

# F8426

## Herbicide

EPA Reg. No 279-3265

EPA Est. 279-

**Active Ingredient:** Carfentrazone-ethyl: Ethyl a,2-dichloro-5-[4-(difluoromethyl)-4,5-dihydro-3-methyl-5-oxo-1H-1,2,4-triazol-1-yl]-4-fluorobenzenepropanoate .....21.3%

**Other Ingredients:** ..... 78.7%

**By Wt.**  
100.0%

This product contains 1.9 pounds active ingredient per gallon  
Contains Petroleum Distillates  
U.S. Patent No. 5,125,958

### KEEP OUT OF REACH OF CHILDREN CAUTION

See other panels for additional precautionary information.

### ACCEPTED

JUN 14 2005

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

279-3265



FMC Corporation  
Agricultural Products Group  
Philadelphia PA 19103

Active ingredient made in China, formulated and packaged in U.S.A.  
3/31/05 Highlighted

### FIRST AID

<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 further 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 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 swallowed</b>	<ul style="list-style-type: none"> <li>Call poison control center or doctor immediately for treatment advice.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give any liquid to the person.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>

### HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-(800)-331-3148 for emergency medical treatment information.

### NOTE TO PHYSICIAN

This product is expected to have low oral and dermal toxicity, and moderate inhalation toxicity. It is expected to be slightly irritating to the skin and minimally irritating to the eyes. Treatment is otherwise controlled by removal of exposure followed by symptomatic and supportive care. This product may pose an aspiration pneumonia hazard.

For information Regarding the Use of this Product Call 1-800-321-1FMC (1362).

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans (and Domestic Animals)

##### CAUTION

Harmful if swallowed, absorbed through the skin or 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 clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

##### Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. 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.

##### User Safety Recommendations:

Users should:

- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

## Environmental Hazards

F8426 Herbicide is very toxic to algae and moderately toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark, except as specified on this label. Do not contaminate water when disposing of equipment washwaters.

## Physical/Chemical Hazards

### FLAMMABLE

Do not use or store near heat or open flame.

## 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 through any type of irrigation system.

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.

## 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.

Entry Statement: Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment area until spray has dried.

## STORAGE AND DISPOSAL

### Pesticide Storage

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put granule or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by inappropriate storage or disposal.

In case of spill, avoid contact, isolate area and keep out of reach of persons and animals. Confine spills. Call FMC: (800) 3148.

To confine spill: Dike surrounding area, sweep up spillage. Dispose of in accordance with information given under Pesticide Disposal. Wash spill area with water, absorb with sand, cat litter or commercial clay, sweep up and dispose of in an approved manner. Place damaged container in a large holding container. Identify contents per required hazardous waste labeling regulations.

### Pesticide Disposal

Waste resulting from the use of this product may be disposed of at an approved waste disposal facility.

### Container Disposal

Triple rinse (or equivalent). Then offer for approved pesticide container recycling program, or puncture and dispose of in an approved waste disposal facility. Provided on site incineration is allowed by state and local authorities, stay out of smoke.

## GENERAL INFORMATION

F8426 Herbicide is a contact herbicide with little or no residual activity that provides selective postemergence control of broadleaf weeds and silvery-thread moss (*Bryum argenteum*) in turfgrass. The active ingredient of F8426 Herbicide is carfentrazone-ethyl. It is an aryl triazolinone herbicide, which interrupts chlorophyll synthesis and produces metabolic byproducts that disrupt plant cell membranes. This process only occurs in susceptible green plants in the presence of light.

F8426 Herbicide rapidly penetrates into the plant cells and symptoms may be apparent on foliage of susceptible weeds in 24 hours or less. Complete desiccation and death occurs within 7 to 14 days of application. F8426 Herbicide is rainfast within one hour after application.

This product is most effective when applied to actively growing winter and summer annual seedlings. It also increases the speed of kill and expands the spectrum of control of mature and perennial broadleaf weeds. See "Weeds Controlled" below section) when applied in a tank mixture with other postemergence herbicides.

