

79766-5

7/19/2012

1/14



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

JUL 19 2012

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Sam Ghantous, Manager
Falcon Lab LLC
4900 Este Ave
Cincinnati, OH 45232

Subject FL-AN540OP
EPA Registration No 79766-5
Label Amendment to add additional producers to CSF, add alternate packaging size to the label and amend the Environmental Hazards statement by adding the point source discharge statement for large containers
Decision # 462774
Application Dated March 15, 2012

Dear Mr Ghantous

The amendment referred to above, submitted in connection with registration under FIFRA section 3(c)(5), is **acceptable** provided that you

- 1 Submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data
- 2 Submit three (3) copies of your final printed labeling before you release the product for shipment Final printed labeling means the label or labeling of the product when distributed or sold Clearly legible reproductions or photo reductions will be accepted for unusual labels, such as those silk-screened directly onto glass or metal containers or large bags or drum labels

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(b) Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions

Should you have any questions, you may contact Ms Menyon Adams directly at 703 347 8496 or via email at adams.menyon@epa.gov

Sincerely,

Lynn Sellers, Chief
Biochemical Pesticides Branch
Biopesticides and Pollution
Prevention Division (751-1P)

SYMBOL	751P			
SURNAME	Adams			
DATE	07/19/12			

EPA Form 1328-1A (1/99)

2/19



FL-AN540OP

Non-selective Herbicide

 FOR ORGANIC PRODUCTION

NOT FOR FOOD USE

MASTER LABEL

SUBLABEL A: FOR AGRICULTURAL USE

FOR CONTACT SPRAY CONTROL OR BURNDOWN OF WEEDS AND GRASSES
FOR ORNAMENTALS, TURF, TREES IN AND AROUND FARMS, FORESTS, NURSERIES AND
GREENHOUSES

SUBLABEL B: FOR COMMERCIAL USE

FOR CONTACT SPRAY CONTROL OR BURNDOWN OF WEEDS AND GRASSES
FOR USE IN STRUCTURAL PEST CONTROL, CONTROL OF VEGETATION IN PASTURE AND
RANGELAND FOR USE IN PARKS, GOLF COURSES AND PUBLIC AND PRIVATE LAWNS AND
GROUNDS FOR AESTHETIC PURPOSES FOR PLANTS IN HABITATIONS, RESIDENTIAL FRUIT
AND VEGETABLE GARDENS, RESIDENTIAL GREENHOUSES

Active ingredient	
Ammonium Nonanoate	40.0 wt %
Other ingredients	<u>60.0 wt %</u>
Total	100.00 wt %

ACCEPTED

JUL 19 2012

Under the Federal Insecticide, Fungicide,
and Rodenticide Act as amended, for
the pesticide registered under
EPA Reg No 79766-5

3/19

SUBLABEL A FOR AGRICULTURAL USE

FOR CONTACT SPRAY CONTROL OR BURNDOWN OF WEEDS AND GRASSES
FOR ORNAMENTALS, TURF TREES IN AND AROUND FARMS, FORESTS NURSERIES AND GREENHOUSES

FL-AN540OP
Non-selective Herbicide

 FOR ORGANIC PRODUCTION

NOT FOR FOOD USE

Active ingredient	
Ammonium Nonanoate	40.0 wt %
Other ingredients	60.0 wt %
Total	100.00 wt %

FL-AN540OP contains 3.3 lbs of ammonium nonanoate per US gallon

KEEP OUT OF REACH OF CHILDREN

WARNING "AVISO"

"Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle (If you do not understand the label, find someone to explain it to you in detail)"

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 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 further 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
EMERGENCY NUMBER	
FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL THE NATIONAL POISON CONTROL CENTER 1-800-222-1222	
Have the product container or label with you when calling a poison control center or doctor	

This product is protected by U S Patent No 6,323,156

EPA Reg No 79766-5

EPA Establishment No 72038-DE-001, 6574-KY-001 064784-OK-001, 067441-IL-001

Lot No xxxxxxxx

Net Contents 3,4,16 & 32 fl oz, 1, 2.5, 5, 55, 270 & 6000 gals

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Warning Causes substantial, but temporary eye irritation Do not get in eyes or on clothing Wear goggles Harmful if inhaled Avoid breathing spray mist Causes moderate skin irritation Avoid contact with skin or on clothing Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco Remove and wash contaminated clothing before reuse

