

Reg # 62719-253

PM-23

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SEP 27 1994

Dennis M. Lade, Ph.D.  
Compliance  
9330 Zionsville Road  
Indianapolis, IN 46208

Dear Dr. Lade:

Subject: Broadstrike Plus Corn Pre/PFI  
EPA Registration No. 62719-253  
Applications dated September 19, 1994, Request for  
Alternate formula to delete water soluble film  
packaging and to add directions for either  
water soluble packaging or for dispensing from  
5-Pound plastic jug

The alternate formula which deletes the use of water  
soluble film used in packaging the subject, submitted on  
EPA Form 8070-4 and dated September 1, 1994 has been reviewed  
and is an acceptable amendment to the subject pesticide  
product registration under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended. A copy of the Confidential  
Statement of Formula has been added to this Agency's records  
for this product.

The proposed subject labeling amendments have been reviewed  
and are acceptable under the Act as amended, provided that  
you:

- o Submit one (1) printed copy of the final printed  
label before releasing the product for shipment  
under the enclosed stamped label.

If this condition is not complied with, the registration  
will be subject to cancellation in accordance with FIFRA,  
Section 6(e). Your release for shipment of the product  
constitutes acceptance of this condition.

A stamped copy of the label is enclosed for your records.

Sincerely, yours,

Deborah L. Miller  
Product Manager (23)  
EPA Pesticide-Regulation Branch  
Registration Division (7300)

ENCLOSURE  
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# Broadstrike\* Plus Corn Pre/PPI

EPA Reg. No. 62719-253

Current label text based on EPA-accepted copy dated May 25, 1994.

### Proposed Revisions:

1. Addition of language to accommodate the dispensing of the Broadstrike Plus "Water Dispersible Granule" in either water soluble packaging or a 5-pound plastic jug. The "Water Dispersible Granule" will be dispensed by pouring from the 5-pound plastic bottle.
2. Added wild buckwheat, carpetweed and red clover to weeds controlled section.

\*Trademark of DowElanco

[Editor's note: Added text underlined and deleted text denoted by ~~strike-through~~.]

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

SEP 27 1994

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

62719-253

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[Editor's note: Added text underlined and deleted text denoted by ~~strike-through~~.]

(Container Label)

(Logo) DowElanco

# Broadstrike\* Plus Corn Pre/PPI

A selective soil applied herbicide for preemergence control of broadleaf weeds in field corn.

**Active Ingredients:**

flumetsulam: N-(2,6-difluorophenyl)-5-methyl-1,2,4-triazolo-[1,5a]- pyrimidine-2-sulfonamide .....	23.1%
clopyralid: 3,6-dichloro-2-pyridinecarboxylic acid .....	62.5%
Inert Ingredients .....	14.4%
Total .....	100.0%

Contains 0.856 pounds of active ingredient per pound of product.

## Precautionary Statements

### Hazards to Humans and Domestic Animals

Keep Out of Reach of Children

**DANGER**

**PELIGRO**

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

**Causes Irreversible Eye Damage o Do Not Get In Eyes Or On Clothing o Harmful If Swallowed, Inhaled Or Absorbed Through The Skin o May Cause Skin Sensitization Reactions In Certain Individuals. Avoid Breathing Vapors Or Spray Mist And Contact With Skin, Eyes Or Clothing.**

### Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow 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:

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

### First Aid

**If In eyes:** Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**If swallowed:** Do not induce vomiting. Call a physician or Poison Control Center. If available, administer activated charcoal (6-8 heaping teaspoonfuls) with a large quantity of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility and see a physician.

**If Inhaled:** Remove individual to fresh air. Get medical attention if breathing difficulty occurs. If not breathing, give artificial respiration, preferably cardiopulmonary resuscitation assistance, and get medical attention immediately.

**If on skin:** Immediately wash with plenty of soap and water. Get medical attention if irritation develops.

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**Environmental Hazards**

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

The active ingredients in this product are known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this product where soils are permeable, particularly where the water table is shallow, may result in leaching to ground water.

Caution should be exercised when handling this product at mixing and loading sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent 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.

Refer to label booklet for additional precautionary information including Personal Protective Equipment (PPE) and User Safety Recommendations, and Directions for Use including Storage and Disposal.

**Notice:** Read the entire label before using. Use only according to label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" elsewhere on this label.

In case of emergency endangering health or the environment involving this product, call collect 517-636-4000.

Agricultural chemical: Do not ship or store with food, drugs or clothing.

