



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460**

**OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION**

August 24, 2018

Sam Ghantous  
Global Head, Product Safety and Regulations  
Emery Oleochemicals, LLC  
4900 Este Ave  
Cincinnati, Ohio 45232

**Subject:** Labeling Notification per Pesticide Registration Notice (PRN) 98-10 – Replace the EPA Registration No. with 87663-12 (formerly 79766-4); Change the Registrant name and company Logo to Emery Oleochemicals LLC and Add the Alternate Brand name “Emerion™ W 5 RTU”.  
Product Name: FL-AN405F  
EPA Registration Number: 87663-12  
Application Date: February 12, 2018  
OPP Decision Number: 538511

Dear Mr. Ghantous:

The U.S. Environmental Protection Agency (EPA) is in receipt of your application for notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Biopesticides and Pollution Prevention Division (BPPD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The labeling submitted with this application has been stamped “Notification” and will be placed in our records. The alternate brand name “Emerion™ W 5 RTU” has been added to the product’s records. You must submit one (1) copy of the final printed labeling with the modifications.

Should you wish to add/retain a reference to your company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and is subject to review by the EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance Assurance.

Page 2 of 2  
EPA Reg. No. 87663-12  
OPP Decision No. 538511

If you have any questions, please contact Menyon Adams of my team by phone at (703) 347-8496 or via email at [adams.menyon@epa.gov](mailto:adams.menyon@epa.gov).

Sincerely,

A handwritten signature in blue ink that reads "Andrew C. Bryceland". The signature is fluid and cursive, with the first name "Andrew" and last name "Bryceland" clearly legible.

Andrew Bryceland, Team Leader  
Biochemical Pesticides Branch  
Biopesticides and Pollution  
Prevention Division (7511P)  
Office of Pesticide Programs

Enclosure

**NOTIFICATION**

87663-12

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

08/24/2018



**FL-AN405F**

**(Alternate Brand Name “EMERION™ W 5 RTU”)**

**Non-selective Herbicide**

**MASTER LABEL**

**SUBLABEL A: FOR AGRICULTURAL AND COMMERCIAL USE**

FOR CONTACT SPRAY CONTROL OR BURNDOWN OF WEEDS AND GRASSES  
FOR FOOD CROPS, FIELD CROPS, PASTURES, ORNAMENTALS, TURF, LANDSCAPES,  
INTERIORSCAPES, GREENHOUSES, FARMSTEADS AND AROUND BUILDINGS AND INDUSTRIAL  
SITES

**SUBLABEL B: FOR RESIDENTIAL USE**

FOR CONTACT SPRAY CONTROL OR BURNDOWN OF WEEDS AND GRASSES  
FOR HOMES AND GARDENS

**Active ingredient:**

|                              |             |
|------------------------------|-------------|
| Ammonium Nonanoate . . . . . | 5.0 wt.%    |
| Other ingredients . . . . .  | 95.0 wt.%   |
| Total . . . . .              | 100.00 wt.% |

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Ammonium Nonanoate . . . . . 5.0 wt.%  
Other ingredients . . . . . 95.0 wt.%  
Total . . . . . 100.00 wt.%

FL-AN405F contains 0.42 lbs. of ammonium nonanoate per U.S. gallon

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**"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.)"**

| <b>FIRST AID</b>   |   |
|--|---|
| <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>  |
| <b>If inhaled</b>  | <ul style="list-style-type: none"><li>• Move person to fresh air</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>      |
| <b>EMERGENCY NUMBER</b>  |   |
| <b>FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL THE NATIONAL POISON CONTROL CENTER 1-800-222-1222.</b> |   |
| 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. ~~79766-4~~ 87663-12

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

Caution: Harmful if inhaled. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. 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.

## 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 12 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

### 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-AN405F** 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-AN405F** 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-AN405F** is a non-volatile and water soluble herbicide for foliar application to weeds. 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. **FL-AN405F** effect on plant tissue may be more rapid in warm weather than in cold conditions. However, weed control is normally unaffected by temperature.

