

62719-560

8/2/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D C 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

AUG - 2 2012

Niamh McMahon  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

Subject Notification per PR Notice 98-10 –Multiple Label Changes  
EF-1343  
EPA Reg No 62719-560  
Application Dated – July 19, 2012

Proposed Alternate Brand Names “DE 570 EF 1343” and “Defendor”

Dear Ms McMahon

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the subject product

The Registration Division (RD) 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 label submitted with the application has been date-stamped “Notification” and will be placed in our records.

If you have any questions regarding this letter, please contact Maggie Rudick at (703) 347-0257 or [rudick\\_maggie@epa.gov](mailto:rudick_maggie@epa.gov)

Sincerely,

A large, stylized handwritten signature in black ink, appearing to read "K. Montague".

Kathryn Montague, Product Manager 23  
Herbicide Branch  
Registration Division (7505P)

Handwritten initials in black ink, appearing to be "fer".

Please read instructions on reverse before completing form

Form Approved, OMB No 2070-0060

Print Form



United States  
Environmental Protection Agency  
Washington DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide - Section I

1 Company/Product Number Dow AgroSciences LLC/62719 560	2 EPA Product Manager Kathryn Montague	3 Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4 Company/Product (Name) Dow AgroSciences LLC/EF 1343	PM# 23	
5 Name and Address of Applicant (Include ZIP Code) Dow AgroSciences LLC 9330 Zionsville Road Indianapolis IN 46268 <input type="checkbox"/> Check if this is a new address	6 Expedited Review In accordance with FIFRA Section 3(c)(3) (b)(i) my product is similar or identical in composition and labeling to EPA Reg No _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment Explain below	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____	<b>NOTIFICATION</b>  ALG 02 2012
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application	
<input checked="" type="checkbox"/> Notification Explain below	<input type="checkbox"/> Other Explain below	

Explanation Use additional page(s) if necessary (For section I and Section II)

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46 No other changes have been made to the labeling or the confidential statement of formula of this product I understand that it is a violation of 18 U S C Sec 1001 to willfully make any false statement to EPA I further understand that if this notification is not consistent with the terms of PR Notice 98 10 and 40 CFR 152.46 this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under Sections 12 and 14 of FIFRA

Section - III

1 Material This Product Will Be Packaged In				2 Type of Container	
Child Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Metal Plastic Glass Paper Other (Specify) _____		
* Certification must be submitted		If "Yes" Unit Packaging wgt	No per container	If "Yes" Package wgt	No per container
3 Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4 Size(s) Retail Container		5 Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6 Manner in Which Label is Affixed to Product			<input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled	<input type="checkbox"/> Other _____	

Section - IV

1 Contact Point (Complete items directly below for identification of individual to be contacted if necessary to process this application)					
Name Niamh McMahon		Title Regulatory Manager		Telephone No (include Area Code) 517-337-4609	
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true accurate and complete I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law					6 Date Application Received (Stamped)
2 Signature <i>Stacy Frank / for</i>		3 Title Regulatory Manager			
4 Typed Name Niamh McMahon		5 Date July 19 2012			

308/2E  
July 19 2012



Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
U S Environmental Protection Agency  
One Potomac Yard  
2777 S Crystal Drive  
Arlington VA 22202

EF 1343 (A I FLORASULAM)  
EPA REGISTRATION NUMBER 62719 560  
NOTIFICATION OF MINOR LABEL CHANGE PER PR NOTICE 98 10

Enclosed please find labeling for the notification action of EF 1343 herbicide Refer to the Registration Notes page for a list of changes

This notification is consistent with the provisions of PR Notice 98 10 and EPA regulations at 40 CFR 152 46 and no other changes have been made to the labeling or the confidential statement of formula of this product I understand that it is a violation of 18 U S C Sec 1001 to willfully make any false statement to EPA I further understand that if this notification is not consistent with the terms of PR Notice 98 10 and 40 CFR 152 46 this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA

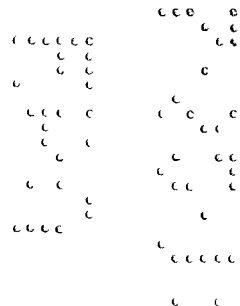
**Contents of Submission**

- Transmittal document (this letter)
- Application for Pesticide EPA Form 8570 1
- Label entitled EF 1343 (D5A / EF 1343 / MSTR Notif /05 17 12) (26 Pages plus Registration Notes) (1 Copy)

If you require further information please contact Stacy Frank Regulatory Specialist at (317) 337 5635

Sincerely

Niamh McMahon  
Regulatory Leader  
(317) 337 4609  
(317) 337 4649 (FAX)



Enclosures

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D5A / EF-1343 / MSTR Notf / 05-17-12  
file EF-1343-560 MSTR 17May12N doc

**NOTIFICATION**

**AUG 02 2012**

**EF-1343**

EPA Reg No 62719-560

The master label for EF-1343 consists of separate, self-contained sub labels for row crops and turfgrass, respectively

[Alternate Brand Names DE 570 EF 1343 FirstStep™ A Defendor]

**Registration Notes**

Source label text based on EPA-accepted text dated December 13 2010

**Proposed changes by notification**

- 1 Sub Label A Row Crops – Wheat (Including Durum) Barley Oats Rye Triticale (1) Clarified 1<sup>st</sup> sentence in Application Prior to Crop Emergence section to read Apply 1.36 fl oz of EF-1343 prior to planting up to two days after seeding wheat triticale and oats (2) Combined instructions in 1<sup>st</sup> and 2<sup>nd</sup> sentences in Application Prior to Crop Emergence section thereby removing the 2<sup>nd</sup> sentence (3) Clarified 3<sup>rd</sup> sentence in Application Prior to Crop Emergence section to read If applied after seeding do not apply over the drill row due to emerging crop seedlings
- 2 Sub Label B Turfgrass (1) Added Alternate Brand Name Defendor (2) Clarified 8<sup>th</sup> bullet under Use Precautions and Restrictions to read Do not apply more than 12 fl oz of EF-1343 (0.75 pints 0.039 lb ai florasulam) per acre per annual growing season (3) Changed the following weeds under Weeds Controlled section to magenta text for exclusion from commercialized label aster (slender) buckwheat wild burdock cocklebur common coffeeweed creeping beggarweed dichondra dogfennel dwarf beggarweed English lawn daisy Florida betony goldenrod hawkweed ivy ground lambsquarters London rocket lespedeza common matchweed mayweed medic black mugwort Japanese pennycress field pineappleweed purslane common ragweed common round leaf mallow sheep sorrel smartweed spurweed wild mustard woodsorrel creeping woodsorrel yellow (4) added the following weeds to Weeds Controlled section Carolina geranium corn speedwell dandelion groundsel common (5) changed specific use instructions for controlling English lawn daisy section to magenta text for exclusion from commercialized label (6) Clarified 1<sup>st</sup> sentence in 3<sup>rd</sup> paragraph of Application Timing and Rates section to read Apply EF-1343 to turfgrass at the rate of 4 fl oz per acre (0.25 pints per acre 0.09 fl oz per 1000 sq ft 2.7 mL per 1000 sq ft) as a ground broadcast treatment or spot treatment (7) Removed the duplication section Specific Use Instructions for Controlling English Lawn Daisy from the end of the label