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear

- Coveralls worn over short-sleeve shirt and short pants
- Socks and chemical resistant footwear
- Chemical resistant gloves
- Protective eyewear
- When mixing and loading wear a chemical resistant apron

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

USER SAFETY RECOMMENDATIONS

Users should

- Remove clothing/PPE immediately if pesticide gets inside Then wash thoroughly and put on clean clothing
- Remove PPE immediately after handling this product Wash outside of gloves before removing As soon as possible, wash thoroughly and change into clean clothing

ENVIRONMENTAL HAZARDS

For terrestrial uses This pesticide is toxic to fish and aquatic invertebrates Use care when applying in areas adjacent to any body of water Do not apply directly to water to areas where surface water is present, or to intertidal areas below the mean high water mark Do not contaminate water when disposing of equipment wash water or rinsate Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas This product is toxic to bees exposed to direct treatment or residues on blooming crops or weeds Do not apply this product if bees are visiting the treatment area

For containers greater than 5 gallon

Do not discharge effluent containing this product into lakes streams, ponds estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority For guidance contact your State Water Board or Regional Office of the EPA

5/19

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. 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. For any requirements specific to your State or Tribe, consult the State/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. 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 statements 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 enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil, or water is:

- Coveralls worn over short-sleeve shirt and short pants
- Socks and chemical resistant footwear
- Chemical resistant gloves
- Protective eyewear

METHODS OF USE AND GENERAL APPLICATION INSTRUCTIONS

General Instructions

FL-AN540OP is a contact non-selective herbicide for spray application only to undesirable plant growth. Do not allow spray to contact any green plant parts of desirable plants. **FL-AN540OP** provides control and burndown suppression of annual and perennial broadleaf and grass weeds. Spore producing plants such as mosses and liverworts are also controlled. The amount of burndown and the duration of weed suppression may be reduced when weed growth conditions are unfavorable or when plants are mature.

FL-AN540OP is non-volatile and water soluble for foliar application in tractor powered field-type sprayers or manual pump sprayers. Complete and uniform coverage of weeds by the spray solution is required for the best weed control. Plant foliage will change from a green color to brown/black necrotic tissue within one to two hours after spray application of **FL-AN540OP** diluted with water. **FL-AN540OP** effect on plant tissue may be more rapid in warm weather than in cold conditions. However, weed control is normally unaffected by temperature.

FL-AN540OP herbicide is a soap product which penetrates the cell walls of plants to disrupt the cellular organization of physiological functions which are compartmentalized by membranes within the cell walls. Plant growth ceases when cellular contents are mixed which causes brown necrotic plant tissue.

FL-AN540OP does not migrate through the soil and is not translocated in plants. **To ensure satisfactory control, plant leaves must be thoroughly and uniformly covered with the spray solution.** **FL-AN540OP** does not provide any residual weed control in soil to affect germinating weed seeds.

Mixing and Application Instructions

For use, **FL-AN540OP** is diluted with water to the specified concentration for effective control of the undesirable vegetation. Apply using standard methods of liquid herbicide application. Dilution must be in accordance with label instructions. Do not apply this product through any type of irrigation system.

A 12% v/v dilution is recommended for most weed control situations and based on the results, applicators may increase or decrease spray concentrations as discussed in the following text and tables to obtain better control or to reduce herbicide use.

The degree of dilution for application is based on the concentration of active ingredient needed for the size of vegetation to be suppressed or the rate of herbicidal effect desired. The larger the vegetation, the higher the concentration (less dilution of FL-AN540OP) required for rapid action. See required concentration for variously sized weeds and grasses in Dosage and Application Rates Section. Hard to control or suppress weeds (perennial weeds and some grasses) may require several applications for complete control.

Spray equipment options include hand-held, boom sprayers, pressure sprayers and hose-end sprayers. Spray nozzles that produce a uniform spray will give maximum coverage of the leaves and improved weed control. **FL-AN540OP** is completely soluble in water and when uniformly mixed, no additional mixing or agitation is required.

Application Precautions

- Do not apply to weeds when wet from dew, rain or irrigation
- Do not irrigate within 2 hours after application
- Do not apply if rainfall is expected within 2 hours

During application, some foaming may occur, however, weed control is unaffected if the foam is deposited on the plant surface and is not blown away as drift. Foaming can be reduced by using the minimum spray pressure required for a uniform application to the target weeds. Use low spray pressure to reduce foaming and avoid contact with desirable plants. Most spray nozzles are designed to operate at 10 to 15 psi and provide uniform spray coverage of weeds.