**FL-AN405F** 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 and brown necrotic plant tissue is formed.

**FL-AN405F** does not migrate through the soil and is not trans located in plants. **To ensure satisfactory control, plant leaves must be thoroughly and uniformly covered with the spray solution.** **FL-AN405F** does not provide any residual weed control in soil to affect germinating weed seeds.

### Application Instructions:

**FL-AN405F** is completely soluble in water. No shaking or agitation is required. During application, some foaming may occur; however, weed control is not reduced if the foam is deposited on the plant surface and is not blown away as drift.

**Apply FL-AN405F when weed surfaces are dry.**

### 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.

Difficult to control weeds may require several applications for complete control.

### Hand-Held Spray Application

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.

Thorough saturation of the foliage and stems is required for control. Apply sprays until run-off from weed leaves occurs. Use low spray pressure to reduce foaming and avoid contact with desirable plants.

## **Directed Spray Application**

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.

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.

## **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 crops, ornamentals, pastures 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.

**C. Pre-emergence Spray Before Seeds Germinate and Emerge, and Before Perennial Plants, Tubers, Bulbs or Seed Pieces Sprout and Emerge:** Make application before new growth emerges.

**D. Dormant or Post Harvest Spray:** Apply after crops are harvested to kill weeds and residual green growth of the crop plants. Apply to dormant crops such as alfalfa or turf.

**E. Sucker Control, Pruning and Trimming:** Direct sprays to kill small tender basal suckers in crops such as brambles and fruit trees.

**F. Desiccation and Harvest Aid:** Apply only when crop is ready to harvest and green crop leaves or weeds interfere with harvest. Spray as broadcast application over the crop and weeds for rapid desiccation of green plant growth to facilitate harvest. Apply as an harvest aid for cotton, potatoes and other root, tuber and bulb vegetables.

**G. Industrial and Building Uses:** Apply to weeds in walkways, driveways, parking areas and around buildings or structures. Broadcast or spot sprays may be applied to open field areas and rights-of-ways.



# PESTS

## I. Weeds controlled or suppressed by FL-AN405F:

COMMON NAMES TAXONOMIC NAMES

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### Broadleaf Weeds:

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

### Grass and Other Weeds:

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

## II. Weeds Moderately Difficult to Control

|                         |                         |
|-------------------------|-------------------------|
| Bermudagrass (Wireweed) | Cynodon dactylon        |
| Dandelion               | Taraxacum officinale    |
| Nutsedge, yellow        | Cyperus esculentus      |
| Ragweed, common         | Ambrosia artemisiifolia |

