestrial uses, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated sites may be hazardous to fish in adjacent waters. Consult your State's Fish and Wildlife Agency before treating such waters. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

STORAGE AND DISPOSAL

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

Storage: Store product in original container in a locked storage area.

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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and Local authorities.

DIRECTIONS FOR USE

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

READ ENTIRE LABEL FOR DIRECTIONS

For use only by certified applicators or under the supervision of such applicators, for the reduction in annoyance from adult mosquito infestations and as a part of a mosquito abatement program.

IN THE STATE OF CALIFORNIA: For use only by local districts or other public agencies which have entered into and operate under a cooperative agreement with the Department of Public Health pursuant to Section 2426 of the Health and Safety Code.

This product is to be used for control of adult mosquitoes, (including organophosphate resistant species), midges (biting & non-biting) and blackflies by specially designed aircraft capable of applying ULTRA LOW VOLUME of finished spray formulation or by ground application with nonthermal or mechanical spray equipment that can deliver spray particles within the aerosol size range and at specified dosage levels.

NOTICE: This concentrate cannot be diluted in water. Mix well before using. Avoid storing excess formulation in spray equipment tank beyond the period needed for application.

ULTRA LOW VOLUME APPLICATIONS

For use in nonthermal ULV portable backpack equipment similar to the Hudson B.P., mix 9.75 fl oz (288 ml) of this product with 1 gal (3.79 L) of refined soybean oil, light mineral oil of 54 second viscosity or other

suitable solvent or diluent. Adjust equipment to deliver fog particles of 18-50 microns mass median diameter.

Apply at the rate of 4.25-8.50 fl oz of finished formulation per acre (311-621 ml/ ha) as a 50 ft (15.2 m) swath while walking at a speed of 2 mph (3.2 kph). This is equivalent to 0.0035-0.0070 lb ai SBP-1382/A (3.92- 7.85 gm/ha) plus 0.0105-0.0210 lb ai piperonyl butoxide tech./A (11.77-23.54 gm/ha). Where dense vegetation is present, the higher rate is recommended.

For truck mounted nonthermal ULV equipment similar to LECO HD or MICRO-GEN or WHISPERMIST-XL, mix product with refined soybean oil, light mineral oil of 54 second viscosity or other suitable solvent or diluent. Adjust equipment to deliver fog particles of 8-20 microns mass median diameter. Consult the following chart for dilution and application rates.

Where dense vegetation is present, the use of the higher rates and/or slower speed is recommended.

NOTE: One gal (3.79 L) of product treats up to 1510 A (611 ha) for adult mosquito control.

For best results, fog when air currents are 2-8 mph (3.2-12.9 kph). It is preferable to fog during early morning and evening when there is less breeze and convection currents are minimal. Arrange to apply the fog in the direction with breeze to obtain maximum swath length and better distribution. Direct spray head of equipment in a manner to insure even distribution of the fog throughout the area to be treated. Avoid prolonged inhalation of fog.

Where practical, guide the direction of the equipment so that the discharge nozzle is generally maintained at a distance of more than 6 feet (1.83 m) from ornamental plants and 5-15 feet (1.5-4.5 m) or more from painted objects. Temperature fluctuations will require periodical adjustment of equipment to deliver the desired flow rate at the specified speed of travel. The flow rate must be maintained to insure the distribution of the proper dosage of finished formulation.

Spray parks, campsites, woodlands, athletic fields, golf courses, swamps, tidal marshes, residential areas and municipalities around the outside of apartment buildings, restaurants, stores and warehouses. Do not spray on cropland, feed or foodstuffs. Avoid direct application over lakes, ponds and streams.

DIRECTIONS FOR STABLE FLY, HORSE FLY, DEER FLY CONTROL:

Treat shrubbery and vegetation where above flies may rest. Shrubby and vegetation around stagnant pools, marshy areas, ponds and shore lines may be treated. Application of this product to any body of water is prohibited.