Mixing

Fill sprayer tank with half the required amount of water, add the full amount of **FL-AN540OP** to be used (see Dilution Factors below), then fill the sprayer tank with the remainder of the water required for the desired final concentration. Since **FL-AN540OP** is completely soluble in water and when uniformly dispersed in water, continuous mixing or agitation is not required.

Broadcast Application with Field Sprayer Boom Equipment

The amount of weed vegetation will determine the spray volume required for complete coverage of undesired plants (weeds). Weed vegetation conditions that affect spray coverage are number of weeds present, leaf shape, weed size and weed species. For weeds of over 1 inch height do not use less than 30 gal/acre. Large weeds of 12 to 18 inch height may require 80 to 125 gal/acre or more for control.

Hand-Held Equipment

Thorough saturation of the foliage and stems is required for control, but stop sprays when run-off from weed leaves occurs. Use low spray pressure to reduce foaming and avoid contact with desirable plants. Most spray nozzles are designed to operate at 10 to 15 psi and provide uniform spray coverage of weeds.

Directed Spray Equipment

Use a shielded sprayer to prevent spray contact on desirable plants. Avoid spray contact of green plant stems or green bark of young trees and shrubs.

NOTE In areas of hard water, the final mixture may appear milky. This condition does not change the effectiveness of the treatment. Some visible foam may appear on the leaves as the plants are sprayed. Overspray or drift onto desirable plants is usually not a serious problem because leaves and stems require a thoroughly wet spray coverage for significant injury. Repeat applications as often as necessary to obtain desired control.

Dosage and Application Rates

For general weed and grass control, rates are based on the size of the plants and/or the desired speed of kill. The larger the plants, the higher the dosage rates needed to ensure maximum herbicidal activity. Also, the higher the concentration, the quicker the plants wilt and turn brown. Apply **FL-AN540OP** spray solutions only when weed surfaces are dry.

The rate table presents the suggested percent volume/volume solutions of **FL-AN540OP** to use for application as follows:

- Use a 6 to 8 % V/V **FL-AN540OP** spray solution for control of annual weeds of 1 inch height or less and for control of liverworts and mosses
- Use an 8 to 10% V/V **FL-AN540OP** spray solution for control of annual weeds over 1 inch height and up to 4 inch height
- Use a 10 to 13% V/V **FL-AN540OP** spray solution for weeds over 4 inch height and for hard to control weeds
- A 15% V/V **FL-AN540OP** spray solution is the maximum labeled rate. Use this rate for hard to control perennial weeds or extremely dense weed growth.

Repeat spray applications as necessary to obtain the desired control or suppression of weeds from newly germinated weed seeds and regrowth from roots or stems.

RATE TABLE

Final Spray Volume (gallons)	Amount of FL-AN540OP for Percent V/V (Volume/Volume) Solution				
	6%	8%	10%	13%	15%
1	8 fl oz	10 fl oz	13 fl oz	1 pt	1.2 pt
2	1 pt	1.3 pt	1.3 pt	2 pt	2.4 pt
5	2.5 pt	3.3 pt	4 pt	5 pt	6 pt
10	5 pt	6.5 pt	1 gal	1.3 gal	1.5 gal
20	1.3 gal	1.6 gal	2 gal	2.6 gal	3.0 gal

Height of Plants to be Controlled	Spray Solution (% V/V)
1 inch or less	6 to 8%
1 to 3 inches	8 to 10%
Above 3 inches	10 to 13%

NOTE Do not use spray concentrations higher than 15% in a pressure sprayer since unacceptable foaming and bubble formation may occur at the nozzle heads.

Use Methods

Determine the weed control situation and select the use method required as follows

A Vegetative Burndown Broadcast spray for weed control for no-till planting or seedbed preparation to control weeds prior to seeding or transplanting. Spot sprays may be used in ornamentals and turf.

B Directed and shielded sprays Spray nozzle type or configuration for directed spray or a shield placed around the nozzle to prevent spray contact on the foliage or green stems or bark. Directed/shielded spray applications to area between plastic mulch strips and staked crops for weed control.