Extremes in environmental conditions e.g. excessively high or low moisture or temperature may affect the activity of this product. Under warm, moist conditions appearance of herbicide symptoms may be accelerated while under very dry or cool conditions the expression of herbicidal symptoms is delayed. However, this product remains highly

effective under both cool and warm environmental conditions. Weeds hardened by drought and/or extremely high temperatures are less susceptible to this product and the higher rates in the range are recommended under those conditions.

## General Use Precautions

Avoid spray drift onto non-target susceptible plants such as vegetables, flowers, ornamentals, trees, shrubs and other desirable plants.

Do not apply this product to carpetgrass, dichondra, nor on lawns or turf where desirable clovers are present.

Do not apply when conditions are conducive to spray drift or poor spray coverage.

~~Not for use on golf course tees or greens~~

Do not apply more than 6.7 fluid ounces of product (0.10 lbs. a.i. of carfentrazone-ethyl) per acre per application or more than 0.40 lbs. a.i. of carfentrazone-ethyl per acre per season. The minimum retreatment interval for sequential broadcast applications of this product is two (2) weeks.

Do not apply this product by aerial application.

Do not apply this product through any type of irrigation system.

## Turfgrass and Use Sites

F8426 Herbicide is intended to be applied by lawn care operators, maintenance applicators, and service technicians for use in ornamental lawns and turfgrass, as well as stone-covered yards established in institutional, ornamental, and residential/domestic sites. Institutional sites are defined as turf areas and stone-covered yards around properties or facilities providing a service to public or private organizations including, but not limited to hospitals, nursing homes, schools, museums, libraries, sports facilities, golf courses (excluding greens and tees), and office buildings. Ornamental sites include turfgrass and stone-covered yards established around residences, parks, streets, retail outlets, cemeteries, industrial buildings and institutional buildings. Residential/domestic sites are defined as areas associated with household or home life including, but not limited to apartment complexes, condominiums, and patient care areas of nursing homes, mental institutions, hospitals, or convalescent homes

## Turfgrass Tolerance

**Turfgrasses tolerant to application of F8426 Herbicide are listed below. FMC does not recommend application to turfgrasses not listed.**

**Cool Season Grasses (creeping bentgrass, colonial bentgrass, annual bluegrass, Kentucky bluegrass, fine fescues, red fescues, tall fescue, perennial ryegrass)**

~~Established Cool season grasses, both newly seeded and established,~~ are generally tolerant to applications of F8426 Herbicide at labeled rates. Tall fescue may exhibit a slight yellowing discoloration occurring within 3 to 5 days after application under some conditions. Recovery typically occurs within 4 to 7 days. If such injury or any injury cannot be tolerated, apply to a small test area before treating large areas to assure tolerance of the host turf species.

Be aware of and observe all label restrictions regarding turf tolerance of companion products when F8426 Herbicide is tank mixed with another product.

**Warm Season Grasses (common and hybrid bermudagrass, bahiagrass, buffalograss, centipedegrass, seashore paspalum, St. Augustine grass, zoysiagrass)**

~~Established Warm season grasses listed above~~ are generally tolerant to applications of F8426 Herbicide but may be susceptible to transitory yellowing when they are under stress. Stress is typically associated with but not limited to extreme high or low temperatures, Disease infection or insect infestation, extreme high or low moisture conditions, or transition into or out of dormancy.

Under such conditions injury in the form of transitory yellowing discoloration may occur within 3 to 7 days of application. If such injury or any injury cannot be tolerated, apply F8426 Herbicide in the manner you will be using it to a small test area before treating large areas to assure tolerance of the turf.

Be aware of and observe all label restrictions regarding turfgrass tolerance of companion products when F8426 Herbicide is tank mixed with another product.

## Newly Seeded, Sodded or Sprigged turfgrass

F8426 can be applied to the following species of turfgrass at 7 days or more after emergence for species established by both seeding and sprigging: hybrid bermudagrass, common bermudagrass, St. Augustine, creeping bentgrass, tall fescue, perennial ryegrass and Kentucky bluegrass. Application to zoysiagrass should be delayed until at least 14 days after emergence to avoid extended discoloration. Slight discoloration may be observed immediately after application for hybrid bermudagrass, however, normal turf color returns by 12 days after emergence if no other stresses are present. Areas treated with

F8426 Herbicide may be seeded or overseeded one day following application.