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[Sub Label A Row Crops]

**NOTIFICATION**

(Base label)

**AUG 02 2012**

**EF-1343**

**Herbicide**

[Alternate Brand Names DE 570 EF 1343, FirstStep™ A]

**For postemergent control of annual broadleaf weeds in wheat (including durum), barley, oats, rye and triticale**

<b>Group</b>	<b>2</b>	<b>HERBICIDE</b>
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Active Ingredient

florasulam N-(2,6-difluorophenyl)-8-fluoro 5-methoxy (1,2,4)-triazolo(1,5-c)pyrimidine-2-sulfonamide

4.84%

Other Ingredients

95.16%

Total

100.00%

Contains 0.42 lb of active ingredient per gallon

**Keep Out of Reach of Children**

**CAUTION**

**Precautionary Statements**

**Hazards to Humans and Domestic Animals**

**Harmful If Absorbed Through Skin**

**Avoid contact with skin, eyes or 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**

Long-sleeved shirt and long pants

Chemical-resistant gloves

Shoes plus socks

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

**Engineering Controls**

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

**User Safety Recommendations**

Users should

6/30

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

**First Aid**

**If on skin or clothing** 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

Have the product container or label with you when calling a poison control center or doctor or going for treatment You may also contact 1-800-992-5994 day or night for emergency treatment information

**Environmental Hazards**

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark Do not contaminate water when disposing of equipment washwater or rinsate

**Groundwater Advisory** This chemical has properties and characteristics associated with chemicals detected in groundwater The use of this chemical in areas where soils are permeable particularly where the water table is shallow may result in groundwater contamination

**Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR Part 170 Refer to the label booklet under Agricultural Use Requirements in the Directions for Use section for information about this standard

**(Storage and Disposal for rigid containers 5 gal or less)**

**Storage and Disposal**

Do not contaminate water food or feed by storage and disposal

**Pesticide Storage** Store in original container only Storage below 14°F will cause the product to freeze If product freezes bring to room temperature and agitate before use

**Pesticide Disposal** Wastes resulting from the use of this product must be disposed of on site according to label use directions or at an approved waste disposal facility

**Container Handling** Nonrefillable container Do not reuse or refill this container

Triple rinse or pressure rinse container (or equivalent) promptly after emptying **Triple rinse** as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container 1/4 full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal Drain for 10 seconds after the flow begins to drip Repeat this procedure two more times **Pressure rinse** as follows Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal Insert pressure rinsing nozzle in the side of the container and rinse at about 40 psi for at least 30 seconds Drain for 10 seconds after the flow begins to drip Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration or by other procedures allowed by state and local authorities

**(Storage and Disposal for refillable rigid containers larger than 5 gal)**

**Storage and Disposal**

Do not contaminate water food or feed by storage and disposal

**Pesticide Storage** Store in original container only Storage below 14°F will cause the product to freeze If product freezes bring to room temperature and agitate before use

**Pesticide Disposal** Wastes resulting from the use of this product must be disposed of on site according to label use directions or at an approved waste disposal facility

**Container Handling** Refillable container Refill this container with 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% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**(Storage and Disposal for nonrefillable rigid containers larger than 5 gal)**

**Storage and Disposal**

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

**Pesticide Storage:** Store in original container only. Storage below 14°F will cause the product to freeze. If product freezes, bring to room temperature and agitate before use.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site according to label use directions or at an approved waste disposal facility.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

**Triple Rinse:** Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple Rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. **Pressure Rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

**Refer to label booklet for Directions for Use**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical. Do not ship or store with food, feeds, drugs, or clothing.

EPA Reg. No. 62719-560

EPA Est. \_\_\_\_\_

Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

Net Contents \_\_\_\_\_

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(cover shipping container)

# EF-1343

## Herbicide

[Alternate Brand Names DE 570 EF 1343, FirstStep™ A]

**For postemergent control of annual broadleaf weeds in wheat (including durum), barley, oats, rye and triticale**

<b>Group</b>	<b>2</b>	<b>HERBICIDE</b>
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### Active Ingredient

florasulam N-(2,6-difluorophenyl)-8-fluoro-5-methoxy(1,2,4)-triazolo(1,5-c)pyrimidine-2-sulfonamide 4.84%

Other Ingredients 95.16%

Total 100.00%

Contains 0.42 lb of active ingredient per gallon

## Keep Out of Reach of Children

# CAUTION

Refer to inside of label booklet for additional precautionary information including Directions for Use

**Notice** Read the entire label. Use only according to label directions. **Before using this product read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable return at once unopened.**

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Agricultural Chemical Do not ship or store with food, feeds, drugs or clothing

EPA Reg. No. 62719-560

EPA Est. \_\_\_\_\_

**Produced for**  
**Dow AgroSciences LLC**  
**9330 Zionsville Road**  
**Indianapolis, IN 46268**

**Net Contents** \_\_\_\_\_



9/30

(Page 1 through end)

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**Precautionary Statements**

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**Hazards to Humans and Domestic Animals****CAUTION****Harmful If Absorbed Through Skin**

**Avoid contact with skin eyes or 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**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks

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

**Engineering Controls**

When handlers use closed systems enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170 240(d)(4-6)] the handler PPE requirements may be reduced or modified as specified in the WPS

**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

**First Aid**

**If on skin or clothing** 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

Have the product container or label with you when calling a poison control center or doctor or going for treatment You may also contact 1-800-992-5994 day or night for emergency treatment information

**Environmental Hazards**

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark Do not contaminate water when disposing of equipment washwater or rinsate

**Groundwater Advisory** This chemical has properties and characteristics associated with chemicals detected in groundwater The use of this chemical in areas where soils are permeable particularly where the water table is shallow may result in groundwater contamination

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**Directions for Use**

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It is a violation of Federal law to use this product in a manner inconsistent with its labeling Read all Directions for Use carefully before applying