For control of adult flies in residential and recreational areas, apply this product undiluted at a rate of 36 fl oz/hr (1.065 L/hr) by use of a suitable ULV generator traveling at 5 mph (8 kph) or at a rate of 72 fl oz/hr (2.129 L/hr) while traveling at 10 mph (16 kph). When spraying, apply across wind direction approximately 300 ft (91.4 m) apart. Apply when winds range from 1-10 mph (1.6-16.0 kph). Repeat for effective control.

Treatment lb ai/A of Scourge Wanted SBP-1382/PBO	FL oz/A of Finished Spray to be Applied	Dilution by Volume		Application Rate - Fl oz/Min	
		Scourge	Solvent	5 mph	10 mph
0.001/0.003	0.5 (15ml)	1 part	4.5 parts	1.5 (44.4ml)	3.0 (88.7 ml)
	1.0 (30 ml)	1 part	10 parts	3.0 (88.7 ml)	6.0 (177.4 ml)
	3.0 (90ml)	1 part	34 parts	9.0 (266.2 ml)	18.0 (532.3 ml)
0.00175/0.00525	0.5 (15 ml)	1 part	2.37 parts	1.5 (44.4 ml)	3.0 (88.7 ml)
	1.0 (30 ml)	1 part	5.74 parts	3.0 (88.7 ml)	6.0 (177.4 ml)
	3.0 (90 ml)	1 part	19.2 parts	9.0 (266.2 ml)	18.0 (532.3 ml)
0.0035/0.0105	0.5 (15 ml)	1 part	0.68 parts	1.5 (44.4 ml)	3.0 (88.7 ml)
	1.0 (30 ml)	1 part	2.33 parts	3.0 (88.7 ml)	6.0 (177.4 ml)
	3.0 (90 ml)	1 part	9 parts	9.0 (266.2 ml)	18.0 (532.3 ml)
0.007/0.021	0.6 (18 ml)			1.8 (53.2 ml)	3.6 (106.5 ml)
	1.0 (30 ml)	1 part	0.68 parts	3.0 (88.7 ml)	6.0 (177.4 ml)
3.0 (90 ml)	1 part	4 parts	-	9.0 (266.2 ml)	18.0 (532.3 ml)

DIRECTIONS FOR USE OF AIRCRAFT

This product is used in specially designed aircraft capable of applying ultra low volume of finished spray formulation for control of adult mosquitoes (including organophosphate resistant species), midges (biting and non-biting) and blackflies.

Aerial application should be made preferably in the early morning or evening. It is not recommended to make application when wind speeds exceed 10 mph (16 kph). Repeat applications should be made as necessary. Apply preferably when temperatures exceed 50°F (10°C). May be used as a mosquito adulticide in recreational and residential areas, and in municipalities, around the outside of apartment buildings, golf courses, athletic fields, parks, campsites, woodlands, swamps, tidal

marshes, and overgrown waste areas. Do not spray on cropland, feed or foodstuffs. Avoid direct application over lakes, ponds and streams.

USE OF FIXED WING AIRCRAFT OR HELICOPTERS

Thoroughly mix 25.5 fl oz (755 ml) of this product with 102.5 fl oz (3030 ml) of light mineral oil of 54 second viscosity, refined soybean oil or other suitable solvent. For a treatment rate of 0.007 lb ai/A (7.85 gm/ha) SBP-1382 plus 0.021 lb ai/A (23.55 gm/ha) piperonyl butoxide tech., apply at a rate of 3 fl oz /A (219 ml/ha).

For a treatment rate of 0.0035 lb ai/A (3.93 gm/ha) SBP-1382 plus 0.0105 lb ai/A (11.77 gm/ha) piperonyl butoxide tech., apply at a rate of 1.5 fl oz/A (109.5 ml/ha).

MIXING INSTRUCTIONS FOR PRODUCT IN AIRCRAFT USAGE

This product is used diluted in mineral oil of 54 second viscosity, refined soybean oil or other suitable solvent.