~~F8426 Herbicide may be applied to newly seeded, seeded or sprigged turfgrass that is established and is not subject to incipient or permanent stress from moisture, temperature or other cultural practice extremes. Areas treated with F8426 Herbicide may be seeded or overseeded one day following application.~~

**Dormant Turf**

Applications to dormant warm-season grasses are permitted. Avoid applications when warm-season grasses are transitioning into or out of dormancy.

**Mixing Instructions**

F8426 Herbicide is an aqueous base emulsion containing 1.9 pounds active ingredient per gallon and is intended for dilution with water. ~~Liquid fertilizers may also be used along with water as part of the diluent.~~

Fill the spray tank 3/4 full with clean water or diluent. Make sure the agitation system is operating. Add the recommended amount of F8426 Herbicide and complete filling the spray tank to the desired level. The mechanical or bypass agitation must be sufficient to ensure uniform spray mixture during application.

**Tank Mix Compatibility**

F8426 Herbicide is believed to be compatible with most herbicides, fungicides, insecticides, growth regulators, liquid fertilizers and spray adjuvants commonly used in turf and lawn care management. Liquid fertilizers may also be used along with water as part of the diluent. However, when preparing a new tank mix, always conduct a physical compatibility test by mixing proportional amounts of all spray ingredients in a test vessel (jar). Shake the mixture vigorously and allow it to stand for five to ten minutes. Rapid precipitation of the ingredients and failure to re-suspend when shaken indicates that the mixture is incompatible and should not be applied. To evaluate the biological compatibility of a mixture being used for the first time, spray a small area and observe for control and phytotoxicity symptoms for several days before applying to large areas.

Read and observe mixing instructions of all tank mix partners. Also read each product's label for Directions for Use, Precautionary Statements and Restrictions and Limitations. The most restrictive labeling applies in all tank mixtures. No label dosage rate should be exceeded. Tank mixture recommendations are for use only in states where the companion products and application site are registered. In addition, certain states or geographical regions may have established dosage rate limitations. Consult your state Pesticide Control Agency for additional information regarding the maximum use rates.

When tank mixing F8426 Herbicide with other products always add the other products as specified on their label. Ensure the compatibility of other products with this product before mixing them in the tank.

**Maintain the pH of the spray solution in the range of pH 5 to 8. Use buffers as necessary. Spray solution in the range of pH 6 to 7 is optimal.**

**Application Directions**

**Spray coverage**

F8426 is a contact herbicide with little or no residual activity. It produces herbicidal symptoms only in the portions of the target weeds with which it comes into direct contact. Therefore, to achieve maximum effectiveness of this product, select a spray volume and nozzle system that ensures thorough and uniform coverage and at the same time minimizes the spray fines. Spray droplets larger than 400 microns may reduce coverage and result in loss of weed control. Applications should be made using spray volumes of 20-175 gallons per acre (0.5 to 4.0 gallons per 1000 sq.ft.). Use higher spray volumes when there is a dense weed population or turfgrass canopy or where uniform coverage is difficult to obtain.

**Spot Treatments (Applications with hand operated sprayers such as backpack sprayers, compression sprayers, knapsack sprayers)**

For spot treating weeds, other than moss, with hand-held or backpack sprayers, mix 0.030 fluid ounces (0.9 milliliters) of this product in one to two gallons of water to treat 1000 square feet. Refer to Category 2 in the Weeds Controlled section to determine the appropriate rates for control of silvery-thread moss. To avoid overdosing when using a hand-held wand, use a flat fan nozzle and maintain the nozzle at a uniform recommended height over the canopy. Avoid back-and-forth and side-to-side motion with the wand. Hold the wand stationary and move forward at a uniform pace over the area to be treated.

