



**AQUEOUS FLOWABLE BASED ON THE ELLCAP®
ENCAPSULATION SYSTEM**
For control of larvae of certain caterpillar pests on field crops.

ACTIVE INGREDIENT

Delta endotoxin of *Bacillus thuringiensis* variety *kurstaki*
encapsulated in killed *Pseudomonas fluorescens* 10%

INERT INGREDIENTS

90%

TOTAL

100%

One gallon of this product contains 0.9 lbs. of delta endotoxin of
Bacillus thuringiensis variety *kurstaki* encapsulated in killed
Pseudomonas fluorescens.

1819381

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

Avoid contact with eyes, skin and clothing. Wash thoroughly after
handling. See side panel for additional precautionary statements

EPA Registration No. 53219-3

EPA Est. No. 37429-GA-2

CellCap is a registered trademark of Mycogen Corporation

M-Pest is a trademark of Mycogen Corporation

The CellCap encapsulation system is protected by U.S. patent nos. 4,453,462 and
4,685,455

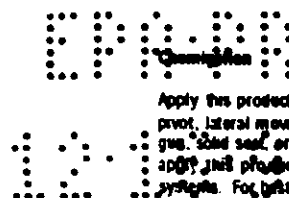
Net Contents: 2 1/2 gallons

M Mycogen Corporation
5461 Oberlin Drive
San Diego, California 92121
(609) 745-7476

ACCEPTED

FEB 18 1993

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 53219-3



Apply this product only through sprinkler (including center
pivot, lateral move end row side (wheel) roll, travel, big
gun, side seat, or side move) irrigation systems. Do not
apply this product through any other type of irrigation
systems. For best results use irrigation levels of 0.15 to 0.5
inches of water per acre.

Shake the product container well or otherwise agitate the
product before pouring or pumping into a nurse tank.

Product may be injected undiluted and does not require
agitation in the nurse tank. Agitate the product again if
shutdown periods are longer than 36 hours.

If dilution of the product is required to obtain proper
application rate, dilute in a 1 to 1 ratio of water to product
and maintain continuous agitation during application.
Agitate again after any shutdown period. Do not mix with
nonemulsifiable oil.

When application is completed, thoroughly flush the
injection system and sprinkler lines with water.

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

In center pivot systems the application of this product must
be made continuously for the duration of the water
application.

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

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

Do not connect an irrigation system (including greenhouse
systems) used for pesticide application to a public water
system unless the pesticide label prescribed safety devices
for public water supplies are in place. Public water system
means a system for the provision to the public of piped
water for human consumption if such system has at least 15
service connections or regularly serves an average of at least
25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water system
must contain a functional reduced-pressure zone, backflow
preventer (RPZ) or the functional equivalent in the water
supply line upstream from the point of pesticide
introduction. As an option to the RPZ, water from the public
water system should be discharged into a reservoir tank
prior to pesticide introduction. There shall be a complete
physical break (air gap) between the outlet end of the fill pipe
and the top or overflow rim of the reservoir tank of at least
twice the inside diameter of the fill pipe.

A person knowledgeable of the 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. The system
must contain a functional check valve, vacuum relief valve
and low pressure drain appropriately located on the
irrigation pipeline to prevent water source contamination
from backflow. The pesticide injection pipeline must contain
a functional, automatic, quick-closing check valve to prevent
the flow of fluid back toward the injection pump. The
pesticide injection pipeline must also contain a functional,
normally closed, solenoid-operated valve located on the
intake side of the injection pump and connected to the
system interlock to prevent fluid from being withdrawn from
the supply tank when the irrigation system is either
automatically or manually shut down. The system must
contain functional interlocking controls to automatically shut
off the pesticide injection pump when the water pump motor
stops, or in cases where there is no water pump, when the
water pressure decreases to the point where pesticide
distribution is adversely affected. The irrigation line or water
pump must include a functional pressure switch which will
stop the water pump motor when the water pressure
decreases to the point where pesticide distribution is
adversely affected. Systems must use a metering pump,
such as a positive displacement injection pump (e.g.,
diaphragm pump) effectively designed and constructed of
materials that are compatible with pesticides and capable of
being fitted with a system interlock.

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GENERAL INFORMATION

Insects Controlled: This product controls the listed caterpillar (e.g., "worm") pests, including those resistant to synthetic chemical pesticides.