Fl. oz/A of Finished Spray to be Applied	lb ai/A Wanted SBP-1382/PBO	Volumetric Dilution Needed	
		Product	Solvent
0.5 (15 ml)	0.001/0.003	1 part	4.5 parts
	0.00175/0.00525	1 part	2.37 parts
	0.0035/0.0105	1 part	0.68 parts
	0.007/0.021 - Apply as is 0.6 fl oz (17.7 ml)/acre		
1.0 (30 ml)	0.001/0.003	1 part	10 part
	0.00175/0.00525	1 part	5.74 parts
	0.0035/0.0105	1 part	2.33 parts
	0.007/0.021	1 part	0.68 parts
3.0 (90 ml)	0.001/0.003	1 part	34 parts
	0.00175/0.00525	1 part	19.2 parts
	0.0035/0.0105	1 part	9 parts
	0.007/0.021	1 part	4 parts

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following conditions, disclaimer of warranties and limitations of liability.

CONDITIONS: The directions for use of this product are believed to be adequate and should be followed carefully. However, because of manner of use and other factors beyond Aventis Environmental Science's control, it is impossible for Aventis Environmental Science to eliminate all risks associated with the use of this product. As a result, crop injury or Ineffectiveness is always possible. All such risks shall be assumed by the user or buyer.

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Aventis Environmental Science USA LP

95 Chestnut Ridge Road

Montvale, NJ 07645

S 18-SL-7/01



Product Name: Scourge® Insecticide with SBP-1382®/PB 18%+54% MF Forla II
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Material Safety Data Sheet

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1. CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Product Name: Scourge® Insecticide with SBP-1382®/PB 18%+54% MF
Formula II

Product Code: 15418

MSDS Number : C2109

Chemical Name: Mixture; a.i.'s, resmethrin, piperonyl
butoxide

EPA Registry Number: 432-667

AVENTIS ENVIRONMENTAL SCIENCE USA LP
95 CHESTNUT RIDGE ROAD
MONTVALE, NJ 07645
UNITED STATES

Scourge and SBP-1382 are registered trademarks of Aventis.

PRODUCT USE:

PRODUCT DESCRIPTION: A synthetic pyrethroid for effective adult mosquito, midge and blackfly control. This product has a restricted use classification and can be used only by Certified Applicators or persons under the supervision of such applicators.

2. COMPOSITION / INFORMATION on INGREDIENTS

Component	Cas number	%
Resmethrin	10453-86-8	18%
Piperonyl butoxide	51-03-6	54%
Other ingredients, including:		28%
Aromatic petroleum solvent	64742-94-5	> 20%

For Product Use Information: (800)331-2867 24 Hours/Day
Medic./Trans. Emergency:
(DART) (800)334-7577 24 Hours/Day
(CHEMTREC) (800)424-9300 24 Hours/Day



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3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

An amber liquid with a mild paintlike solvent odor.
■ This pesticide is highly toxic to fish.

POTENTIAL HEALTH EFFECTS

SIGNS AND SYMPTOMS OF EXPOSURE:

Humans might experience transient headache, dizziness, stuffy or runny nose, and scratchy throat.

IMMEDIATE EFFECTS

SKIN:

Harmful if absorbed through skin.

INGESTION:

Harmful if swallowed.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

None known.

4. FIRST AID MEASURES

After contact with skin:

Wash with soap and plenty of water. Get medical attention.

After contact with eyes:

Flush eyes with plenty of water. Get medical attention if irritation persists.

After inhalation:

Remove individual to fresh air. Get medical attention if breathing difficulty develops.

After ingestion:

Call a doctor or get medical attention. Do not induce vomiting. Do not give anything by mouth to an unconscious person. Avoid alcohol. This product contains aromatic petroleum solvent. Aspiration may be a hazard.