EPA Reg. No. 62719-253

EPA Est. 00000-XX-00

\*Trademark of DowElanco

DowElanco o Indianapolis, IN 46268

**Broadleaf Blend Herbicide**

**Net Weight 5 lb**

(or)

(Contains \_\_, 8 oz Water Soluble Packets)

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(Label Booklet)

(Logo) DowElanco

# Broadstrike\* Plus Corn Pre/PPI

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**Broadleaf Blend Herbicide**

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**Hazards to Humans and Domestic Animals**

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**Personal Protective Equipment (PPE)**

**Applicators and other handlers must wear:**

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow 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.

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**Users should:**

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

**First Aid**

**If In eyes:** Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

**If swallowed:** Do not induce vomiting. Call a physician or Poison Control Center. If available, administer activated charcoal (6-8 heaping teaspoonfuls) with a large quantity of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility and see a physician.

**If inhaled:** Remove individual to fresh air. Get medical attention if breathing difficulty occurs. If not breathing, give artificial respiration, preferably cardiopulmonary resuscitation assistance, and get medical attention immediately.

**If on skin:** Immediately wash with plenty of soap and water. Get medical attention if irritation develops.

**Environmental Hazards**

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

The active ingredients in this product are known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this product where soils are permeable, particularly where the water table is shallow, may result in leaching to ground water.

Caution should be exercised when handling this product at mixing and loading sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

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**Directions for Use**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read all directions before applying.

**Handling Precautions for If Product Is Packaged in Water Soluble Packets:** Do not remove water soluble packet from overpack except for immediate use. Do not allow water soluble packet to come into contact with water prior to use. Do not handle water soluble packet with wet hands or wet gloves. Carefully reseal package containing unopened water soluble packets and protect package from moisture.

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 this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

**Exception:** If the product is soil-injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

**Storage And Disposal**

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

**Storage:** Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides and fertilizers. Do not store above 122°F for extended periods of time. If container is damaged or spill occurs, use product immediately or contain with absorbent materials and dispose as waste.

**Water Soluble Packaging:** Packets may become brittle when stored below 32°F.

Handle carefully when frozen to avoid breakage or allow package to warm above 32°F before handling.

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

**Container Disposal (water soluble packaging):** When all packets are used, dispose of empty package in a sanitary landfill or by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Container Disposal (plastic jug):** Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**General:** Consult federal, state, or local disposal authorities for approved alternative procedures.

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## General Information

Broadstrike Plus - Corn Pre/PPI is a selective herbicide for broadleaf weed control in field corn. Broadstrike Plus - Corn Pre/PPI may be applied as a preplant surface, preplant incorporated or preemergence treatment. Treatments may be applied in water or liquid fertilizer or impregnated on dry fertilizer. Absorption of Broadstrike Plus - Corn Pre/PPI occurs through both the foliage and root uptake. Susceptible weeds exposed to Broadstrike Plus - Corn Pre/PPI stop growing and either die or remain non-competitive with the crop. Broadstrike Plus - Corn Pre/PPI provides residual control of weeds that may emerge after application. Adequate soil moisture is necessary for optimal activity because uptake and translocation of Broadstrike Plus - Corn Pre/PPI involves uptake by both roots and/or foliage.

When applications are made under adverse (dry or cold) conditions, weed suppression may be observed. Weed suppression is a visual reduction in weed competition (reduced population, size, and/or vigor) as compared to an untreated area. Degree of control can be increased by applying Broadstrike Plus - Corn Pre/PPI under favorable growing conditions (i.e., adequate moisture and temperature), and by using a higher rate in the specified rate range.