PESTS

I Weeds controlled or suppressed by FL-AN5400P

COMMON NAMES

TAXONOMIC NAMES

Broadleaf Weeds

Algae	<i>Gloeocapsa magma</i>
Bittercress, hairy	<i>Cardamine hirsuta</i>
Chickweed, common	<i>Stellaria media</i>
Chickweed, mouse-ear	<i>Cerastium vulgatum</i>
Cocklebur, common	<i>Xanthium strumarium</i>
Corn spurry	<i>Spergula arvensis</i>
Cudweed, purple	<i>Gnaphalium purpureum</i>
Groundsel	<i>Senecio spp</i>
Lambsquarters, common	<i>Chenopodium album</i>
Liverwort	<i>Machantia spp</i>
Marestail or Horseweed rosettes	<i>Conyza canadensis</i>
Morningglory, annual	<i>Ipomoea spp</i>
Moss	<i>Bryophyta</i>
Mustards	<i>Brassica spp</i>
Oxalis or Woodsorrel	<i>Oxalis stricta</i>
Pansy, wild	<i>Viola tricolor</i>
Plantain	<i>Plantago spp</i>
Pigweed, smooth and redroot	<i>Amaranthus spp</i>
Mallow, roundleaved	<i>Malva spp</i>
Moneywort	<i>Lysimachia nummularia</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>
Sorrel, sheep	<i>Rumex acetosella</i>
Spurge, spotted	<i>Euphorbia maculata</i>
Field pennycress	<i>Thlaspi arvense</i>
Velvetleaf	<i>Abutilon theophrasti</i>

Grass and Other Weeds

Bentgrass, colonial	<i>Agrostis tenuis</i>
Bluegrass, annual	<i>Poa annua</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Fescue, creeping red	<i>Festuca rubra</i>
Fescue, hard	<i>Festuca ovina</i>
Nimblewill	<i>Muhlenbergia scheberi</i>
Onion, wild	<i>Allium canadense</i>
Ryegrass, perennial	<i>Lolium perenne</i>
Star of Bethlehem	<i>Ornithogalum nutans</i>

II Weeds Moderately Difficult to Control¹

Bermudagrass (Wireweed)	<i>Cynodon dactylon</i>
Bindweed, field	<i>Convolvulus arvensis</i>
Dandelion	<i>Taraxacum officinale</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Ragweed, common	<i>Ambrosia artemisifolia</i>

¹Use 13 to 15% V/V FL AN5400P for control or suppression

11/19

STORAGE AND HANDLING

DO NOT contaminate water food or feed by storage or disposal

Pesticide Storage Store container in cool place until used Store at temperatures above 32° F

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

Container Handling

Non-refillable Containers Do not reuse or refill this container Offer for recycling if available

Clean container promptly after emptying (liquid formulations)

Non refillable container equal to or less than 5 gals Triple rinse as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container ¼ full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal Drain for 10 seconds after the flow begins to drip Repeat this procedure two more times

Non-refillable container between 5 55 gals Triple rinse as follows Empty the remaining contents into application equipment or a mix tank Fill the container ¼ 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

Refillable container 5 gals to bulk Refill this container with this 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 To clean the container before final disposal empty the remaining contents from this container into application equipment or a mix tank Fill the container about 10 percent full with water Agitate vigorously or recirculate water with the pump for 2 minutes Pour or pump rinsate into application equipment or rinsate collection system Repeat this rinsing procedure two more times Dispose of in a sanitary landfill or by other procedures approved by state and local authorities

For non-medical emergencies or spills, see **FL-AN540OP** MSDS or call CHEMTREC at 800-424-9300

Warranty and Disclaimer Notice

To the extent consistent with applicable law, Falcon Lab, LLC, makes no warranty or guarantee of any kind, expressed or implied concerning the effects of use of this product, other than those specified on this label Buyers or users accept all responsibility for results due to misuse or improper handling of this product

Produced for
Falcon Lab LLC
4900 Este Avenue
Cincinnati, OH 45232
513-762-2500
www.falconlabllc.com

SUBLABEL B: FOR COMMERCIAL USE

FOR CONTACT SPRAY CONTROL OR BURNDOWN OF WEEDS AND GRASSES
FOR USE IN STRUCTURAL PEST CONTROL, CONTROL OF VEGETATION IN PASTURE AND
RANGELAND

FOR USE IN PARKS, GOLF COURSES AND PUBLIC AND PRIVATE LAWNS AND GROUNDS FOR
AESTHETIC PURPOSES FOR PLANTS IN HABITATIONS, RESIDENTIAL FRUIT AND VEGETABLE
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Active ingredient