Mode of Action: This product must be eaten by the target insects to be effective. After eating foliage that has been sprayed with this product, insects immediately stop feeding. Death usually occurs 1-5 days later.

Residual Activity: This product is based on the CalCap encapsulation system, which increases the residual activity of the active ingredient by protecting it from rapid environmental breakdown.

Re-entry and Pre-harvest Restrictions: This product can be applied up to the day of harvest (zero days to harvest). Workers may reenter the field immediately after use of this product.

Beneficial Insects: This product does not harm beneficial insects (honey bees, lacewings, parasitic wasps, ladybird beetles, predatory beetles and flies, etc.)

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Read the entire label before using this product.

Recommended Rates

Rates and frequency of application will vary depending on level and type of infestation, and type of application equipment used.

Light infestations (<1 larva/5 plants) 1-2 quarts per acre
Moderate to heavy infestations 2-3 quarts per acre
Extremely heavy infestations 3-4 quarts per acre

Application Timing

- Always target newly hatched or small larvae as they feed and are controlled before they cause extensive feeding damage. Always make applications before other larvae begin feeding inside the plant.
- To determine optimal timing of first application, scout fields regularly for the appearance of eggs and newly hatched larvae. Make the first application as soon as larvae begin to hatch. Repeat applications as needed to maintain larval control.
- Larvae may tunnel through the crop, feeding or resting as they mature. Once larvae are protected inside the plant, they will be difficult to control with this, or other foliar applied products.
- Use this product for early season control of *Heliothis* or *Helioverpa* species. Do not use this product for control of large *Heliothis* or *Helioverpa* larvae (>4" long), or control of larvae that are feeding inside the plant.

Mixing and Application

- For conventional ground application, apply recommended amount of this product in at least 20 gallons of water per acre and pressure of 50 psi or more. For aerial application, apply the recommended amount of product in at least 3 gallons of water per acre.
- Thorough coverage of the foliage is NECESSARY for satisfactory performance of this product. Control of target insects is achieved only when susceptible stages of the insect eat treated surfaces of the plant. All application techniques and equipment should result in uniform and complete coverage of the plant. Sheds, streams or untreated foliage below the canopy surface will result in unsatisfactory performance.
- Fill spray tank 1/2 full with water and add recommended amount of this product to tank. Mix thoroughly while adding the remainder of water. Agitate as necessary to maintain suspension.
- If rain or irrigation occurs on the day of application, re-apply this product.

CROPS

CATERPILLAR LARVAE CONTROLLED

Corn: field, seed sweet and popcorn	European corn borer and southwestern corn borer (1st and 2nd generation)*
Cucurbit	armyworms, diamondback moth, loopers
Cotton	armyworms, cotton bollworm, cabbage looper, tobacco budworm
Peanut, soybean	armyworms, corn earworm, diamondback moth, green cloverworm, soybean looper, cabbage looper, velvetbean caterpillar
Tobacco	cabbage looper, hornworms, tobacco budworm

*Two applications may be necessary for control of second generation borers under conditions of extended egg deposition

PRECAUTIONARY STATEMENTS

CAUTION

Hazards to Humans and Domestic Animals: May cause skin sensitization reactions in certain individuals. Avoid contact with eyes, skin or clothing. Use protective gloves, goggles and a dust mask when applying this product.

Statement of Practical Treatment: If in eyes, flush with plenty of water. Get medical attention if irritation persists. Wash thoroughly with soap and water after handling.

Environmental Hazards: Keep out of fishes, ponds, or streams. Do not contaminate aquatic systems by cleaning of equipment or disposal of wastes.

For emergency medical information, call toll free 1-800-225-5835.

STORAGE AND DISPOSAL

Do not contaminate water, feed or foodstuffs by storage or disposal. Storage: Keep container uncapped until use. Store unused product in original container. This product should be stored at temperatures between 35°F and 90°F.