## Crop Uses and Methods of Application\*

| Crop Group                             | Crops  | Use Methods                |
|--|--|----------------------------|
| Root Tuber and Perennial Vegetables    | Asparagus, artichoke, beet, carrot, ginger, horseradish, parsnip, potato, radish, rutabaga, sweet potato, turnip and yam<br><sup>1</sup> Harvest Aid and Desiccation approved for root and tuber crops in this crop group  | A, B, C, D, F <sup>1</sup> |
| Bulb vegetables                        | Garlic, leek, onion and shallot  | A, B, C, F                 |
| Leafy Vegetables                       | Celery, cilantro, cress, endive, fennel, lettuce, parsley, rhubarb, spinach, Swiss chard   | A, B                       |
| Cole or Brassica Crops                 | Broccoli, brussel sprouts, cabbage, cauliflower, collards, kale, kohlrabi, mustard and turnip greens   | A, B, C                    |
| Legume Vegetables                      | Beans (Phaseolus spp.: black, green, kidney, lima, mung, navy, pinto, snap and wax), (Vigna spp.: black-eyed, Chinese longbean, cowpea and southern pea), peas (Pisum spp.: garden, green, sugar and snow peas), soybeans  | A, B, C                    |
| Fruiting Vegetables                    | Eggplant, okra, pepper, (bell, chili, sweet), pimento, and tomato  | A, B, C                    |
| Cucurbits and Melons                   | Cucumber, gourd, muskmelon, cantaloupe, pumpkin, squash, and watermelon  | A, B, C                    |
| Citrus                                 | Grapefruit, kumquat, lemon, lime, orange, tangerine and tangelo  | A, B                       |
| Pome Fruit                             | Apple, crabapple, pear and quince  | A, B, E                    |
| Stone fruit                            | Apricot, cherry, nectarine, peach, plum and prune  | A, B, E                    |
| Small Fruit and Grapes                 | Blackberry, blueberry, boysenberry, cranberry, currant, dewberry, elderberry, grape (all types), loganberry, olallieberry, raspberry and strawberry  | A, B, C, E                 |
| Nuts                                   | Almond, brazil nut, chestnut, filbert, macadamia, pecan, pistachio and walnut  | A, B, E                    |
| Tropical and Other Fruit               | Avocado, banana, coconut, date, fig, guava, kiwi, mango, olive, persimmon, papaya and banana   | A, B, E                    |
| Agronomic Crops and Cereal Grains      | Barley, buckwheat, canola, corn (field, popcorn and sweet), cotton, cowpea, flax, millet, oat, peanut, rice, rye, safflower, sorghum, soybean, sugarcane, sunflower and wheat<br><sup>1</sup> Harvest Aid and Desiccation approved for cotton, soybean and wheat | A, B, C, F <sup>1</sup>    |
| Forages and Pastures (Forage or Seeds) | Alfalfa, clovers, trefoil, vetch, bromegrass, fescue, bluegrass, lespedeza, ryegrass, sudangrass, timothy, range grasses and crops grown for livestock feed  | A, C, D                    |
| Herbs and Spices                       | Anise, basil, Caraway, chive, cumin, curry, dill, fennel, oregano, mints, rosemary, sage, savory, sweet bay, tarragon, thyme and wintergreen   | A, B, C, D                 |
| Beverage and Specialty Crops           | Cocoa, coffee, hops, tea, tobacco and jojoba   | A, B, E                    |

\* Refer to the General Instructions section for Use Methods description

## Farmsteads, Buildings and Industrial sites Uses and Methods of Application\*

| Group   | Crops   | Use Methods      |
|---|---|------------------|
| Turf, Flowers, Container, Bedding and Landscape Plants            | Turfgrass (maintenance, sod or seed production), bedding plants, flowers and ornamental plants  | A, B, C, D, E, F |
| Trees and Shrubs  | Christmas trees, forest and commercial trees, landscape trees, nursery production of trees and shrubs   | A, B, E          |
| Greenhouse and Indoor Use   | All crops, plants and structures  | A, B, C, G       |
| Industrial, Parks and Public Areas                                | Farmstead, homestead, fallow land, storage areas, schools, paved areas, rights-of-ways (road, railroad, utilities, etc.), parking lots, recreational areas (athletic fields, campgrounds, golf courses, playgrounds, etc.), walks, industrial sites (tank farms, lumberyard, warehouses and other structures, etc.) | A, B, G          |
| Buildings, Driveways, Walkways and Other Structures               | Benches, decks, equipment, floors, roofs, wall, walks and evaporative cooling pads  | G                |
| Dry Aquatic Sites, Dry Drainage Systems, and Around Aquatic Sites | Applications must be made 72 hours prior to reflooding of dry aquatic sites. Dry ditches, dry canals, ditch banks, and for use above the water line or after drawdown of agricultural irrigation water and ditch systems, industrial ponds and disposal systems, and impounded water areas.                         | A, G             |

\* Refer to the General Instructions section for Use Methods description

### 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.

Manufactured by: Produced for:

Emery Oleochemicals LLC Falcon-Lab LLC

4900 Este Avenue  
Cincinnati, OH 45232  
513-762-2500

[www.Emeryoleo.com](http://www.Emeryoleo.com) [www.falconlabllc.com](http://www.falconlabllc.com)

**SUBLABEL B: FOR RESIDENTIAL USE**

FOR CONTACT SPRAY CONTROL OR BURNDOWN OF WEEDS AND GRASSES  
FOR HOMES AND GARDENS

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**(Alternate Brand Name "EMERION™ W 5 RTU")**

**Non-selective Herbicide**

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| <b>EMERGENCY NUMBER</b>  |   |
| <b>FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL THE NATIONAL POISON CONTROL CENTER 1-800-222-1222.</b> |   |
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EPA Reg. No. 87663-12 79766-4

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

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#### 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. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, or gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems. This product is toxic to bees exposed to direct treatment or residues on blooming crop or weeds. Do not apply this product if bees are visiting the treatment area.