Do not apply this product in a way that will contact workers or other persons either directly or through

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drift Only protected handlers may be in the area during application For any requirements specific to your state or tribe consult the 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 the label about personal protective equipment restricted-entry interval and notification to workers (as applicable) The requirements in this box 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 4 hours

For early entry into 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 wear

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

### **Storage and Disposal**

Do not contaminate water food or feed by storage or disposal

**Pesticide Storage** Store in original container only Storage below 14 F will cause the product to freeze If product freezes bring to room temperature and agitate before use

**Pesticide Disposal** Wastes resulting from the use of this product must be disposed of on site according to label use directions or at an approved waste disposal facility

#### **Nonrefillable containers 5 gallons or less**

**Container Handling** Nonrefillable container Do not reuse or refill this container

Triple rinse or pressure rinse container (or equivalent) promptly after emptying **Triple rinse** as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container 1/4 full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal Drain for 10 seconds after the flow begins to drip Repeat this procedure two more times **Pressure rinse** as follows Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal Insert pressure rinsing nozzle in the side of the container and rinse at about 40 psi for at least 30 seconds Drain for 10 seconds after the flow begins to drip Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration or by other procedures allowed by state and local authorities

#### **Refillable containers 5 gallons or larger**

**Container Handling** Refillable container Refill this container with 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% full with water and if possible spray all sides while adding water If practical agitate vigorously or recirculate water with the pump for two minutes Pour or pump rinsate into application equipment or rinsate collection system Repeat this rinsing procedure two more times Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration or by other procedures allowed by state and local authorities

#### **Nonrefillable containers 5 gallons or larger**

**Container Handling** Nonrefillable container Do not reuse or refill this container  
 Triple rinse or pressure rinse container (or equivalent) promptly after emptying **Triple rinse** as follows  
 Empty the remaining contents into application equipment or a mix tank Fill the container 1/4 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  
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 Drain for 10 seconds after the flow begins to drip Then offer for recycling if available or puncture and  
 dispose of in a sanitary landfill or by incineration or by other procedures allowed by state and local  
 authorities

## Product Information

Use EF-1343 herbicide in the spring or fall prior to planting as a summer (chemical) fallow application or postemergence for the control of annual broadleaf weeds such as chickweed wild buckwheat mustards and cleavers in wheat (including durum) barley oats rye and triticale not underseeded with legumes

EF-1343 rapidly stops growth of susceptible weeds However typical symptoms (discoloration) of dying weeds may not be noticeable for 1 to 2 weeks after application depending upon growing conditions and weed susceptibility Degree of control and duration of effect are dependent upon weed sensitivity weed size crop competition growing conditions at and following treatment and spray coverage

## Use Precautions and Restrictions

When applying this product in tank mix combination follow all applicable use directions precautions and limitations on each manufacturer's label

**Chemigation** Do not apply this product through any type of irrigation system

Do not apply EF-1343 directly to or otherwise permit it to come into direct contact with susceptible crops or desirable plants including alfalfa edible beans canola flowers and ornamentals lentils lettuce peas potatoes radishes soybeans sugar beets sunflowers tomatoes or tobacco Do not permit spray mists containing EF-1343 to drift onto such plants

For best resistance management stewardship do not use more than once per season

This product has potential to leach Do not apply excessive irrigation

Do not apply to crops underseeded with legumes

## Herbicide Resistance Management

Florasulam is an ALS mode of action Group 2 herbicide Any weed population may contain or develop plants naturally resistant to this product and other ALS herbicides The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field Other resistance mechanisms that are not linked to site of action but specific for individual chemicals such as enhanced metabolism may also exist Appropriate resistance management strategies should be followed

To delay herbicide resistance

- For best resistance management stewardship do not use EF-1343 more than once per season
- Where possible rotate the use of EF-1343 or other ALS herbicides with different herbicide groups that control the same weeds in a field
- Use tank mixes with herbicides from a different group when such use is permitted

- Base herbicide use on an IPM program that includes scouting historical information related to herbicide use and crop rotation and considers tillage (or other mechanical) cultural biological and other chemical control practices
- Monitor treated weed populations for resistance development
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed
- Contact your local extension specialist or certified crop advisers for any additional pesticide resistance management and/or integrated weed management recommendations for specific crops and weed biotypes

**Crop Rotation Intervals**

The following rotational crops may be planted at the indicated interval following application of EF-1343

Numbers in parentheses (-) refer to Specific Crop Rotation Information

Crop	Rotation Interval (1) (Months)
barley oats wheat grasses	0
field corn popcorn seed corn sweet corn sorghum	3
alfalfa canola chickpea soybean dry bean peas (dry and succulent) flax lentil potato safflower sugar beet sunflower	9
other crops not listed	12

**Specific Crop Rotation Information**

1 Minimum number of months that must pass before planting other crops after application of EF-1343

**Avoid Injurious Spray Drift**

This product can affect broadleaf plants directly through foliage and indirectly by root uptake from treated soil Do not apply EF-1343 directly to or allow spray drift to come into contact with broadleaf crops including alfalfa canola beans cotton flowers grapes lettuce lentils mustard peas potatoes radishes soybeans sugar beets sunflowers tobacco tomatoes vegetables or other desirable broadleaf crops or ornamental plants or soil where sensitive crops will be planted the same season (See Crop Rotation Intervals section )

Make applications only when there is little or no hazard from spray drift Very small quantities of spray which may not be visible may seriously injure crops whether dormant or actively growing When applying EF-1343 use low pressure equipment capable of producing sprays of uniform droplet size with a minimum of fine spray droplets Under adverse weather conditions fine spray droplets that do not settle rapidly onto target vegetation may be carried a considerable distance from the treatment area A drift control or spray thickening agent may be used with this product to improve spray deposition and minimize the potential for spray drift If used follow all use directions and precautions on the product label

**Ground Applications** To minimize spray drift apply EF-1343 in a total spray volume of 8 gallons or more per acre using spray equipment designed to produce large-droplet low pressure sprays Refer to the spray equipment manufacturer's recommendations for detailed information on nozzle types arrangement spacing and operating height and pressure Apply spot treatments with a calibrated boom only to prevent over application Operate equipment at spray pressures no greater than is necessary to produce a uniform spray pattern Operate the spray boom no higher than is necessary to produce a uniformly overlapping pattern between spray nozzles Do not apply with hollow cone-type insecticide nozzles or other nozzles that produce a fine-droplet spray

**Aerial Application** To minimize spray drift apply EF 1343 in a total spray volume of 3 gallons or more per acre Drift potential is lowest between wind speeds of 2 to 10 mph However many factors including

droplet size and equipment type determine drift potential at any given speed. Avoid applying below 2 mph due to variable wind direction and high potential for temperature inversion. Spray drift from aerial application can be minimized by applying a coarse spray at spray boom pressure no greater than 30 psi by using straight-stream nozzles directed straight back and by using a spray boom that does not exceed 75% of wingspan or 90% of rotor diameter. Spray pattern and droplet size distribution can be evaluated by applying sprays containing a water-soluble dye marker or appropriate drift control agents over a paper tape (adding machine tape). Mechanical flagging devices may also be used.