For Product Use Information: (800) 331-2867 24 Hours/Day
Medic./Trans. Emergency:
(DART) (800) 334-7577 24 Hours/Day
(CHEMTREC) (800) 424-9300 24 Hours/Day



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----- 4. FIRST AID MEASURES (Continued) -----

Hints for the physician:

This product contains a synthetic pyrethroid and a petroleum solvent. If ingested and vomiting has not occurred, emesis should be induced with supervision. Keep patient's head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered. DO NOT administer or instill milk, cream or other substances containing vegetable or animal fats which enhance absorption of lipophilic substances. If localized paresthesia develops, the site should be thoroughly washed with soap and water. Cold cream can be applied to diminish the effect.

----- 5. FIRE FIGHTING MEASURES -----

FLAMMABLE PROPERTIES

Flash point: 166°F 74°C TCC

Advice on protection against fire and explosion:

FIRE FIGHTING INSTRUCTIONS: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear. Keep upwind. Isolate hazard area. Avoid inhalation of smoke and fumes. Use water or foam to reduce fumes. Do not touch spilled material. If possible, move containers from area. Extinguish only if flow can be stopped. Use flooding amounts of water as a fog. Cool containers with flooding amounts of water from as far a distance as possible. Avoid breathing vapors.

FLAMMABILITY CLASSIFICATION/RATING:

NFPA/OSHA Class: IIIA

NFPA Rating (Fire): 2

Suitable extinguishing media:

Carbon dioxide, dry chemical and foam.

For Product Use Information: (800) 331-2867 24 Hours/Day
Medic./Trans. Emergency: (800) 334-7577 24 Hours/Day
(DART) (800) 424-9300 24 Hours/Day
(CHEMTREC)



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----- 6. ACCIDENTAL RELEASE MEASURES -----

GENERAL AND DISPOSAL: Use proper protective equipment to minimize personal exposure (see Section 8). Take all necessary action to prevent and to remedy the adverse effect of the spill. Ensure that the disposal is in compliance with all Federal, State/Provincial, and local regulations (see Section 13 for applicable RCRA Number). Refer to Section 15 for applicable Reportable Quantity (RQ) and other regulatory requirements.

LAND SPILL OR LEAK

Small Spills: Absorb with an inert absorbent material such as granular clay, saw dust, or pet litter. Sweep up carefully while avoiding the formation of a dust cloud. Place in an approved chemical waste container for disposal. Rinse spill area with small amount of soapy water. Contain and absorb the rinsate with inert absorbents and place into the same disposal container. Area can be washed with water to remove the last trace residue. Do not allow water to contaminate water supplies or sewers.

Large Spills: Eliminate all ignition sources. Stop leak if you can do so without coming into contact with spilled material. Dike far ahead of liquid spill for later disposal. All equipment used to clean up spill should be grounded. Prevent entry into waterways, sewers, basements or confined areas. Inform appropriate authorities immediately if contamination occurs. Contact Aventis for further assistance if necessary.

----- 7. HANDLING and STORAGE -----

Handling:

- Avoid contact with skin, eyes, or clothing.

Storage:

- Do not contaminate water, food or feed by disposal.
- Store product in original container in a locked storage area.

☛ For Product Use Information: (800) 331-2867 24 Hours/Day
Medic./Trans. Emergency:
(DART) (800) 334-7577 24 Hours/Day
(CHEMTREC) (800) 424-9300 24 Hours/Day



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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Hygiene measures:

- Wash thoroughly with soap and water after handling.

Personal protective equipment

MANUFACTURING, FORMULATION AND OTHER NON-AGRICULTURAL USES

ENGINEERING CONTROLS

Control airborne concentrations below the appropriate exposure guideline (see below for any applicable OSHA/ACGIH Exposure Limits). Local exhaust ventilation may be necessary.

EYE/FACE PROTECTION

Wear safety glasses, splash goggles or face shield.

SKIN PROTECTION

Wear chemical-resistant gloves (Neoprene, Nitrile, PVC) and other protective clothing to avoid skin contact.

RESPIRATORY PROTECTION

Ensure good ventilation. If not adequate, use a chemical cartridge-type respirator approved by the National Institute of Occupational Health and Safety.

