Foray® 48B
BIOLOGICAL INSECTICIDE
FLOWABLE CONCENTRATE

For Commercial Forestry and Wide-Area Pest Treatment — Aerial Application Only

For Organic Production

Active Ingredient:
Bacillus thuringiensis, subsp. kurstaki, strain ABTS—351,
fermentation solids, spores, and insecticidal toxins ........12.65%
Other Ingredients ........................................... 87.35%
Total ................................................................... 100.00%

Potency: 10,600 Cabbage Looper Units (CLU) per mg of product
(equivalent to 48 billion CLU per gallon).
The percent active ingredient does not indicate product
performance and potency measurements are not federally
standardized.

KEEP OUT OF REACH OF CHILDREN

CAUTION

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CAUTION

VALEN'T BioSciences
Valent BioSciences LLC
870 Technology Way
Libertyville, IL 60048 U.S.A.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION
Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash
thoroughly with soap and water after handling and before eating, drinking,
chewing gum, using tobacco or using the toilet.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool dry place. Keep container tightly closed when
not in use. Store in temperatures above freezing and below 32° C (90° F).

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. Triple rinse container (or equivalent) promptly after emptying. Triple
rinse as follows: Empty the remaining contents into application equipment or a
mix tank and drain for 10 seconds after the flow begins to drip. Fill the
container ¾ full with water and recap. Shake for 10 seconds. Pour into
application equipment or a mix tank or store rinsate for later use or disposal.
Drain for 10 seconds after the flow begins to drip. Repeat this procedure two
more times. Offer for recycling if available. Offer for reconditioning, if
appropriate.

Refillable Container: Refill this container with pesticide only. Do not use 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. To clean the container before final disposal,
empty the remaining contents from this container into application equipment or
mix tank. Fill the container about 10 percent full with water. Agitate vigorously
or recirculate water with pump for 2 minutes. Pour or pump rinsate into
application equipment or rinsate collection system. Repeat this rinsing procedure
two more times. Offer for recycling if available. Offer for reconditioning, if
appropriate.

See enclosure label for First Aid, Precautionary Statements, Storage/Disposal
Statements and Directions for Use.

EPA Reg. No. 73049 – 427
EPA Est. No. 33762 – IA – 001

Lot No.: ####### – ###
Date of Mfg.: #### ###
Net Contents: 55.0 GAL

04 – 9116/R5
Environmental Hazards
Except under the forest canopy, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. This product must not be applied aerially within 1/4 mile of any habitats of threatened or endangered Lepidoptera.

DIRECTIONS FOR USE
It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under “Agricultural Use Requirements” in the Directions For Use section for information about this standard.

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

Pesticide Storage: Store in a cool, dry place. Keep containers tightly closed when not in use. Store in temperatures above freezing and below 32 degrees C (90 degrees F).

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. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available. Offer for reconditioning, if appropriate.

Refillable Container: Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Before cleaning, the person disposing of the container is responsible for the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available. Offer for reconditioning, if appropriate.

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

DIRECTIONS FOR USE BOOKLET
It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

Apply this product only through aerial application.

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the standards on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard (that involves contact with anything that has been treated, such as plants, soil, or water) is:
• Coveralls
• Waterproof gloves
• Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS
The requirements in this box apply to uses that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

APPLICATION
Apply Foray 48B Biological Insecticide Flowable Concentrate (hereafter referred to as Foray 48B) as directed on the product container. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

HANDLING & MIXING
If Foray 48B is applied undiluted, the operator must ensure that the bulk quantity is well agitated and homogenous. When Foray 48B is shipped by bulk tankers and transferred via a closed-loop mixing/loading system, the material is measured by passing through in-line flow meters directly into the aircraft, minimizing exposure to ground handling personnel.

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

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 treatment.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION
Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Personal Protective Equipment (PPE)
Applicants and other handlers must wear:
• Long-sleeved shirt and long pants
• Waterproof gloves
• Shoes plus socks

Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Agricultural Use Requirements:
Mixers/loaders and applicators must wear a NIOSH-approved particulate respirator with any R or P filter with NIOSH approval number prefix TC-84A, or a NIOSH-approved powered air purifying respirator with a HE filter with NIOSH approval number prefix TC-21C. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

Engineering Control
When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must provide all PPE specified above for “applicants and other handlers” and have such PPE immediately available for use in an emergency, such as spill or equipment breakdown.