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40.0 wt %

Other ingredients

60.0 wt %

Total

100.00 wt %

KEEP OUT OF REACH OF CHILDREN

WARNING "AVISO"

"Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle (If you do not understand the label, find someone to explain it to you in detail)

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 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 further treatment advice
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EMERGENCY NUMBER	
FOR 24 HOUR EMERGENCY MEDICAL ASSISTANCE, CALL THE NATIONAL POISON CONTROL CENTER 1 800 222 1222	
Have the product container or label with you when calling a poison control center or doctor	

This product is protected by U S Patent No 6,323 156

EPA Reg No 79766-5

EPA Establishment No 72038-DE-001, 6574-KY-001, 064784-OK-001, 067441-IL-001

Lot No xxxxxxxx

Net Contents 3,4 16 & 32 fl oz 1, 2 5 5, 55, 270 & 6000 gals

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Warning Causes substantial, but temporary eye irritation Do not get in eyes or on clothing Wear goggles Harmful if inhaled Avoid breathing spray mist Causes moderate skin irritation Avoid contact with skin or on clothing Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco Remove and wash contaminated clothing before reuse

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Applicators and other handlers must wear

- Protective eyewear

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

USER SAFETY RECOMMENDATIONS

Users should

- Remove clothing/PPE immediately if pesticide gets inside Then wash thoroughly and put on clean clothing
- Remove PPE immediately after handling this product Wash outside of gloves before removing As soon as possible wash thoroughly and change into clean clothing

ENVIRONMENTAL HAZARDS

For terrestrial uses This pesticide is toxic to fish and aquatic invertebrates Use care when applying in areas adjacent to any body of water Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark Do not contaminate water when disposing of equipment wash water or rinsate Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas This product is toxic to bees exposed to direct treatment or residues on blooming crops or weeds Do not apply this product if bees are visiting the treatment area

For containers greater than 5 gallon

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority For guidance contact your State Water Board or Regional Office of the EPA

DIRECTIONS FOR USE

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

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product 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 treated areas until sprays have dried

METHODS OF USE AND GENERAL APPLICATION INSTRUCTIONS

General Instructions

FL-AN540OP is a contact non-selective herbicide for spray application only to undesirable plant growth Do not allow spray to contact any green plant parts of desirable plants **FL-AN540OP** provides control and burndown suppression of annual and perennial broadleaf and grass weeds Spore producing plants such as mosses and liverworts are also controlled The amount of burndown and the duration of weed suppression may be reduced when weed growth conditions are unfavorable or when plants are mature

FL-AN540OP is non-volatile and water soluble for foliar application in tractor powered field-type sprayers or manual pump sprayers Complete and uniform coverage of weeds by the spray solution is required for the best weed control Plant foliage will change from a green color to brown/black necrotic tissue within one to two hours after spray application of **FL-AN540OP** diluted with water **FL-AN540OP** effect on plant tissue may be more rapid in warm weather than in cold conditions However, weed control is normally unaffected by temperature

FL-AN540OP herbicide is a soap product which penetrates the cell walls of plants to disrupt the cellular organization of physiological functions which are compartmentalized by membranes within the cell walls Plant growth ceases when cellular contents are mixed which causes brown necrotic plant tissue

FL-AN540OP does not migrate through the soil and is not translocated in plants **To ensure satisfactory control, plant leaves must be thoroughly and uniformly covered with the spray solution FL-AN540OP** does not provide any residual weed control in soil to affect germinating weed seeds

Mixing and Application Instructions

For use **FL-AN540OP** is diluted with water to the specified concentration for effective control of the undesirable vegetation Apply using standard methods of liquid herbicide application Dilution must be in accordance with label instructions Do not apply this product through any type of irrigation system

A 12% v/v dilution is recommended for most weed control situations and based on the results, applicators may increase or decrease spray concentrations as discussed in the following text and tables to obtain better control or to reduce herbicide use

The degree of dilution for application is based on the concentration of active ingredient needed for the size of vegetation to be suppressed or the rate of herbicidal effect desired. The larger the vegetation, the higher the concentration (less dilution of FL-AN540OP) required for rapid action. See required concentration for variously sized weeds and grasses in Dosage and Application Rates Section. Hard to control or suppress weeds (perennial weeds and some grasses) may require several applications for complete control.