### General Use Precautions

- Do not exceed 1 application per year.
- Do not exceed a total application rate of 0.30 lb/acre of Broadstrike Plus - Corn Pre/PPI (0.07 lb flumetsulam) in a single crop year.
- **Preharvest Interval:** An interval of at least 85 days is required between application of Broadstrike Plus - Corn Pre/PPI and field corn harvest.
- Do not apply Broadstrike Plus - Corn Pre/PPI to sweet corn or popcorn.
- Corn inbred lines grown for hybrid seed production may be injured by Broadstrike Plus - Corn Pre/PPI. Inbred lines should be thoroughly tested for crop tolerance before treating large acreages.
- The following IT corn lines are tolerant to Broadstrike Plus - Corn Pre/PPI: 8532IT, 8708IT and 522PT. All other IT corn lines should be thoroughly tested for crop tolerance before applying to these varieties.
- If Preview or Canopy were applied the previous crop year, apply Broadstrike Plus - Corn Pre/PPI to corn, only if the rotational restrictions to corn for these products have been met.
- Do not apply to a soil which has both a soil pH-greater than 8.0 and organic matter less than 3.0 percent unless the risk of potential crop injury is acceptable.
- Do not apply to a soil having a pH less than 5.9 and organic matter greater than 5% (both must apply).
- Do not use on peat or muck soils.
- **Soil Insecticides:** Soil insecticides should be applied in a band to avoid potential crop injury when Broadstrike Plus - Corn Pre/PPI is used for broadleaf weed control in corn.
- Do not apply when air temperature is near freezing or when freezing conditions are expected for several days following application.
- **Do not aerially apply Broadstrike Plus - Corn Pre/PPI.**
- **Chemigation:** Do not apply this product through any type of irrigation system.
- **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 under conditions of application to minimize potential exposure.
- **Crop residues from treated areas:** Crop residues from treated areas cannot be used for composting or mulching on ground where susceptible crops may be grown the following season. To promote herbicide decomposition, plant material should be evenly incorporated or burned. Adequate moisture is also required to promote breakdown of plant residues which contain clopyralid.
- **Do not move treated soil:** Avoid situations where soil particles may blow into areas where susceptible crops are grown. The hazard of movement of this product on dust is reduced if treated fields are irrigated or if rain occurs shortly after application.
- **Do not apply under conditions which favor runoff or wind erosion of soil containing Broadstrike to non-target areas.** To prevent off-site movement due to runoff or wind erosion:
  - Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.
  - Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered ground.
  - Do not apply to soils when saturated with water.
  - Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non target crops unless at least 1/2-inch of rainfall has occurred between application and the first irrigation.
- **Do not apply when weather conditions favor drift to non target sites.** To minimize spray drift to non target areas:
  - Use low pressure application equipment capable of producing a large droplet spray.



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- Do not use nozzles that produce a fine-droplet spray.
- Minimize drift by using sufficient spray volume to ensure adequate coverage with large droplet size sprays.
- Keep ground-driven spray boom as low as possible above the target surface.
- Spray when conditions are calm or wind speed is low. Do not spray when wind is gusting or steady wind speed is greater than 10 mph.
- **Sprayer Cleanup:** To avoid injury to or exposure of nontarget crops, thoroughly clean and drain spray equipment used to apply Broadstrike Plus - Corn Pre/PPI after use. Cleaning should occur as soon as possible after Broadstrike Plus - Corn Pre/PPI application. Spray equipment should be cleaned after use with Broadstrike Plus - Corn Pre/PPI by the following procedure:
  1. Drain any remaining Broadstrike Plus - Corn Pre/PPI from the spray tank and dispose of according to label disposal instructions.
  2. Hose down the interior surfaces of the tank. Flush tank, hoses, boom and nozzles with clean water for 10 minutes. Fill the tank with water and recirculate for 15 minutes. Spray part of the mixture through the hoses, boom and nozzles and drain the tank. All rinse water must be disposed of in compliance with local, State and Federal guidelines.
  3. Remove the nozzles and screens and clean separately.
  4. If the spray equipment will be used on crops other than field corn, repeat steps 1 and 2 again and thoroughly wash the spray mixture from the outside of spray tank and the boom.

**Placement of mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.**

**Rotational Crop Restrictions:**

When tank mixing with companion herbicides, follow the most restrictive crop rotation guidelines on the label of each product used.

The following rotational crops may be planted after the indicated interval following application of rates up to 0.30 lb/acre of Broadstrike Plus - Corn Pre/PPI:

Crop <sup>1</sup>	Interval (Months)
barley, oats, rye, wheat	4
rice	6
alfalfa	10 1/2
dry beans <sup>2</sup>	10 1/2
soybean <sup>2</sup>	10 1/2
sweet corn	10 1/2
pop corn	10 1/2
grain sorghum	12
peas	18
peanuts	18
sunflower	18
cotton	18

<sup>1</sup>Note: Rotation to sugar beets, canola and all other crops requires a 26 month rotation interval and a successful field bioassay.

<sup>2</sup>For low moisture (less than 15 inches annual rainfall) and low organic matter (less than 2 %) areas dry beans and soybeans should not be planted until 18 months after treatment.

**Field Bioassay Instructions:** Using typical tillage, seeding practices, and timings for the particular crop, plant several strips of the desired crop variety across the field previously treated with Broadstrike Plus - Corn Pre/PPI. Plant the strips perpendicular to the direction Broadstrike Plus - Corn Pre/PPI was applied. The strips should also be located so that different field conditions are encountered, including differences in soil texture, pH, and drainage. If the crop does not show visible symptoms of injury, or stand reduction, the field can be seeded with the test crop in the growing season following the bioassay. If visible injury, stand reduction, or yield reduction occurs, the test crop should not be seeded, and the bioassay must be repeated the next growing season.