GENERAL PROTECTION

Eye wash facility and safety shower should be available.

EXPOSURE GUIDELINES:

Aromatic petroleum solvent (64742-94-5)
Manufacturer's Recommended Limit: 100 ppm

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE: An amber liquid.

ODOR: Mild paintlike solvent odor.

BASIC PHYSICAL PROPERTIES

PHYSICAL STATE: Liquid

PH: Not applicable

VAPOR PRESSURE: Not available

For Product Use Information:	(800)331-2867	24 Hours/Day
Medic./Trans. Emergency:		
(DART)	(800)334-7577	24 Hours/Day
(CHEMTREC)	(800)424-9300	24 Hours/Day



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----- 9. PHYSICAL and CHEMICAL PROPERTIES (Continued) -----

VAPOR DENSITY (AIR=1): Not available
EVAPORATION RATE (BUTYL ACETATE = 1): Not available
SPECIFIC GRAVITY OR DENSITY: 1.01 g/cm³ @ 21°C
PACKING (BULK) DENSITY: 8.41 lb/gal @ 21°C
BOILING POINT/RANGE: Not available
MELTING/FREEZING POINT RANGE: Not available
SOLUBILITY (IN WATER): Not available
SOLUBILITY IN SOLVENTS/OIL (SPECIFIED): Not available
DUST EXPLOSION SEVERITY DATA: Not applicable
MINIMUM IGNITION ENERGY (MJ): Not available
MINIMUM EXPLOSION CONCENTRATION (MEC): Not available
LIMITED OXYGEN CONCENTRATION (LOC): Not available
VISCOSITY: 35.6 cp at 21.4°C

----- 10. STABILITY and REACTIVITY -----

CHEMICAL STABILITY:

Stable

CONDITIONS TO AVOID:

Extreme heat or sources of ignition.

INCOMPATIBILITY:

Strong oxidizing and strong reducing agents.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition products may include carbon monoxide and carbon dioxide.

HAZARDOUS POLYMERIZATION:

Will not occur

----- 11. TOXICOLOGICAL INFORMATION -----

There are no acute toxicological data available for this formulation.

THE FOLLOWING DATA WERE DEVELOPED WITH: Scourge Insecticide with SBP-1382/Piperonyl Butoxide 18% + 54% MF Formula II (EPA Reg. No. 432-667), which contains 18% Resmethrin and 54% Piperonyl Butoxide.

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----- 11. TOXICOLOGICAL INFORMATION (Continued) -----

ACUTE TOXICITY

ORAL LD50 (rat): 2,700 mg/kg (slightly toxic)
DERMAL LD50 (rabbit): > 2,000 mg/kg (slightly toxic)
INHALATION LC50 (rat, 4hr): > 2.64 mg/L (practically non-toxic)
EYE IRRITATION (rabbit): non-irritating
SKIN IRRITATION (rabbit): slightly irritating
SKIN SENSITIZATION (guinea pig): non-sensitizing

NOTE: The severity classifications listed above are those of Aventis, and, particularly for eye irritation, may not always coincide with EPA-mandated Precautionary Statements.

THE FOLLOWING DATA WERE DEVELOPED WITH: resmethrin and piperonyl butoxide, the active ingredients

SUBCHRONIC (TARGET ORGAN EFFECTS)

The NOEL established for resmethrin in a 90-day inhalation study with rats was 0.1 g/m³ or 0.1 mg/L. The NOEL for resmethrin was 10 mg/kg/day in the diet when fed to dogs for 180 days. Rats tolerated diets containing 5000 ppm of piperonyl butoxide without adverse effects for 17 weeks.

CHRONIC TOXICITY AND CARCINOGENICITY

Resmethrin was not considered to be oncogenic based on chronic feeding studies conducted in rats and mice.