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 incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

LIMIT OF WARRANTY AND LIABILITY

This product conforms to the description on this label and is reasonably fit for the purpose set forth on this label when used according to the label directions and under the specified label conditions. THE MANUFACTURER DISCLAIMS ANY AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE. Buyer and all users assume all risks and responsibility for loss or damage if this product is used, stored, handled or applied under any condition not reasonably foreseeable or beyond the manufacturer's control, or not explicitly set forth in this label. THE LIMIT OF THE MANUFACTURER'S LIABILITY SHALL BE THE PURCHASE PRICE FOR THE QUANTITY INVOLVED. IN NO EVENT SHALL THE MANUFACTURER BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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B I O I N S E C T I C I D E

ABREXON FLOWABLE BASED ON THE CELLCAP[®] ENCAPSULATION SYSTEM
For control of certain caterpillar pests on vegetables, fruits and field crops.

ACTIVE INGREDIENT
Delta endotoxin of *Bacillus thuringiensis* variety *kurstaki* encapsulated in killed *Pseudomonas fluorescens*.....10%

INERT INGREDIENTS.....90%

TOTAL.....100%

One gallon of this product contains 0.9 lbs of delta endotoxin of *Bacillus thuringiensis* variety *kurstaki* encapsulated in killed *Pseudomonas fluorescens*.

KEEP OUT OF REACH OF CHILDREN

CAUTION

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. See side panel for additional precautionary statements.

EPA Registration No. 53219-3

EPA Establishment No. 37428-CA-2

MVP is a registered trademark of Mycogen Corporation.

CellCap is a registered trademark of Mycogen Corporation.

The CellCap encapsulation system is protected by U.S. patent nos. 4,886,462 and 4,886,463.

Net Contents: 2 1/2 gallons



Mycogen Corporation
5451 Chabot Drive
San Diego, California 92121
(602) 746-7476

CROPS AND PESTS

GREENHOUSE AND FIELD/ OPEN-VEGETABLE CROPS

CATERPILLAR LARVAE CONTROLLED

Leafy vegetables: cole crops (including cabbage, broccoli, brussels sprouts, bok choy, Chinese cabbage, cauliflower, Chinese cabbage, collards, greens, horseradish, kale, kohlrabi, mustard greens) water-cress and lettuce (head and leaf)

diamondback moth, cabbage looper, imported cabbageworm, cabbage webworm, cross striped cabbageworm, armyworms*

Solanaceous crops: pepper, tomato

armyworms, cabbage looper, European corn borer, hornworms*

Root crops** : horseradish, potatoes, radish, rutabaga, turnips

armyworms, diamondback moth, European corn borer, looper

Small fruits

European corn borer and southwestern corn borer (1st and 2nd generations), armyworms*

Deleted these types of crops

FRUIT CROPS

CATERPILLAR LARVAE CONTROLLED

Grape**

cane cutworm, leafminer

Grape (California)

Western grapefruit skeletonizer, cabbage looper, armyworms

Grape (all other states)

Western grapefruit skeletonizer, grape berry moth, cabbage looper, armyworms, leafminer

Peach fruit: apple**

codling moth, leafminer, banded apple budworm

Small fruits and berries: blueberry, cranberry**

armyworms, aphid moth, looper, leafminer*

FIELD CROPS

CATERPILLAR LARVAE CONTROLLED

Corn: field corn, seed corn, sweet corn, popcorn

European corn borer and southwestern corn borer (1st and 2nd generations) * ←

Cotton

diamondback moth, armyworms, looper* ←

Cotton

armyworms, cabbage looper* ←

Peas, soybeans

armyworms, cabbage looper, diamondback moth, green cloverworm, soybean looper, velvetbean caterpillar* ←

Tomato

cabbage looper, hornworms* ←

Deleted #3

*Mend to 4th
Deleted under
April 1st to 3rd
Deleted →*

*This product may be used for early season control of Heliothis species (tobacco budworm, corn earworm, tomato budworm, cotton budworm) and tomato pinworm larvae. Do not use this product for control of large ribbed larvae (4th instar), or for control of Heliothis or pinworm larvae that are feeding inside the plant.
**Not for use in California.

Application →

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GENERAL INFORMATION

Insects Controlled: This product controls the listed caterpillars (e.g. "worm") pests, including those resistant to synthetic chemical pesticides.

Mode of Action: This product must be eaten by targeted insects to be effective. After eating foliage that has been sprayed with this product, insects immediately stop feeding. Death usually occurs 1 to 5 days later.

Residual Activity: This product is based on the CellCap encapsulation system, which increases the residual activity of the active ingredient by protecting it from rapid environmental breakdown.