Do not apply under conditions of a low level air temperature inversion. A temperature inversion is characterized by little or no wind and lower air temperature near the ground than at higher levels. The behavior of smoke generated by an aircraft-mounted device or continuous smoke column released at or near site of application will indicate the direction and velocity of air movement. A temperature inversion is indicated by layering of smoke at some level above the ground and little or no lateral movement.

**Spray Drift Management**

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

- The distance of the outer most operating nozzles on the boom must not exceed 75% of wingspan or 90% of rotor diameter
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees

Where states have more stringent regulations they must be observed.

The applicator should be familiar with and take into account the information covered in the following Aerial Drift Reduction Advisory (This information is advisory in nature and does not supersede mandatory label requirements.)

**Aerial Drift Reduction Advisory**

**Information on Droplet Size** The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

**Controlling Droplet Size**

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

14/30

**Boom Length** For some use patterns reducing the effective boom length to less than 75% of the wingspan or 90% of rotor length may further reduce drift without reducing swath width

**Application Height** Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind

**Swath Adjustment** When applications are made with a crosswind the swath will be displaced downwind Therefore on the up and downwind edges of the field the applicator must compensate for this displacement by adjusting the path of the aircraft upwind Swath adjustment distance should increase with increasing drift potential (higher wind smaller drops etc )

**Wind** Drift potential is lowest between wind speeds of 2 to 10 mph However many factors including droplet size and equipment type determine drift potential at any given speed Application should be avoided below 2 mph due to variable wind direction and high inversion potential **Note** Local terrain can influence wind patterns Every applicator should be familiar with local wind patterns and how they affect spray drift

**Temperature and Humidity** When making applications in low relative humidity set up equipment to produce larger droplets to compensate for evaporation Droplet evaporation is most severe when conditions are both hot and dry

**Temperature Inversions** Applications should not occur during a local low level temperature inversion because drift potential is high Temperature inversions restrict vertical air mixing which causes small suspended droplets to remain in a concentrated cloud This cloud can move in unpredictable directions due to the light variable winds common during inversions Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind They begin to form as the sun sets and often continue into the morning Their presence can be indicated by ground fog however if fog is not present inversions can also be identified by the movement of the smoke from a ground source or an aircraft smoke generator Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion while smoke that moves upward and rapidly dissipates indicates good vertical air mixing

**Sensitive Areas** Only apply the pesticide when the potential for drift to adjacent sensitive areas (e.g residential areas bodies of water known habitat for threatened or endangered species non target crops) is minimal (e.g when wind is blowing away from the sensitive areas)

## Mixing Directions

### EF-1343 - Alone

- 1 Fill the tank with 1/2 of the total amount of water
- 2 Start agitation
- 3 Add the required amount of EF-1343
- 4 Continue agitation while filling the spray tank to the required volume
- 5 To ensure a uniform spray mixture continuous agitation is required during application If product is allowed to settle thoroughly agitate to resuspend the mixture before spraying Apply mixture immediately after it is prepared

### EF-1343 - Tank Mix

If a broader spectrum of weed control is needed EF-1343 may be tank mixed with labeled rates of other herbicides provided (1) the tank mix product is labeled for the timing and method of application or the use site to be treated and (2) tank mixing is not prohibited by the label of the tank mix product

### Tank Mixing Precautions

- Read carefully and follow all applicable use directions precautions and limitations on the respective product labels

Do not exceed specified application rates for respective products or maximum allowable application rates for any active ingredient in the tank mix  
 Do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment have been adequately cleaned (See Equipment Clean-Out Procedures )  
 Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture

**Tank Mix Compatibility Testing** When tank mixing EF-1343 with other materials a jar test using relative proportions of the tank mix ingredients should be conducted prior to mixing ingredients in the spray tank Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour If the mixture balls-up forms flakes sludges jels oily films or layers or other precipitates it is not compatible and the tank mix combination should not be used

Vigorous continuous agitation during mixing filling and throughout application is required for all tank mixes Sparger pipe agitators generally provide the most effective agitation in spray tanks To prevent foaming in the spray tank avoid stirring or splashing air into the spray mixture

**Mixing Order for Tank Mixes**

- 1 Fill the spray tank to 3/4 of the total spray volume required with water
- 2 Start agitation
- 3 Add the correct amount of EF-1343 and agitate for 2 to 3 minutes
- 4 After adding EF-1343 add different formulation types in the following order (1) dry flowables (2) wettable powders (3) aqueous suspensions flowables and liquids Maintain agitation and add (4) emulsifiable concentrates (5) solutions and (6) adjuvants Allow each product type to completely mix and disperse before adding another
- 5 Finish filling the spray tank Maintain continuous agitation during mixing and throughout application If product is allowed to settle thoroughly agitate to resuspend the mixture before spraying Apply mixture immediately after it is prepared

If application or agitation must be stopped before the spray tank is empty the materials may settle to the bottom Settled materials must be resuspended before spraying is resumed A sparger agitator is particularly useful for this purpose Settled material may be more difficult to resuspend than when originally mixed Do not allow tank mixes to set overnight

**Clean-Out Procedures for Spray Equipment**

- 1 Drain any remaining spray mixture from the application equipment
- 2 Hose down the interior surfaces of the tank while filling the tank 1/2 full of water
- 3 Add household ammonia at a rate of 1 gallon per 100 gallons of water Recirculate for 5 minutes and spray out part of this mixture for 5 minutes through the boom Drain tank
- 4 Remove all spray nozzles and screens and clean separately
- 5 If spray equipment will be used for pesticide application to crops sensitive to EF-1343 repeat steps 1 through 3
- 6 Thoroughly clean exterior surfaces of spray equipment