## 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.

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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

### 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-AN405F** 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-AN405F** 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-AN405F** is a non-volatile and water soluble herbicide for foliar application to weeds. 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. **FL-AN405F** effect on plant tissue may be more rapid in warm weather than in cold conditions. However, weed control is normally unaffected by temperature.

**FL-AN405F** 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 and brown necrotic plant tissue is formed.

**FL-AN405F** 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-AN405F** does not provide any residual weed control in soil to affect germinating weed seeds.

### Application Instructions:

**FL-AN405F** is completely soluble in water. No shaking or agitation is required. During application, some foaming may occur; however, weed control is not reduced if the foam is deposited on the plant surface and is not blown away as drift.

**Apply FL-AN405F when weed surfaces are dry.**

### 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.

Difficult to control weeds may require several applications for complete control.

### Hand-Held Spray Application

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.

Thorough saturation of the foliage and stems is required for control. Apply sprays until run-off from weed leaves occurs. Use low spray pressure to reduce foaming and avoid contact with desirable plants.



## **Directed Spray Application**

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.

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.

## **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 crops, ornamentals, pastures 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.

**C. Preemergence Spray Before Seeds Germinate and Emerge, and Before Perennial Plants, Tubers, Bulbs or Seed Pieces Sprout and Emerge:** Make application before new growth emerges.

**D. Dormant or Post Harvest Spray:** Apply after crops are harvested to kill weeds and residual green growth of the crop plants. Apply to dormant crops such as alfalfa or turf.

**E. Sucker Control, Pruning and Trimming:** Direct sprays to kill small tender basal suckers in crops such as brambles and fruit trees.

**F. Desiccation and Harvest Aid:** Apply only when crop is ready to harvest and green crop leaves or weeds interfere with harvest. Spray as broadcast application over the crop and weeds for rapid desiccation of green plant growth to facilitate harvest. Apply as an harvest aid for cotton, potatoes and other root, tuber and bulb vegetables.

**G. Industrial and Building Uses:** Apply to weeds in walkways, driveways, parking areas and around buildings or structures. Broadcast or spot sprays may be applied to open field areas and rights-of-ways.



# PESTS

## I. Weeds controlled or suppressed by FL-AN405F:

COMMON NAMES TAXONOMIC NAMES

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### Broadleaf Weeds:

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

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### Grass and Other Weeds:

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

## II. Weeds Moderately Difficult to Control

|                         |                         |
|-------------------------|-------------------------|
| Bermudagrass (Wireweed) | Cynodon dactylon        |
| Dandelion               | Taraxacum officinale    |
| Nutsedge, yellow        | Cyperus esculentus      |
| Ragweed, common         | Ambrosia artemisiifolia |