Re-entry and Pre-harvest Restrictions: This product can be applied up to and on the day of harvest (zero days to harvest). Workers may re-enter the field immediately after use of this product.

Beneficial Insects: This product does not harm beneficial insects (beetlebees, lacewings, parasitic wasps, ladybird beetles, predatory beetles and flies, etc.).

DIRECTIONS FOR USE

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

Recommended Rates

Rates and frequency of applications will vary depending on level and type of larval infestation, and type of application equipment used.*

Light infestations (<1 larva/5 plants)	1-2 quarts per acre
Moderate to heavy infestations	2-3 quarts per acre
Extremely heavy infestations	3-4 quarts per acre

*For aerial applications, or if Heliothis species are present, the higher recommended rates should be used.

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Application Timing

- Always target newly hatched or small larvae with spray applications so that insects are controlled before they cause extensive feeding damage. Always make applications before older larvae begin feeding inside the plant.
- To determine optimal timing of first application, scout fields regularly for the appearance of eggs and newly hatched larvae. Make the first application as soon as larvae begin to hatch. Repeat applications as needed to maintain larval control.
- Larvae may tunnel or bore into buds, heads, stalks, or fruits as they mature. Once larvae are protected inside the plant, they will be difficult to control with this, or other foliar applied products.
- For control of tomato pinworm or Heliothis species, use this product for early season control only. Once older larvae begin to feed inside the plant, they will not be controlled by this product.
- Use other labeled products for control of large (>1" long) cabbage looper larvae.

Mixing and Application

- Do not apply this product through any type of irrigation system. *Deleted*
- Thorough coverage of the foliage is NECESSARY for satisfactory performance of this product. All application techniques and equipment should result in uniform and complete coverage of all leaf surfaces on the plant. Control of target insects is achieved only when susceptible stages of the insect eat treated leaf surfaces. Sheds, streaks or untreated foliage below the canopy surface will result in unsatisfactory performance.
- Fill spray tank 1/4 full with water and add recommended amount of this product to tank. Mix thoroughly while adding remainder of water. Agitate as necessary to maintain suspension.
- If rain or irrigation occurs on day of application, re-apply this product.
- For conventional ground application, apply recommended amount of product in at least 20 gallons of water per acre. For best results, use volumes of 40 gpa or more, and pressures of 50 psi or more. For aerial application, apply recommended amount of product in at least 3 gallons of water per acre.
- Use an approved sprayer or stickler-sprayer to improve coverage on hard to wet crops.

For Application to Small Areas (<1 acre)

- Use 1 1/2 to 3 oz. (3 to 6 tablespoons) of this product per gallon of water. Time application as recommended above.
- Use sufficient volume of water to thoroughly wet upper and lower leaf surfaces.



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PRECAUTIONARY STATEMENTS

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Environmental Hazards: Keep out of lakes, ponds or streams. Do not contaminate aquatic systems by cleaning of equipment or disposal of wastes.

For emergency medical information, call toll free 1-800-222-0633.

STORAGE AND DISPOSAL

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

Storage: Keep container unopened until use. Store unused product in original container. This product should be stored at temperatures between 35°F and 95°F.

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 incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

LIMIT OF WARRANTY AND LIABILITY

This product conforms to the description on this label and is reasonably fit for the purpose set forth on this label when used according to the label directions and under the specified label conditions. THE MANUFACTURER DISCLAIMS ANY AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE. Buyer and all users assume all risks and responsibility for loss or damage if this product is used, stored, handled or applied under any condition not reasonably foreseeable or beyond the manufacturer's control, or not as explicitly set forth in this label. THE LIMIT OF THE MANUFACTURER'S LIABILITY SHALL BE THE PURCHASE PRICE FOR THE QUANTITY INVOLVED. IN NO EVENT SHALL THE MANUFACTURER BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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SYSTEM

For control of certain caterpillar pests on vegetables, fruits and field crops

ACTIVE INGREDIENT

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encapsulated in killed *Pseudomonas fluorescens*10%

INERT INGREDIENTS 90%

TOTAL100%

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KEEP OUT OF REACH OF CHILDREN

CAUTION

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Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

See back panel for additional precautionary statements

EPA Registration No. 53219-3

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MYCOGEN CORPORATION

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Net Contents: 1 Quart
1 Pint

DATE

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