**Note** Rinsate may be disposed of on site according to label use directions or at an approved waste disposal facility

**Weeds Controlled or Suppressed**

**Weeds Controlled**

- |                               |                                    |
|-------------------------------|------------------------------------|
| buckwheat wild                | mustard black                      |
| canola volunteer <sup>1</sup> | mustard blue (purple)              |
| chamomile corn                | mustard tansy                      |
| chamomile false (scentless)   | mustard treacle (bushy wallflower) |
| chamomile mayweed (dogfennel) | mustard tumble (Jim Hill)          |

chamomile wild	mustard wild
chickweed common	pennycress field
cleavers	pineappleweed
flixweed	shepherdspurse
London rocket	smartweed (green ladysthumb Pennsylvania)

**Weeds Suppressed**

dandelion	sowthistle annual
hempenettle	sowthistle perennial <sup>2</sup>
pigweed redroot	

<sup>1</sup>Including herbicide-tolerant canola varieties except Clearfield (imidazolinone-tolerant) canola

<sup>2</sup>Applications made at advanced leaf stages will reduce product effectiveness

**Application Directions**

**Application Timing**

Apply EF-1343 in the spring or fall prior to planting as a summer (chemical) fallow application or early postemergence to the main flush of actively growing weeds in the 2 to 4 leaf stage. In the spring or fall apply prior to seeding until two days after seeding. If applied after seeding do not apply if soil has begun cracking over the drill row from emerging crop seedlings. When applied as a summer (chemical) fallow application apply in the initial application pass in early spring. Do not apply as a summer (chemical) fallow application after July 1. Extreme growing conditions such as drought or near freezing temperatures prior to or following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. Only weeds that have emerged at the time of application will be controlled. If foliage is wet at the time of application control may be decreased. Applications of EF-1343 are rainfast within 4 hours after application.

**Spray Coverage**

Use sufficient spray volume to provide thorough coverage and a uniform spray pattern. Do not broadcast apply in less than 3 gallons of total spray volume per acre. For best results and to minimize spray drift apply in a spray volume of 10 gallons or more per acre. As vegetative canopy and weed density increase increase spray volume to obtain equivalent weed control. Use only nozzle types and spray equipment designed for herbicide application. To reduce spray drift follow precautions under Avoid Injurious Spray Drift.

**Adjuvants**

When EF-1343 is applied alone use a non-ionic surfactant with at least 80% active ingredient at 1.6 pints per 100 gallons of spray solution (0.2% v/v). When EF-1343 is applied in combination with emulsifiable concentrate (EC) formulations such as 2,4-D ester or MCPA ester or other herbicides which require use of an adjuvant additional adjuvant is not required. When an adjuvant is to be used with this product Dow AgroSciences recommends the use of a Chemical Producers and Distributors Association certified adjuvant.

**Wheat (Including Durum), Barley, Oats, Rye, Triticale**

**Application Prior to Crop Emergence**

Apply 1.36 fl oz of EF-1343 per acre in the spring or fall prior to planting up to two days after seeding wheat (including spring winter and durum) barley rye triticale and oats. If applied after seeding do not apply if soil has begun cracking over the drill row due to emerging crop seedlings. When applied as a summer (chemical) fallow application apply in the initial application pass in early spring. Do not apply as a summer (chemical) fallow application after July 1. Apply when weeds are actively growing. Only weeds emerged at the time of treatment will be controlled. Best results are obtained from application made to seedling weeds.

**Application Following Crop Emergence**



Apply 1.36 fl oz of EF-1343 per acre to actively growing wheat (including spring winter and durum) barley rye triticale and oats from the 2-leaf to flag leaf emergence stage (Zadoks scale 39) Apply when weeds are actively growing Only weeds emerged at the time of treatment will be controlled Best results are obtained from application made to seedling weeds

Warm moist growing conditions promote active weed growth and enhance the activity of EF-1343 by allowing maximum foliar uptake and contact activity Weeds hardened off by cold weather or drought stress may not be adequately controlled or suppressed and re-growth may occur For best results ensure thorough spray coverage of target weeds

**Tank Mixes for Wheat (Including Durum)** EF-1343 may be applied in tank mix combination with labeled rates of other products registered for postemergence application in wheat See Tank Mixing Precautions under Mixing Directions When tank mixing do not exceed specified application rates and use only in accordance with the most restrictive precautions and limitations on the respective product labels

**Restrictions**

- **Preharvest Interval** Do not apply with 60 days of crop harvest
- Do not apply more than 1.36 fl oz of EF-1343 per acre per growing season
- Make only one application of this product per acre per growing season
- Livestock may be grazed on treated crops 7 days following application

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**Terms and Conditions of Use**

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If terms of the following Warranty Disclaimer Inherent Risks of Use and Limitation of Remedies are not acceptable return unopened package at once to the seller for a full refund of purchase price paid Otherwise use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer Inherent Risks of Use and Limitations of Remedies

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**Warranty Disclaimer**

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Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions subject to the inherent risks set forth below Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY

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**Inherent Risks of Use**

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It is impossible to eliminate all risks associated with use of this product Crop injury lack of performance or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label such as unfavorable temperatures soil conditions etc ) abnormal conditions (such as excessive rainfall drought tornadoes hurricanes) presence of other materials the manner of application or other factors all of which are beyond the control of Dow AgroSciences or the seller All such risks shall be assumed by buyer

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**Limitation of Remedies**

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To the extent permitted by law the exclusive remedy for losses or damages resulting from this product (including claims based on contract negligence strict liability or other legal theories) shall be limited to at Dow AgroSciences election one of the following

- (1) Refund of purchase price paid by buyer or user for product bought or
- (2) Replacement of amount of product used

Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing In no case shall Dow AgroSciences be liable for consequential or incidental damages or losses

The terms of the Warranty Disclaimer Inherent Risks of Use and Limitation of Remedies cannot be varied by any written or verbal statements or agreements No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or Limitation of Remedies in any manner

EPA accepted 12/13/10

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19/30

[Sub Label B Turfgrass]

(Base label)

# EF-1343

## Specialty Herbicide

[Alternate Brand Name DE 570 EF 1343, Defendor]

**For postemergence control of annual and perennial broadleaf weeds in established turfgrass, including residential lawns, golf courses, sports fields, sod farms and commercial turfgrass areas**

### Active Ingredient

florasulam N-(2,6-difluorophenyl)-8-fluoro-5-methoxy (1,2,4)-triazolo(1,5-c)pyrimidine-2-sulfonamide 4.84%

Other Ingredients 95.16%

Total 100.00%

Contains 0.42 lb of active ingredient per gallon

**Keep Out of Reach of Children**

## CAUTION

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### Precautionary Statements

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#### Hazards to Humans and Domestic Animals

#### Harmful If Absorbed Through Skin

**Avoid contact with skin, eyes or 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)

**WPS Uses:** Any use covered by the Worker Protection Standard (40 CFR Part 170) – in general, agricultural plant uses are covered-