Spray equipment options include hand-held, boom sprayers, pressure sprayers and hose-end sprayers. Spray nozzles that produce a uniform spray will give maximum coverage of the leaves and improved weed control. FL-AN540OP is completely soluble in water and when uniformly mixed, no additional mixing or agitation is required.

Application Precautions

- Do not apply to weeds when wet from dew, rain or irrigation
- Do not irrigate within 2 hours after application
- Do not apply if rainfall is expected within 2 hours

During application, some foaming may occur, however, weed control is unaffected if the foam is deposited on the plant surface and is not blown away as drift. Foaming can be reduced by using the minimum spray pressure required for a uniform application to the target weeds. Use low spray pressure to reduce foaming and avoid contact with desirable plants. Most spray nozzles are designed to operate at 10 to 15 psi and provide uniform spray coverage of weeds.

Mixing

Fill sprayer tank with half the required amount of water, add the full amount of FL-AN540OP to be used (see Dilution Factors below) then fill the sprayer tank with the remainder of the water required for the desired final concentration. Since FL-AN540OP is completely soluble in water and when uniformly dispersed in water, continuous mixing or agitation is not required.

Broadcast Application with Field Sprayer Boom Equipment

The amount of weed vegetation will determine the spray volume required for complete coverage of undesired plants (weeds). Weed vegetation conditions that affect spray coverage are number of weeds present, leaf shape, weed size and weed species. For weeds of over 1 inch height do not use less than 30 gal/acre. Large weeds of 12 to 18 inch height may require 80 to 125 gal/acre or more for control.

Hand-Held Equipment

Thorough saturation of the foliage and stems is required for control, but stop sprays when run-off from weed leaves occurs. Use low spray pressure to reduce foaming and avoid contact with desirable plants. Most spray nozzles are designed to operate at 10 to 15 psi and provide uniform spray coverage of weeds.

Directed Spray Equipment

Use a shielded sprayer to prevent spray contact on desirable plants. Avoid spray contact of green plant stems or green bark of young trees and shrubs.

NOTE In areas of hard water, the final mixture may appear milky This condition does not change the effectiveness of the treatment Some visible foam may appear on the leaves as the plants are sprayed Overspray or drift onto desirable plants is usually not a serious problem because leaves and stems require a thoroughly wet spray coverage for significant injury Repeat applications as often as necessary to obtain desired control

Dosage and Application Rates

For general weed and grass control, rates are based on the size of the plants and/or the desired speed of kill The larger the plants, the higher the dosage rates needed to ensure maximum herbicidal activity Also, the higher the concentration the quicker the plants wilt and turn brown Apply **FL-AN540OP** spray solutions only when weed surfaces are dry

The rate table presents the suggested percent volume/volume solutions of **FL-AN540OP** to use for application as follows

- Use a 6 to 8 % V/V **FL-AN540OP** spray solution for control of annual weeds of 1 inch height or less and for control of liverworts and mosses
- Use an 8 to 10% V/V **FL-AN540OP** spray solution for control of annual weeds over 1 inch height and up to 4 inch height
- Use a 10 to 13% V/V **FL-AN540OP** spray solution for weeds over 4 inch height and for hard to control weeds
- A 15% V/V **FL-AN540OP** spray solution is the maximum labeled rate Use this rate for hard to control perennial weeds or extremely dense weed growth

Repeat spray applications as necessary to obtain the desired control or suppression of weeds from newly germinated weed seeds and regrowth from roots or stems

RATE TABLE

Final Spray Volume (gallons)	Amount of FL-AN540OP for Percent V/V (Volume/Volume) Solution				
	6%	8%	10%	13%	15%
1	8 fl oz	10 fl oz	13 fl oz	1 pt	1 2 pt
2	1 pt	1 3 pt	1 3 pt	2 pt	2 4 pt
5	2 5 pt	3 3 pt	4 pt	5 pt	6 pt
10	5 pt	6 5 pt	1 gal	1 3 gal	1 5 gal
20	1 3 gal	1 6 gal	2 gal	2 6 gal	3 0 gal

Height of Plants to be Controlled	Spray Solution (% V/V)
1 inch or less	6 to 8%
1 to 3 inches	8 to 10%
Above 3 inches	10 to 13%

NOTE Do not use spray concentrations higher than 15% in a pressure sprayer since unacceptable foaming and bubble formation may occur at the nozzle heads

Use Methods

Determine the weed control situation and select the use method required as follows