**Use of Adjuvants**

Addition of surface active agents (surfactants) or other adjuvants may improve effectiveness of F8426 Herbicide against weeds with difficult-to-wet leaf surfaces or weeds that are mature or hardened by harsh environmental conditions. Adjuvant materials may also reduce the selectivity to some turfgrass varieties and increase the potential for turf injury. Follow all adjuvant manufacturer use guidelines and also read

and observe all companion product label statements, precautions and restrictions regarding use of adjuvants when F8426 Herbicide is used in tank mixtures with other products.

**Sprayer Clean-Out**

Residues left in mixing equipment, spray tanks, hoses, spray booms and nozzles can cause non-target plant effects if they are not properly cleaned. Because F8426 Herbicide can be highly phytotoxic to sensitive ornamental plants it is strongly recommended that only equipment that is dedicated exclusively to turf and lawn herbicides be used in the application of F8426 Herbicide.

If not using a dedicated sprayer, observe the following cleanout procedures:

1. Drain spray tank, hoses, and boom and thoroughly wash the inside of the sprayer tank free of visible sediment and residues. Thoroughly flush tank, sprayer hoses, boom, and nozzles.
2. Fill the tank with clean water, and add 1 gallons of ammonia (containing at least 3% active) for every 100 gallons of water. Fill the tank to capacity and operate the sprayer for 15 minutes to flush hoses, boom and nozzles. Let the solution stand in the hoses, tank, boom and nozzles for several hours or overnight.
3. Drain the sprayer system. Rinse the tank with clean water and flush through the hoses and boom. Repeat the clean water rinse and flush. Remove and clean nozzles and screens in an ammonia solution separately.

Do not apply sprayer cleaning solutions or rinsate to any lawns, ornamentals, gardens or crops.

For more specific information on clean-out procedures contact FMC at 800-321-1362.

Should small quantities of F8426 Herbicide remain in mixing, loading and/or spray equipment that has been cleaned as described above, they may be released during subsequent applications potentially causing effects to non-target vegetation. FMC accepts no liability for adverse responses to non-target plants or crops.

**Weeds Controlled**

F8426 Herbicide can be used to selectively control weeds including silvery-thread moss anytime during the year except as instructed elsewhere in this label. Application rates for control of weeds other than silvery-thread moss range from 0.9 to 2.1 fluid ounces per acre as described below. Use the lower rates in a range for susceptible weed species and for optimal environmental conditions. Use the higher rates in the range for dense infestations of perennial weeds, and for adverse/extreme environmental conditions. See "Category 2: Used as a stand-alone product for silvery-thread moss control" to determine application rates for control of silvery-thread moss.

**Category 1: Used as a Stand-alone product**

Apply F8426 Herbicide at rates of 1.0 to 2.1 fluid ounces of product per acre (0.023 to 0.048 fluid ounces per 1000 square feet) for control of seedling (4 inches tall or less) winter and summer annual weeds listed below:

Annual morningglory spp.	Hemp sesbania
Annual sowthistle	Henbit
Black medic	Ivyleaf speedwell
Carpetweed	Kochia
Catchweed bedstraw	Ladysthumb
Coast fiddleneck	Little mallow
Common dayflower	London rocket
Common lambsquarters	Nightshade spp.
Common mallow	PA smartweed
Common Purslane	Persian speedwell
Corn speedwell	Pigweed spp.
Deadnettle spp.	Prostrate knotweed
Field pennycress	Sheperd's-purse
Field speedwell	Smallflowered bittercress
Field violet	Wild buckwheat
FL beggarweed	Wild lettuce
FL pusley	Wild mustard
Hairy beggarticks	

**Category 2: Used as a Stand-alone product for silvery-thread moss control:**

F8426 Herbicide may be used for burndown and control of silvery-thread moss (*Bryum argenteum*) occurring on golf course greens and tees consisting of bentgrass. To control silvery-thread moss, apply F8426 Herbicide at a rate 6.7 fluid ounces of product per acre (0.154 fluid ounces per 1000 square feet) followed by a second application in two weeks at a rate of 6.7 fluid ounces/acre.

**Control over longer periods:**

If necessary, applications may be repeated every two weeks at a rate that is no less than 2.0 fluid ounces per acre (0.046 fluid ounces per

1,000 square feet) and no more than 6.7 fluid ounces/acre to control moss that has reestablished, as long as the annual maximum rate of 0.40 lb a.i./acre per year is not exceeded.