Non-agricultural Use Requirements:
Mixers/loaders and applicators must wear a NIOSH-approved particulate respirator with any R or P filter with NIOSH approval number prefix TC-84A, or a NIOSH-approved powered air purifying respirator with a HE filter with NIOSH approval number prefix TC-21C. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

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DIRECTIONS FOR USE BOOKLET
It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

Apply this product only through aerial application.
GENERAL NON-AGRICULTURAL USE INSTRUCTIONS

Not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in ornamental gardens or parks, or on golf courses or lawns and grounds.

For use on trees being grown for sale or other commercial use, or for commercial seed production, or for the production of timber or wood products, or for research purposes except wide-area public pest control programs sponsored by government entities, such as mosquito abatement, Gypsy Moth control, and Mediterranean Fruit Fly eradication.

Foray 48B contains the spores and endotoxin crystals of Bacillus thuringiensis kurstaki. Foray 48B is a stomach poison and is effective against lepidopterous larvae. After ingestion, larvae stop feeding within hours and die 2-5 days later. Maximum activity is exhibited against early instar larvae. Apply Foray 48B only by aerial application.

Use Foray 48B with a closed-loop mixing/loading system that will minimize the potential for accidental spills and exposure of ground handling personnel.

If dilution with water is needed for full coverage, fill tank with approximately 3/4 of the water required for dilution. Begin agitation and pump Foray 48B into the water while maintaining continuous agitation. Do not allow diluted mixture to remain in the tank for more than 72 hours.

Monitor to detect early infestations.

SPRAY VOLUMES

Aerial Application: Use appropriate amount of Foray 48B, as indicated in the tables that follow, in aerial equipment undiluted or with quantities of water sufficient to provide thorough coverage of plant parts to be protected. In the western U.S., use a normal minimum of 5-10 gallons per acre; in the eastern regions, use a normal minimum of 2-3 gallons. The minimum amount of water needed per acre will depend upon size, weather conditions, spray equipment used and local experience.

GENERAL AGRICULTURAL USE INSTRUCTIONS

Foray 48B is a biological insecticide for the control of lepidopterous larvae. It contains the spores and endotoxin crystals of Bacillus thuringiensis kurstaki. Foray 48B must be ingested by the larvae to be effective. For consistent control, apply at first sign of newly hatched larvae (1st and 2nd instar larvae). Susceptible larvae that ingest Foray 48B cease feeding within a few hours and die within 2-5 days.

Foray 48B may be applied up to and on the day of harvest. For maximum effectiveness, follow the instructions listed below:

Monitor fields to detect early infestations.

Apply Foray 48B when eggs start hatching and larvae are small (early instars) and before significant damage occurs. Larvae must be actively feeding to be affected.

Repeat applications every 3 to 14 days to maintain control and protect new plant growth. Factors affecting spray interval include rate of plant growth, weather conditions, and reinfestation. Monitor populations of pests and beneficials to determine proper timing of applications.

Under conditions of heavy pest pressures or when large worms are present use the higher rates on advanced larval stages or under high density larval populations.

Thorough coverage is essential for optimum performance.

Special Instructions:

1. Use the higher rates on advanced larval stages or under high density larva populations.

Use and mix this product with other pesticides only in accordance with the most restrictive of label limitations and precautions. Do not mix this product with any product containing a label prohibition against such mixing. Do not exceed label dosage rates.

Spray volumes of 33-107 fluid ounces of product per acre give optimum coverage. Best results are expected when Foray 48B is applied to dry foliage.

For smaller spray volumes, mix the proper number of teaspoons of Foray 48B from the following chart to attain the desired rates:

If the rate is: Add this amount per gallon of mix:

8 fl. oz. (0.5 pt./acre) 1/2 teaspoon
16 fl. oz. (1 pt.) 1 teaspoon
24 fl. oz. (1.5 pts./acre) 1-1/2 teaspoons
32 fl. oz. (2 pts./acre) 2 teaspoons
48 fl. oz. (3 pts./acre) 3 teaspoons
64 fl. oz. (4 pts./acre) 4 teaspoons

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