## Crop Uses and Methods of Application\*

| Crop Group                             | Crops  | Use Methods                |
|--|--|----------------------------|
| Root Tuber and Perennial Vegetables    | Asparagus, artichoke, beet, carrot, ginger, horseradish, parsnip, potato, radish, rutabaga, sweet potato, turnip and yam<br><sup>1</sup> Harvest Aid and Desiccation approved for root and tuber crops in this crop group  | A, B, C, D, F <sup>1</sup> |
| Bulb vegetables                        | Garlic, leek, onion and shallot  | A, B, C, F                 |
| Leafy Vegetables                       | Celery, cilantro, cress, endive, fennel, lettuce, parsley, rhubarb, spinach, Swiss chard   | A, B                       |
| Cole or Brassica Crops                 | Broccoli, brussel sprouts, cabbage, cauliflower, collards, kale, kohlrabi, mustard and turnip greens   | A, B, C                    |
| Legume Vegetables                      | Beans (Phaseolus spp.: black, green, kidney, lima, mung, navy, pinto, snap and wax), (Vigna spp.: black-eyed, Chinese longbean, cowpea and southern pea), peas (Pisum spp.: garden, green, sugar and snow peas), soybeans  | A, B, C                    |
| Fruiting Vegetables                    | Eggplant, okra, pepper, (bell, chili, sweet), pimento, and tomato  | A, B, C                    |
| Cucurbits and Melons                   | Cucumber, gourd, muskmelon, cantaloupe, pumpkin, squash, and watermelon  | A, B, C                    |
| Citrus                                 | Grapefruit, kumquat, lemon, lime, orange, tangerine and tangelo  | A, B                       |
| Pome Fruit                             | Apple, crabapple, pear and quince  | A, B, E                    |
| Stone fruit                            | Apricot, cherry, nectarine, peach, plum and prune  | A, B, E                    |
| Small Fruit and Grapes                 | Blackberry, blueberry, boysenberry, cranberry, currant, dewberry, elderberry, grape (all types), loganberry, olallieberry, raspberry and strawberry  | A, B, C, E                 |
| Nuts                                   | Almond, brazil nut, chestnut, filbert, macadamia, pecan, pistachio and walnut  | A, B, E                    |
| Tropical and Other Fruit               | Avocado, banana, coconut, date, fig, guava, kiwi, mango, olive, persimmon, papaya and banana   | A, B, E                    |
| Agronomic Crops and Cereal Grains      | Barley, buckwheat, canola, corn (field, popcorn and sweet), cotton, cowpea, flax, millet, oat, peanut, rice, rye, safflower, sorghum, soybean, sugarcane, sunflower and wheat<br><sup>1</sup> Harvest Aid and Desiccation approved for cotton, soybean and wheat | A, B, C, F <sup>1</sup>    |
| Forages and Pastures (Forage or Seeds) | Alfalfa, clovers, trefoil, vetch, bromegrass, fescue, bluegrass, lespedeza, ryegrass, sudangrass, timothy, range grasses and crops grown for livestock feed  | A, C, D                    |
| Herbs and Spices                       | Anise, basil, Caraway, chive, cumin, curry, dill, fennel, oregano, mints, rosemary, sage, savory, sweet bay, tarragon, thyme and wintergreen   | A, B, C, D                 |
| Beverage and Specialty Crops           | Cocoa, coffee, hops, tea, tobacco and jojoba   | A, B, E                    |

\* Refer to the General Instructions section for Use Methods description

## Farmsteads, Buildings and Industrial sites Uses and Methods of Application\*

| Group   | Crops   | Use Methods      |
|---|---|------------------|
| Turf, Flowers, Container, Bedding and Landscape Plants            | Turfgrass (maintenance, sod or seed production), bedding plants, flowers and ornamental plants  | A, B, C, D, E, F |
| Trees and Shrubs  | Christmas trees, forest and commercial trees, landscape trees, nursery production of trees and shrubs   | A, B, E          |
| Greenhouse and Indoor Use   | All crops, plants and structures  | A, B, C, G       |
| Industrial, Parks and Public Areas                                | Farmstead, homestead, fallow land, storage areas, schools, paved areas, rights-of-ways (road, railroad, utilities, etc.), parking lots, recreational areas (athletic fields, campgrounds, golf courses, playgrounds, etc.), walks, industrial sites (tank farms, lumberyard, warehouses and other structures, etc.) | A, B, G          |
| Buildings, Driveways, Walkways and Other Structures               | Benches, decks, equipment, floors, roofs, wall, walks and evaporative cooling pads  | G                |
| Dry Aquatic Sites, Dry Drainage Systems, and Around Aquatic Sites | Applications must be made 72 hours prior to reflooding of dry aquatic sites. Dry ditches, dry canals, ditch banks, and for use above the water line or after drawdown of agricultural irrigation water and ditch systems, industrial ponds and disposal systems, and impounded water areas.                         | A, G             |

\* Refer to the General Instructions section for Use Methods description

### 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 Disposal:**

**If empty: Non-refillable** - Do not reuse or refill this container. Offer for recycling if available.

**If partly filled:** Call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

**Manufactured by: ~~Produced for:~~**

**Emery Oleochemicals LLC ~~Falcon Lab LLC~~**

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