#### Applicators and other handlers must wear

- Chemical-resistant gloves
- Shoes plus socks

#### Mixers and loaders must wear

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks

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

#### Engineering Controls

20/30

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

### 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

### First Aid

**If on skin or clothing** 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

Have the product container or label with you when calling a poison control center or doctor or going for treatment You may also contact 1-800-992-5994 day or night for emergency treatment information

### Environmental Hazards

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark Do not contaminate water when disposing of equipment washwater or rinsate

**Groundwater Advisory** This chemical has properties and characteristics associated with chemicals detected in groundwater The use of this chemical in areas where soils are permeable particularly where the water table is shallow may result in groundwater contamination

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR Part 170 Refer to the label booklet under Agricultural Use Requirements in the Directions for Use section for information about this standard

#### (Storage and Disposal for rigid containers 5 gal or less)

### Storage and Disposal

Do not contaminate water food or feed by storage and disposal

**Pesticide Storage** Store in original container only Storage below 14 F will cause the product to freeze If product freezes bring to room temperature and agitate before use

**Pesticide Disposal** Wastes resulting from the use of this product must be disposed of on site according to label use directions or at an approved waste disposal facility

**Container Handling** Nonrefillable container Do not reuse or refill this container

Triple rinse or pressure rinse container (or equivalent) promptly after emptying **Triple rinse** as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container 1/4 full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal Drain for 10 seconds after the flow begins to drip Repeat this procedure two more times **Pressure rinse** as follows Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal Insert pressure rinsing nozzle in the side of the container and rinse at about 40 psi for at least 30 seconds Drain for 10 seconds after the flow begins to drip Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration or by other procedures allowed by state and local authorities

#### (Storage and Disposal for refillable rigid containers larger than 5 gal)

### Storage and Disposal

Do not contaminate water food or feed by storage and disposal

**Pesticide Storage** Store in original container only Storage below 14 F will cause the product to freeze If product freezes bring to room temperature and agitate before use

**Pesticide Disposal** Wastes resulting from the use of this product must be disposed of on site according to label use directions or at an approved waste disposal facility

**Container Handling** Refillable container Refill this container with 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% full with water and if possible spray all sides while adding water If practical agitate vigorously or recirculate water with the pump for two minutes Pour or pump rinsate into application equipment or rinsate collection system Repeat this rinsing procedure two more times Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration or by other procedures allowed by state and local authorities

**(Storage and Disposal for nonrefillable rigid containers larger than 5 gal)**

**Storage and Disposal**

Do not contaminate water food or feed by storage and disposal

**Pesticide Storage** Store in original container only Storage below 14°F will cause the product to freeze If product freezes bring to room temperature and agitate before use

**Pesticide Disposal** Wastes resulting from the use of this product must be disposed of on site according to label use directions or at an approved waste disposal facility

**Container Handling** Nonrefillable container Do not reuse or refill this container

Triple rinse or pressure rinse container (or equivalent) promptly after emptying **Triple rinse** as follows Empty the remaining contents into application equipment or a mix tank Fill the container 1/4 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 **Pressure rinse** as follows Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal Insert pressure rinsing nozzle in the side of the container and rinse at about 40 psi for at least 30 seconds Drain for 10 seconds after the flow begins to drip Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration or by other procedures allowed by state and local authorities

**Refer to label booklet for Directions for Use**

**Notice** Read the entire label Use only according to label directions **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet If terms are unacceptable, return at once unopened**

In case of emergency endangering health or the environment involving this product call 1-800-992-5994

Agricultural Chemical Do not ship or store with food feeds drugs or clothing

EPA Reg No 62719-560

EPA Est \_\_\_\_\_

**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268**

**Net Contents \_\_\_\_\_**

22/30

(cover shipping container)

# EF-1343

## Specialty Herbicide

[Alternate Brand Names DE 570 EF 1343, Defendor]

**For postemergence control of annual and perennial broadleaf weeds in established turfgrass, including residential lawns, golf courses, sports fields, sod farms and commercial turfgrass areas**

### Active Ingredient

florasulam N-(2,6-difluorophenyl)-8-fluoro-5-methoxy(1,2,4)triazolo(1,5-c)pyrimidine-2-sulfonamide 4.84%

Other Ingredients 95.16%

Total 100.00%

Contains 0.42 lb of active ingredient per gallon

**Keep Out of Reach of Children**

## CAUTION

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR Part 170. Refer to the label booklet under Agricultural Use Requirements in the Directions for Use section for information about this standard.

**Refer to inside of label booklet for additional precautionary information including Directions for Use**

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical. Do not ship or store with food, feeds, drugs, or clothing.

EPA Reg. No. 62719-560

**Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268**

EPA Est. \_\_\_\_\_

**Net Contents** \_\_\_\_\_

(Page 1 through end)

**Precautionary Statements**

**Hazards to Humans and Domestic Animals**

**CAUTION**

**Harmful If Absorbed Through Skin**

Avoid contact with skin eyes or 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)**

**WPS Uses** Any use covered by the Worker Protection Standard (40 CFR Part 170) – in general agricultural plant uses are covered-

**Applicators and other handlers must wear**

- Chemical-resistant gloves
- Shoes plus socks

**Mixers and loaders must wear**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks

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

**Engineering Controls**

When handlers use closed systems enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170 240(d)(4-6)] the handler PPE requirements may be reduced or modified as specified in the WPS

**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

**First Aid**

**If on skin or clothing** 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

Have the product container or label with you when calling a poison control center or doctor, or going for treatment You may also contact 1-800-992-5994 day or night for emergency treatment information

**Environmental Hazards**

Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark Do not contaminate water when disposing of equipment washwater or rinsate

**Groundwater Advisory** This chemical has properties and characteristics associated with chemicals detected in groundwater The use of this chemical in areas where soils are permeable particularly where the water table is shallow may result in groundwater contamination

24/30

**Directions for Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling  
Read all Directions for Use carefully before applying

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 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 the label about personal protective equipment restricted-entry interval and notification to workers (as applicable) The requirements in this box 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 4 hours

For early entry into 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 wear

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

**Non-Agricultural Use Requirements**

The requirements of 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

**Entry Restrictions for Non-WPS Uses** Keep unprotected persons out of treated areas until sprays have dried

**Storage and Disposal**

Do not contaminate water food or feed by storage or disposal

**Pesticide Storage** Store in original container only Storage below 14°F will cause the product to freeze If product freezes bring to room temperature and agitate before use

**Pesticide Disposal** Wastes resulting from the use of this product must be disposed of on site according to label use directions or at an approved waste disposal facility