A statistically significant increase in the number of benign liver tumors appeared in mice fed piperonyl butoxide technical at doses which far exceed any anticipated daily human intake. Independent and industry toxicological experts who have reviewed the data agree that the findings of the study do not indicate a health risk to human beings.

REPRODUCTIVE AND DEVELOPMENTAL TOXICITY

No effects on reproductive parameters were observed when diets containing up to 500 ppm resmethrin were fed to rats over two successive generations. Resmethrin is not considered to be teratogenic based on studies conducted in rabbits and rats.

Reproductive performance and offspring development in rats were unaffected when piperonyl butoxide was fed at dietary

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----- 11. TOXICOLOGICAL INFORMATION (Continued) -----

concentrations of up to 1000 ppm over two successive generations. Piperonyl Butoxide was not considered to be fetotoxic or teratogenic based on a study in rabbits.

NEUROTOXICITY

Resmethrin is not considered to be a neurotoxin based on rat feeding studies conducted for up to 32 weeks.

MUTAGENICITY (GENETIC EFFECTS)

Resmethrin is not considered to be mutagenic based on in vitro studies conducted with bacteria and yeast.

----- 12. ECOLOGICAL INFORMATION -----

ENVIRONMENTAL PRECAUTIONS

This pesticide is highly toxic to fish. For terrestrial uses, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated sites may be hazardous to fish in adjacent waters. Consult your State's Fish and Wildlife Agency before treating such waters. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

ECOLOGICAL TOXICITY

Aquatic

The 96-hour LC50 values for Scourge in rainbow trout, Bluegill Sunfish, and Sheepshead minnow are: 2.40 ppb, 13.00 ppb, and 8.80 ppb, respectively. The 48-hour LC50 for *Daphnia magna* is 0.10 ppm. For *Penaeus* shrimp and American oyster, the 96-hour LC50 for Scourge is 1.25 ppb and approximately 1.79 ppm, respectively.

Avian

The acute oral LD50 of resmethrin in male California quail was in excess of 2,000 mg/kg.
The LC50 of resmethrin fed to Japanese quail in their diet was > 5,000 ppm. The LC50 of resmethrin fed to mallard ducks was also > 5,000 ppm.
Dietary administration of resmethrin at 300 ppm for 23 weeks produced no adverse effects on reproduction in Bobwhite

For Product Use Information: (800)331-2867 24 Hours/Day
Medic./Trans. Emergency:
(DART) (800)334-7577 24 Hours/Day
(CHEMTREC) (800)424-9300 24 Hours/Day



Product Name: Scourge® Insecticide with SBP-1382®/PB 18%+54% MF Forla II
Product Code: 15418
MSDS Number : C2109
Version Date: November 22 2000

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----- **12. ECOLOGICAL INFORMATION (Continued)** -----

quail and in Mallard duck.

----- **13. DISPOSAL CONSIDERATIONS** -----

Do not contaminate water, food or feed by disposal.

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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and Local authorities.

RCRA CLASSIFICATION:

RCRA HAZARDOUS WASTE INGREDIENTS: None

----- **14. TRANSPORT INFORMATION** -----

PROPER SHIPPING NAME: Not DOT Regulated

NOTE: For transport purposes (49 CFR Part 173.132), the calculated 1-Hour LC50 (Rat) is: 10.56 mg/l.

----- **15. REGULATORY INFORMATION** -----

STATE REGULATIONS

CALIFORNIA (Proposition 65): This product contains a chemical (resmethrin) known to the State of California to cause cancer or birth defects or other reproductive harm.