A Vegetative Burndown Broadcast spray for weed control for no-till planting or seedbed preparation to control weeds prior to seeding or transplanting Spot sprays may be used in ornamentals and turf

B Directed and shielded sprays Spray nozzle type or configuration for directed spray or a shield placed around the nozzle to prevent spray contact on the foliage or green stems or bark Directed/shielded spray applications to area between plastic mulch strips and staked crops for weed control

PESTS

I Weeds controlled or suppressed by FL-AN540OP

COMMON NAMES	TAXONOMIC NAMES
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Broadleaf Weeds

Algae	<i>Gloeocapsa magma</i>
Bittercress, hairy	<i>Cardamine hirsuta</i>
Chickweed, common	<i>Stellaria media</i>
Chickweed, mouse-ear	<i>Cerastium vulgatum</i>
Cocklebur, common	<i>Xanthium strumarium</i>
Corn spurry	<i>Spergula arvensis</i>
Cudweed, purple	<i>Gnaphalium purpureum</i>
Groundsel	<i>Senecio spp</i>
Lambsquarters, common	<i>Chenopodium album</i>
Liverwort	<i>Machantia spp</i>
Marestail or Horseweed rosettes	<i>Conyza canadensis</i>
Morningglory, annual	<i>Ipomoea spp</i>
Moss	<i>Bryophyta</i>
Mustards	<i>Brassica spp</i>
Oxalis or Woodsorrel	<i>Oxalis stricta</i>
Pansy, wild	<i>Viola tricolor</i>
Plantain	<i>Plantago spp</i>
Pigweed, smooth and redroot	<i>Amaranthus spp</i>
Mallow, roundleaved	<i>Malva spp</i>
Moneywort	<i>Lysimachia nummularia</i>
Shepherdspurse	<i>Capsella bursa pastoris</i>
Sorrel, sheep	<i>Rumex acetosella</i>
Spurge, spotted	<i>Euphorbia maculata</i>
Field pennycress	<i>Thlaspi arvense</i>
Velvetleaf	<i>Abutilon theophrasti</i>

Grass and Other Weeds

Bentgrass, colonial	<i>Agrostis tenuis</i>
Bluegrass, annual	<i>Poa annua</i>
Crabgrass, large	<i>Digitaria sanguinalis</i>
Fescue, creeping red	<i>Festuca rubra</i>
Fescue, hard	<i>Festuca ovina</i>
Nimblewill	<i>Muhlenbergia scheberi</i>
Onion, wild	<i>Allium canadense</i>
Ryegrass, perennial	<i>Lolium perenne</i>
Star of-Bethlehem	<i>Ornithogalum nutans</i>

II Weeds Moderately Difficult to Control¹

Bermudagrass (Wireweed)	<i>Cynodon dactylon</i>
Bindweed, field	<i>Convolvulus arvensis</i>
Dandelion	<i>Taraxacum officinale</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Ragweed, common	<i>Ambrosia artemisifolia</i>

¹Use 13 to 15% V/V FL AN540OP for control or suppression

19/19

STORAGE AND HANDLING

DO NOT contaminate water, food or feed by storage or disposal

Pesticide Storage Store container in cool place until used Store at temperatures above 32° F

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

Container Handling

Non-refillable Containers Do not reuse or refill this container Offer for recycling if available

Clean container promptly after emptying (liquid formulations)

Non-refillable container equal to or less than 5 gals Triple rinse as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container ¼ full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal Drain for 10 seconds after the flow begins to drip Repeat this procedure two more times

Non-refillable container between 5- 55 gals Triple rinse as follows Empty the remaining contents into application equipment or a mix tank Fill the container ¼ 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

Refillable container 5 gals to bulk Refill this container with this 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 To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank Fill the container about 10 percent full with water Agitate vigorously or recirculate water with the pump for 2 minutes Pour or pump rinsate into application equipment or rinsate collection system Repeat this rinsing procedure two more times Dispose of in a sanitary landfill or by other procedures approved by state and local authorities

For non-medical emergencies or spills, see **FL-AN5400P** MSDS or call CHEMTREC at 800-424-9300

Warranty and Disclaimer Notice

To the extent consistent with applicable law, Falcon Lab, LLC, makes no warranty or guarantee of any kind, expressed or implied concerning the effects of use of this product, other than those specified on this label Buyers or users accept all responsibility for results due to misuse or improper handling of this product

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