**Nonrefillable containers 5 gallons or less**

**Container Handling** Nonrefillable container Do not reuse or refill this container

Triple rinse or pressure rinse container (or equivalent) promptly after emptying **Triple rinse** as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container 1/4 full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal Drain for 10 seconds after the flow begins to drip Repeat this procedure two more times **Pressure rinse** as follows Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal Insert pressure rinsing nozzle in the side of the container and rinse at about 40 psi for at least 30 seconds Drain for 10 seconds after the flow begins to drip Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration or by other procedures allowed by state and local authorities



**Refillable containers 5 gallons or larger**

**Container Handling** Refillable container Refill this container with 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% full with water and if possible spray all sides while adding water If practical agitate vigorously or recirculate water with the pump for two minutes Pour or pump rinsate into application equipment or rinsate collection system Repeat this rinsing procedure two more times Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration or by other procedures allowed by state and local authorities

**Nonrefillable containers 5 gallons or larger**

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Triple rinse or pressure rinse container (or equivalent) promptly after emptying **Triple rinse** as follows Empty the remaining contents into application equipment or a mix tank Fill the container 1/4 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 **Pressure rinse** as follows Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal Insert pressure rinsing nozzle in the side of the container and rinse at about 40 psi for at least 30 seconds Drain for 10 seconds after the flow begins to drip Then offer for recycling if available or puncture and dispose of in a sanitary landfill or by incineration or by other procedures allowed by state and local authorities

**Product Information**

EF 1343 specialty herbicide provides postemergence control of annual and perennial broadleaf weeds in established turfgrass including residential lawns golf courses sports fields sod farms and commercial turfgrass areas Susceptible weeds emerged at the time of application will be controlled A spray volume of 20 gallons or more per acre (gpa) and uniform coverage are required for optimum performance EF-1343 is rainfast within four hours after application and has soil residual herbicidal activity dependent upon weed species soil type soil moisture (rainfall or irrigation after application) and the rate of application

**Use Precautions and Restrictions**

- Do not apply EF-1343 to golf course putting greens or tees
- When applying this product in tank mix combinations follow all applicable use directions precautions and limitations on each manufacturer s label
- Do not allow tank mixes of EF-1343 to sit overnight
- Do not apply EF-1343 directly to or otherwise permit EF 1343 to come into contact with flowers ornamental shrubs or trees or other desirable broadleaf plants as serious injury may occur Do not permit spray mists containing EF-1343 to drift onto desirable broadleaf plants
- Do not allow sprays of EF 1343 to contact exposed suckers or exposed roots of shallow rooted trees and shrubs or injury may occur
- To minimize the potential for turfgrass injury do not make additional applications within four weeks of a previous application
- The active ingredient in this product may leave residues in treated turfgrass clippings which could be harmful to some plants and trees Do not collect treated turfgrass clippings for use as mulch around plants

- Do not apply more than 12 fl oz of EF-1343 (0.75 pints 0.039 lb ai florasulam) per acre per annual growing season
- Use this product strictly in accordance with the drift and runoff precautions on this label in order to minimize off-site exposure
- **Chemigation** Do not apply this product through any type of irrigation system

**Treatment on Turfgrass Species Not Listed on the Label for EF-1343**

Users who wish to use EF-1343 on turfgrass species not listed on this label may determine the suitability for use by treating a small area at a specified rate. Prior to treatment of larger areas, observe the treated area for any sign of herbicidal injury during 30 days of normal growing conditions to determine if the target turfgrass species is tolerant. The user assumes responsibility for any plant damage or other liability resulting from use of EF-1343 on turfgrass species not listed on this label.

**Use EF-1343 on the following established turfgrass species**

**Established Cool Season Turfgrass**

<b>Common Name</b>	<b>Scientific Name</b>
bentgrass	<i>Agrostis species</i>
bluegrass Kentucky	<i>Poa pratensis</i>
fescue chewing	<i>Festuca rubra var commutata</i>
fescue creeping red	<i>Festuca rubra</i>
fescue sheeps	<i>Festuca ovina</i>
fescue tall	<i>Festuca arundinaceae</i>
ryegrass perennial	<i>Lolium perenne</i>

**Established Warm Season Turfgrass**

<b>Common Name</b>	<b>Scientific Name</b>
bahiagrass	<i>Paspalum notatum var sauriae parodi</i>
bermudagrass (common or hybrid)	<i>Cynodon dactylon</i>
centipedegrass	<i>Eremochloa ophiuroides</i>
fescue tall (growing in warm season areas)	<i>Festuca arundinaceae</i>
kikuyugrass	<i>Pennisetum clandestinum</i>
seashore paspalum	<i>Paspalum vaginatum</i>
St. Augustinegrass	<i>Stenotaphrum secundatum</i>
zoysiagrass	<i>Zoysia japonica</i>
zoysiagrass	<i>Zoysia tenuifolia</i>

**Spray Drift Management**

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather- related factors determine the potential for spray drift. Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of increased spray drift. Make applications only when there is little or no hazard from spray drift. The applicator is responsible for considering all of these factors when making the decision to apply this product.

**Avoid all direct or indirect contact with non-target plants.** Do not apply near desirable vegetation. Allow adequate distance between target area and desirable plants to minimize exposure.

**Sensitive Areas** Only apply the pesticide when the potential for drift to adjacent sensitive areas (e.g. bodies of water, known habitat for threatened or endangered species, non-target plants) is minimal (e.g. when wind is blowing away from the sensitive areas).

**Weeds Controlled or Suppressed**

Weeds growing in the absence of competition from other vegetation generally require repeat applications to obtain satisfactory control or suppression

<b>Weeds Controlled</b>	
aster (slender)	London rocket
buckwheat wild	lespedeza common
burdock	matchweed
Carolina geranium	mayweed
catchweed (bedstraw)	medic black
chickweed (common)	mugwort Japanese
chickweed (mouseear)	<b>mustard wild</b>
clover hop	pennycress field
clover red	pineappleweed
clover white	plantain broadleaf
cocklebur common	plantain buckhorn
coffeeweed	poppy
common vetch	purslane common
corn speedwell	ragweed common
creeping beggarweed	round leaf mallow
dandelion	sheep sorrel
curly dock	<b>shepherd s-purse</b>
dichondra	smartweed
dogfennel	<b>spotted catsear</b>
dollarweed	spurweed
dwarf beggarweed	Virginia buttonweed
English lawn daisy <sup>1</sup>	Virginia pepperweed
false dandelion	wild mustard
fleabane	wild violet
Florida betony	woodsorrel creeping
Goldenrod	woodsorrel yellow
groundsel common	
hawkweed	
ivy ground	
knotweed	
lambquarters	
<b>Weeds Suppressed</b>	
dandelion common	nutsedge purple <sup>2</sup>
henbit	nutsedge yellow <sup>2</sup>
kyllinga annual and green (suppression only) <sup>2</sup>	