Use a non-ionic surfactant in the spray mix at a rate of 0.25% volume/volume. Follow all adjuvant manufacturers use guidelines.

tank mix with other pesticides for silvery-thread moss control. Application to bentgrass turf that is under stress due to extreme high (>90°F) or low temperatures, disease infection, insect infestation or extreme high or low moisture conditions may cause transitory yellowing. *Poa annua* may be damaged at rates greater than 2.0 fluid ounces per acre.

Cultural practices that favor the establishment of healthy bentgrass will also help to displace moss that is suppressed by the F8426 Herbicide treatment.

**Category 23: Used in Combinations with phenoxy-type postemergence broadleaf herbicides**

Apply F8426 Herbicide at rates of 0.9 to 1.5 fluid ounces of product per acre (0.021 to 0.034 fluid ounces per 1000 square feet) in tank-mix combinations with amines, esters, and salts of 2,4-D, dichlorprop, dicamba, mecoprop, MCPA and various combinations of these products for control of seedling and mature weeds listed in Category 1 plus the following:

CA burclover	Horseweed ( <i>Conyza Canadensis</i> )
Canada thistle	Lawn burweed
Florida geranium	Old-world diamond-flower
Common chickweed	Parsley-piert
Common groundsel	Perennial sowthistle
Common ragweed	Plantain spp.
Cutleaf eveningprimrose	Prickly sida
Dandelion	Red sorrel
Dollarweed	Redstem filaree
English daisy	Spotted spurge
Fleabane	VA buttonweed
FL betony	White clover
Ground ivy	Wild violet
Healall	Yellow wood sorrel
Henbit	

**Category 34: Used in Combinations with other preemergence and postemergence herbicides registered for use in ornamental turf**

F8426 Herbicide may be applied at rates of 0.9 to 1.7 fluid ounces of product per acre (0.02 to 0.04 fluid ounces per 1000 square feet) in tank-mix combinations with atrazine, clopyralid, foramsulfuron, glufosinate, glyphosate, halosulfuron-methyl, imazaquin, metsulfuron, quinclorac and triclopyr for control of seedling annuals listed under Category 1 and for temporary burndown of weeds listed in Category 2. F8426 Herbicide may be applied at rates of 0.9 to 1.7 fluid ounces of product per acre (0.02 to 0.04 fluid ounces per 1000 square feet) in a tank-mix combination with atrazine applied at 1.0 pounds of active ingredient per acre. Residual, long-term control of target weeds is as defined by the labeling of the companion product. For tank mixing with herbicides not listed above, follow the tank mix compatibility instructions under "Tank Mix Compatibility".

**Category 4-5: Suppression**

F8426 Herbicide may be applied at rates of 1.0 to 2.1 fluid ounces of product per acre (0.023 to 0.048 fluid ounces per 1000 square feet) for temporary burndown of weeds listed in Category 2. F8426 Herbicide may also be used for suppression and temporary burndown of algae (cyanobacteria) occurring in ornamental turf grasses and other landscape environments. Avoid spray drift onto desirable non-target susceptible plants such as vegetables, flowers, ornamentals, trees, shrubs.

fl.oz. product /acre	fl.oz. product /1,000 sq. ft.	ml product /1,000 sq. ft.	Lbs. AI /Acre
0.9	0.021	0.6	0.013
1	0.023	0.7	0.015
1.2	0.028	0.8	0.018
1.3	0.030	0.9	0.019
1.5	0.034	1.0	0.022
1.6	0.037	1.1	0.024
1.8	0.041	1.2	0.027
1.9	0.044	1.3	0.028
2.1	0.048	1.4	0.031
6.7*	0.154	4.5	0.099

\* Rate used for silvery-thread moss control

**Conditions of Sale and Limitation of Warranty and Liability:**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

**Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, and buyer assumes the risk of any such use.**

To the extent allowed by law, in no event shall FMC or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

FMC - Trademark of FMC Corporation (1/30/04)

©2005 FMC Corporation