The following chemicals associated with the product are subject to the right-to-know regulations in these states:

Resmethrin (10453-86-8): NJ
Piperonyl butoxide (51-03-6): NJ

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----- 15. REGULATORY INFORMATION (Continued) -----

U.S. FEDERAL REGULATIONS

EPA Registration Number: 432-667

CARCINOGENICITY: NTP: No IARC: No OSHA: No

SARA TITLE III SECTION 311/312 - HAZARD CLASSES:

Acute Health Hazard - Yes
Chronic Health Hazard - No
Fire Hazard - No
Sudden Release of Pressure Hazard - No
Reactivity Hazard - No

SARA TITLE III - NOTIFICATIONS AND INFORMATION

Section 302 (EHS) ingredients: None
Section 304 (CERCLA & EHS) ingredients (RQ): None

TSCA inventory status

These components are not listed:
Resmethrin 18% (10453-86-8)
Other ingredients, including: 28%

SARA 313 :

Resmethrin 18% (10453-86-8)
Piperonyl butoxide 54% (51-03-6)

INTERNATIONAL REGULATIONS

The following chemical(s) associated with the product have also been listed on the following International inventories:

Resmethrin (10453-86-8): CANADIAN DSL, EINECS
Piperonyl butoxide (51-03-6): CANADIAN DSL, EINECS
Aromatic petroleum solvent (64742-94-5): CANADIAN DSL,
EINECS

WHMIS INGREDIENT DISCLOSURE LISTED COMPONENTS:

CPC NUMBER: None

WHMIS Classification for Control Product Regulations (CPR):
Registered pesticide under US FIFRA regulations; exempt from
CPR classification.

The MSDS contains all CPR required hazard-related
information.

WHMIS HAZARD RATING: See HMIS rating (Section 16)

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----- **16. OTHER INFORMATION** -----

HAZARD RATINGS

	HEALTH	FLAMM	REACT	OTHER
NFPA	1	2	1	
HMIS	1	2	1	G

REVISED SECTIONS:

MSDS REVISION INDICATOR: New Format and Company Name.

PREPARED BY: Regulatory Department

PHONE: 800-438-5837

SUPERCEDES MSDS DATED: 11/11/99

DISCLAIMER:

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instructions.

For Product Use Information: (800)331-2867 24 Hours/Day
Medic./Trans. Emergency: (800)334-7577 24 Hours/Day
(DART) (800)424-9300 24 Hours/Day
(CHEMTREC)

Material Safety Data Sheet

Date last revised: 2 January 2003

I. General Information

Chemical Name and Synonyms Permethrin	Trade Name & Synonyms FLIT 10EC Broad Spectrum Multi-Use Insecticide
Chemical Family Synthetic Pyrethroid	EPA Registration Number 8329-67
Proper DOT Shipping Name Agricultural Insecticide, N.O.I., Non-Hazardous	DOT Hazard Classification Non-Hazardous
Manufacturer Clarke Mosquito Control Products, Inc	Manufacturer's Phone Number (630) 894-2000
Manufacturer's Address 159 North Garden Avenue Roselle, Illinois 60172	INFOTRAC (Transportation/Spill Emergency) 1-800-535-5053 Poison Control Center (Medical Emergency) 1-800-214-7753

II. Ingredients

Principal Hazardous Components	CAS #	OSHA PEL-TWA	Percent
Permethrin	52645-53-1	None Established	< 10.0
Petroleum Distillate		2000 mg/ m3	> 90.0

III. Hazards Identification

Health: Harmful if inhaled. Causes moderate eye irritation. Avoid breathing vapor or spray mist. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling.

IV. Emergency First Aid

Skin Contact: Remove contaminated clothing and wash affected areas of skin with soap and water.

Eye: 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. Call a poison control center or doctor for treatment advice.

Inhalation: Remove affected person to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

Ingestion: Call a physician or Poison Control Center immediately. **Do not induce vomiting.** This product contains petroleum solvent. Aspiration may be a hazard. Do not give anything by mouth to an unconscious person.

Note to Physician This product contains a pyrethroid and a petroleum solvent. If ingested and vomiting has not occurred, emesis should be induced with supervision. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using cuffed endotracheal tube should be considered.

V. Fire & Explosion Hazard Data

Do not use or store near heat or open flame. Do not use this product in or near electrical equipment due to the possibility of shock hazard.