**Specific use instructions for controlling English lawn daisy**

- Late summer/fall applications of EF 1343 have shown to provide better control of English lawn daisy than spring applications
  - Irrigate the day before applications are planned to assure turfgrass and English lawn daisy are not stressed
  - Make two to three applications on a 28 day interval
  - Tank mix a quality nonionic surfactant with all applications of EF 1343
  - Heat and irrigation stress increase the potential for turfgrass injury
- <sup>2</sup>Re treatment may be necessary

**Mixing Directions**

**EF-1343 - Alone**

- 1 Fill spray tank with water equal to 1/2 to 3/4 of the required spray volume
- 2 Start agitation

- 3 Add the required amount of EF-1343 then finish filling the tank
- 4 Continue agitation while filling the spray tank to the required volume and during application Apply mixture immediately after it is prepared If product is allowed to settle thoroughly agitate to resuspend the mixture before spraying

**EF-1343 – Tank Mix**

EF-1343 may be applied in tank mix combination with other herbicides labeled for use on turfgrass to control additional weeds Tank mixing or using EF-1343 with any other product not specifically and expressly authorized by the label shall be the exclusive risk of the user applicator and/or application advisor When tank mixing follow label directions including application rates use precautions and limitations on each respective label Continuous agitation is required for tank mixes

**Tank Mix Precautions**

Read carefully and follow all applicable use directions precautions and limitations on the respective product labels

- Do not exceed specified application rates for respective products or maximum allowable application rates for any active ingredient in the tank mix Do not tank mix with another pesticide product that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used

For other products packaged in water soluble packaging do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment has been adequately cleaned

Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture

**Tank Mix Compatibility Testing** When tank mixing EF-1343 with other materials a jar test using relative proportions of the tank mix ingredients should be conducted prior to mixing ingredients in the spray tank Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour If the mixture balls-up forms flakes sludges jels oily films or layers or other precipitates it is not compatible and the tank mix combination should not be used

Vigorous continuous agitation during mixing filling and throughout application is required for all tank mixes

**Mixing Order for Tank Mixes**

- 1 Fill the spray tank with water to 3/4 of the required spray volume
- 2 Start agitation
- 3 Add the correct amount of EF-1343 and agitate for 2 to 3 minutes
- 4 After adding EF-1343 add different formulation types in the following order (1) dry flowables (2) wettable powders (3) aqueous suspensions flowables and liquids Maintain agitation and add (4) emulsifiable concentrates (5) solutions and (6) adjuvants Allow each product type to completely mix and disperse before adding another
- 5 Finish filling the spray tank Maintain continuous agitation during mixing and throughout application If product is allowed to settle thoroughly agitate to resuspend the mixture before spraying Apply mixture immediately after it is prepared

If application or agitation must be stopped before the spray tank is empty the materials may settle to the bottom Settled materials must be resuspended before spraying is resumed A sparger agitator is particularly useful for this purpose Settled material may be more difficult to resuspend than when originally mixed Do not allow tank mixes to set overnight

**Clean Out Procedures for Spray Equipment**

- 1 Drain any remaining spray mixture from the application equipment
- 2 Hose down the interior surfaces of the tank while filling the tank 1/2 full of water
- 3 Add household ammonia at a rate of 1 gallon per 100 gallons of water Recirculate for 5 minutes and spray out part of this mixture for 5 minutes through the boom Drain tank

- 4 Remove all spray nozzles and screens and clean separately
- 5 If spray equipment will be used for pesticide application to trees shrubs ornamental plants or broadleaf crops that may be sensitive to EF-1343 repeat steps 1 through 3 This product is highly active at low rates It is best not to use the same sprayer to treat trees shrubs or ornamental plants after use with this product
- 6 Thoroughly clean exterior surfaces of spray equipment

**Note** Rinsate may be disposed of on site according to label use directions or at an approved waste disposal facility

**Application Directions**

**Adjuvants**

When EF-1343 is applied alone use a non-ionic surfactant with at least 80% active ingredient at 1.6 pints per 100 gallons of spray solution (0.2% v/v) When EF-1343 is applied in combination with emulsifiable concentrate formulations such as 2,4-D ester or MCPA ester or other herbicides which require use of an adjuvant additional adjuvant is not required When an adjuvant is to be used with this product Dow AgroSciences recommends the use of a Chemical Producers and Distributors Association certified adjuvant

**Standard Volume Broadcast Application**

Apply in a spray volume of 20 gpa or more (0.5 gallons or more per 1000 sq ft) Use a higher application volume when complete and uniform application must be ensured i.e. when EF-1343 is tank mixed with foliar fertilizers If required spray volume up to 200 gpa may be used

**Low Volume Application**

Apply in a spray volume of 5 to 20 gpa (0.11 to 0.5 gallons per 1000 sq ft) Use low pressure and application equipment capable of delivering a uniform spray droplet To improve spray coverage the addition of a nonionic surfactant is suggested (see Adjuvants)

**Spot Treatments and/or Hand-Held Sprayers**

Apply spot treatments at rates equivalent to broadcast applications

**Hand-Held Sprayers** When treating a small area apply EF-1343 with a calibrated sprayer that assures accurate uniform spray distribution In general thoroughly mix EF-1343 with clean water and applied at 20 to 40 psi in a minimum of 1 gallon of water per 1000 sq ft

**Application Timing and Rates**

Best weed control results are obtained when EF-1343 is applied to small actively growing weeds Extreme growing conditions such as drought or near freezing temperatures prior to at or following time of application may reduce weed control Broadleaf weed species germinate at different times

Apply EF-1343 to newly seeded or sprigged turfgrass only after the third mowing or after the turfgrass seedlings have tilled and developed an adequate secondary root system Reseeding is not recommended for at least four weeks after application

Apply EF-1343 to turfgrass at the rate of 4 fl oz per acre (0.25 pints per acre 0.09 fl oz per 1000 sq ft 27 mL per 1000 sq ft) as a ground broadcast treatment or spot treatment Calibrate application equipment prior to use according to manufacturer's directions Avoid skips or overlaps as poor weed control or plant injury may occur

This product may also be applied to newly established warm season turfgrass Delay treatments until two to four weeks after sodding sprigging or plugging

**Use Restrictions for All Weeds**

