

## Biological Insecticide

# Foray® 48F

## Flowable Concentrate

### ACTIVE INGREDIENT:

<i>Bacillus thuringiensis</i> subsp. <i>kurstaki</i> , strain ABTS-351, fermentation, spores and insecticidal toxins . . . . .	17.6%
OTHER INGREDIENTS . . . . .	82.4%
TOTAL	100.0%

EPA Reg. No. 73049-35  
EPA Est. No. 33762-IA-001

List No. 60177

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### KEEP OUT OF REACH OF CHILDREN CAUTION

#### 1.0 FIRST AID

<b>If in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>

#### 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 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. Remove and wash contaminated clothing before reuse.

### 2.2 Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

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

Follow the 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.

### 2.3 User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### 2.4 Environmental Hazards

For terrestrial agricultural uses, do not apply directly to water, or to 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 endangered species or threatened lepidoptera. No manual application can be made within 300 feet of any threatened or endangered lepidoptera.

## 3.0 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 agency responsible for pesticide regulation.

## 4.0 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.

Keep unprotected persons out of the treated areas until sprays have dried.

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## 5.0 STORAGE AND DISPOSAL

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

**Storage:** Keep containers tightly closed when not in use. Do not store at temperatures below 0°F or above 90°F. Roll or shake the drum before dispensing.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water when disposing of equipment washwaters.

**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 flow begins to drip. Repeat this procedure two more times. Once cleaned, offer container for recycling, if available. If recycling is not available puncture and dispose of container in a sanitary landfill, or by other procedures approved by state and local authorities.

## 6.0 NON-AGRICULTURAL USE SITE DIRECTIONS FOR USE

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 interior landscapes, ornamental gardens or parks, or on golf courses or lawns or grounds.

Not 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 for wide-area public pest control programs sponsored by government entities, such as mosquito abatement, gypsy moth control, and Mediterranean fruit fly eradication.

Do not enter treated areas without protective clothing until sprays have dried.

Do not apply this product to the non-agricultural use sites through any type of irrigation system.

Do not apply when weather conditions favor drift from treated areas.

Foray 48F is an insecticide for use against listed caterpillars (larvae) of lepidopterous insects. Close scouting and early attention to infestations is highly recommended. Larvae must eat deposits of Foray 48F to be affected. Always follow these directions:

- Treat when larvae are young (early instars) before the trees are damaged.
- Larvae must be actively feeding on treated, exposed plant parts.
- Thorough spray coverage is needed to provide a uniform deposit of Foray 48F at the site of larval feeding.
- Under heavy pest population pressure, use the higher label rates and/or consider a second application.
- If attempting to control a pest with a single spray, make the treatment when egg hatch is essentially complete, but before tree damage occurs.
- An approved spreader-sticker may be added to diluted tank mixes to improve weather-fastness of the spray deposits. Do not add a sticker to undiluted product.

After eating a lethal dose of Foray 48F, larvae stop feeding within the hour and will die within several days. Dying larvae move slowly, discolor, then shrivel, blacken and die.

Foray 48F is completely water miscible and may be applied through conventional ground or aerial equipment with quantities of water sufficient to provide thorough coverage of infested plant parts. The volume of water needed per acre will depend on weather, spray equipment and plant canopy type. Foray 48F can be mixed in any ratio with water. Mild agitation is sufficient to maintain the mixture in suspension during mixing, loading and spraying. Do not mix more Foray 48F than can be used in a 144 hour period.

Foray 48F can also be applied undiluted from aircraft for control of Spruce Budworm, Hemlock Looper, Jackpine Budworm, and Gypsy Moth. It is recommended that rotary or other atomizers be used to provide droplet Volume Median Diameters (VMD) of 60-100 microns for needle conifers and 50-150 microns for deciduous hardwoods. After prolonged storage, undiluted Foray 48F should be recirculated once to redistribute prior to use. During loading and spraying, agitation of the undiluted product is unnecessary and should be avoided.

Foray 48F may be used to protect trees and shrubs such as in:

- Forests
- Residential, municipal, and shade tree areas
- Recreational areas such as campgrounds, golf courses, parks, and parkways
- Ornamental and shade trees
- Shelterbelts, rights of way, and other easements

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## 7.0 FORAY 48F FOR FOREST, TREES AND SHRUBS

Crop	Pest	OZ/100 GAL/A* (Ground Equipment)	OZ/A (Aerial** Application)
Forest, Trees and Shrubs	Bagworm	21 - 43	21 - 43
	Blackheaded Budworm	21 - 64	21 - 64
	Browntail Moth	21 - 80	21 - 80
	California Oakworm	11 - 43	11 - 43
	Douglas Fir Tussock Moth	21 - 80	21 - 80
	Eastern Tent Caterpillar	43 - 64	43 - 64
	Elm Spanworm	21 - 64	21 - 64
	Fall Webworm	21 - 64	21 - 64
	Forest Tent Caterpillar	21 - 64	21 - 64
	Fruittree Leafroller	11 - 21	-
	Green Striped Maple Worm	21 - 43	21 - 43
	Gypsy Moth	21 - 128	21 - 128
	Asian Gypsy Moth	21 - 128	21 - 128
	Jackpine Budworm	21 - 64	21 - 64
	Mimosa Webworm	11 - 21	-
	Oak Leaf-tier	21 - 64	21 - 64
	Pine Butterfly	21 - 43	21 - 43
	Redhumped Caterpillar	11 - 43	11 - 43
	Saddleback Caterpillar	11 - 43	-
	Saddled Prominent Caterpillar	11 - 43	11 - 43
	Spring & Fall Cankerworm	21 - 64	21 - 64
	Eastern Spruce Budworm <sup>1</sup>	21 - 128	21 - 128
	Western Spruce Budworm <sup>1</sup>	21 - 128	21 - 128
	Western Tussock Moth	21 - 43	21 - 43
	Eastern Hemlock Looper	43 - 64	43 - 64
	Western Hemlock Looper	43 - 64	43 - 64
	Eastern Pine Looper	43 - 64	43 - 64
	Leafrollers	21 - 43	21 - 43
	Buck Moth	43 - 107	43 - 107
	Oak Skeletonizer	21 - 43	21 - 43
	Tortrix	21 - 43	21 - 43
	Coneworm	64 - 96	64 - 96

NOTE: For Hemlock Looper, Eastern Pine Looper, and Coneworms, use 1 to 2 applications, diluted or undiluted, beginning at peak first instar.

\* Water dilution rate for hydraulic sprayer may be varied depending on coverage. For mist blowers, mix the applicable amount (oz.) in up to 10 gallons of water.

\*\* For diluted aerial application, use in up to 10 gallons of water depending on type and density of trees. For best results spray systems which deliver droplet size of 150 microns VMD or less should be used. Note: For Hemlock Looper and Eastern Pine Looper use 1-2 applications, beginning at peak first instar. When applying two applications, first application is at peak first instar and second application is at second instar.

<sup>1</sup> Use rates greater than 21 ounces in Northern states for heavy populations.

## 8.0 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.