Flash Point (Test Method) : 165 F, 74 C (Tag Closed Cup)

Extinguishing Media: Foam, carbon dioxide, dry chemical or water

Special Fire Fighting Procedures: Use self-contained breathing apparatus pressure demand, MSHA/NIOSH approved and full protective gear Cool fire exposed areas and equipment. Do not use direct stream of water. Material may float and ignite.

VI. Physical Data

Boiling Point (°F): Not Established	Specific Gravity (H₂O = 1): 0.84
Vapor Pressure (mm Hg.): < 1 mm HG @ 25 C	Vapor Density (Air = 1): >5
Solubility in Water: Emulsifiable	pH: Not Applicable
Appearance: Medium amber to light brown	Odor: Very mild

VII. Toxicological Information

Primary Route of Entry: Inhalation, Dermal, Oral	Effect of Acute Overexposure:
Eye Effects: EPA Tox Category III	Acute Oral Effects: LD50 > 5,000 mg/kg
Acute Inhalation Effects:	4-Hour LC50 > 1.56 mg/L (maximum attainable concentration) 1-Hour equivalent LC50 > 6.24 mg/L
Skin Effects:	Irritation: Tox Category III, Moderate irritation @ 72 hours; PDI = 4.2 Absorption: LD50 > 5,050 mg/kg; Sensitization: Not a sensitizer
Chronic: A statistically significant increase in the incidence of lung and liver tumors was observed in female mice receiving diets containing 375 and 750 mg/kg/day over 85 weeks.	
Carcinogenicity:	NPT: No IARC: No OSHA: No

Material Safety Data Sheet

Flit 10 EC Broad Spectrum Multi-Use Insecticide

Date last revised: 2 January 2003

VIII. Reactivity Data

Stability:	Do Not store near heat or flame
Incompatibility	Strong oxidizers
Hazardous Decomposition Products	Will not occur

IX. Environmental Protection Procedures

Spill Response: In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, Fuller's earth, etc. Clean spill area of residues and absorbent. Contaminated absorbent should be disposed of according to local, state and federal regulations.

Storage: Store upright and sealed in its original container at room temperature, in a dry locked place out of the reach of children. Avoid exposure to extreme temperatures.

Waste Disposal: Do not contaminate water, food, or feed by storage or disposal. Pesticide Disposal: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility. Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or dispose of in a landfill or by other approved State and local procedures. For guidance, contact your State Water Board or Regional Office of the EPA.

Other Precautions: Do not contaminate water by cleaning of equipment or disposal or wastes.

X. Special Protection Information

Eye Protection: OSHA-approved safety glasses, goggles or face shield suggested when mixing or loading tank.

Skin Protection: Handlers should wear protective clothing and chemical resistant gloves when mixing or loading tank

Respiratory Protection: Wear a full-faced gas mask with canister type, recommended for general insecticide protection for applying indoors as a space spray fog

Ventilation: Work in a well ventilated area.

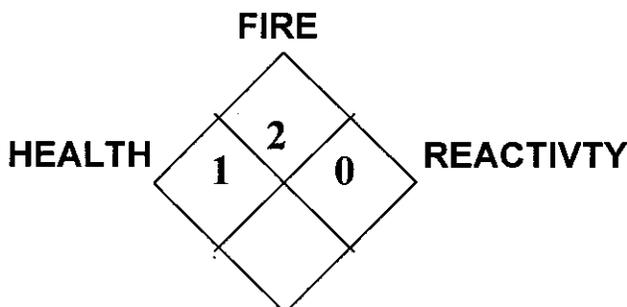
Other: IMPORTANT. Read and observe all precautions and instructions on the label.

XI. Other Regulatory Information

SARA Title III notifications and information : This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and 40 CFR 372:

CAS Number	INGREDIENT NAME	PERCENTAGE BY WEIGHT
52645-53-1	Permethrin	10.0

This information must be included on all MSDS's that are copied and distributed for this material

**NFPA Code Key**

- 4 = Severe
- 3 = Serious
- 2 = Moderate
- 1 = Slight
- 0 = Minimal

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.