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## Mixing and Application

### Mixing Directions

#### Application Rates for Preplant Surface Applied, Preplant Incorporated and Postplant Preemergence Treatments

Soil Texture	lb of Broadstrike Plus - Corn Pre/PPI/acre	Acres Per 5 lb Plastic Jug†	Water Soluble Package Packet Factor‡ (acres/packet)
Course	0.20 - 0.25	25 - 20	2.5 - 2.0
Medium or Fine	0.25 - 0.30	20 - 16.6	2.0 - 1.67

†If the number of acres to be treated results in the use of a partial container, use the measuring device provided with the container to measure out one (1) acre increments according to the scale indicated on the measuring device.

‡To calculate the number of water soluble packets for your spray mix:

1. Determine the number of acres you wish to spray in the desired application.
2. Divide the number of acres by the Packet Factor that falls within the rate range you have chosen (Packet factor = acres per packet at a specified application rate) See the above rate table for broadcast application rates and corresponding packet factors.
3. The result is the number of packets you are required to add to the spray mix.

If the resulting number of packets is not a whole packet:

1. Do not open the water soluble packets.
2. Round up or down to the nearest whole number of packets and check to make sure that the resulting number of acres/packet falls within the desired rate range for the application.

Sample calculations:

1. Planned application = 0.2 lb/acre (The packet factor for 0.2 lb/acre is 2.5.)
2. Assuming 17 acres is to be treated, 17 acres divided by the Packet Factor of 2.5 = 6.8 packets (Round up to 7 packets).
3. 17 acres divided by 7 packets = a packet factor of 2.43 which is within the desired packet factor range of 2.5 to 2.0 for the application.

#### Spray Preparation:

Broadstrike Plus - Corn Pre/PPI is a water dispersible granule formulation. Thorough mixing is required.

1. Fill the tank with 1/2 of the total amount of water or liquid fertilizer required for the load.
2. Start agitation system.
3. Add the required amount of Broadstrike Plus - Corn Pre/PPI directly into the spray tank while agitating. If product is packaged in water soluble packets, add the required number of water soluble packets (See special pre-mixing instructions below for use of water soluble packaging in liquid fertilizer solutions). Open overpack and add the soluble packet (product in transparent film) directly into the spray tank while agitating. Do not open water soluble packets. Water soluble packets will float on the surface until the water soluble film dissolves and releases the product. Handling packets with hands should be minimized.
4. Continue agitation and complete filling the tank while the packets dissolve product disperses in the spray tank solution.
5. Before spraying make sure Broadstrike Plus - Corn Pre/PPI is thoroughly mixed in the solution. If product is in water soluble packets Before spraying, make sure packets have completely disintegrated and product is thoroughly mixed with water. Depending on the water temperature and the degree of agitation, the packet and Broadstrike Plus - Corn Pre/PPI should be completely dispersed within 5 minutes from the time they were added to the water.

To insure a uniform spray mixture continuous agitation is required during mixing and spraying. Apply within 24 hours after mixing. If product is allowed to settle, thoroughly agitate to resuspend the mixture before spraying.

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**Pre-mixing (Slurry) for Water Soluble Packets Only**

**Note:** These pre-mixing instructions must be followed when Broadstrike Plus - Corn Pre/PPI will be used in liquid fertilizer or impregnated onto dry granular fertilizer. The film used in water soluble packaging for Broadstrike Plus - Corn Pre/PPI is not soluble in liquid fertilizer solutions. Water soluble packets containing Broadstrike Plus - Corn Pre/PPI should be pre-mixed with water and added to the spray tank through a 20-35 mesh screen. For best results, a minimum of 1 pint of water should be used to slurry each 8 oz packet of Broadstrike Plus - Corn Pre/PPI. The packets can be stirred immediately on addition to water or allowed to dissolve. Stir until the packets are completely dissolved and granules are dispersed.

**Broadstrike Plus - Corn Pre/PPI In Tank Mix**

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.

**Note:** When tank mixing Broadstrike Plus - Corn Pre/PPI with other products, a compatibility test (jar test) using relative proportions of tank mix ingredients should be conducted prior to mixing ingredients in the spray tank. ~~Pre-mixing of Broadstrike Plus - Corn Pre/PPI to form a slurry is required when applying with liquid fertilizer solutions.~~

**Mixing Order for Tank Mixes:** Fill the spray tank to 1/4 to 1/3 of the total spray volume required with water or liquid fertilizer solution. Start agitation. Add different formulation types in the order indicated below, allowing time for complete mixing and dispersion after addition of each product. Allow extra mixing and dispersion time for dry flowable products.

Add different formulation types in the following order: Broadstrike Plus - Corn Pre/PPI (slurried if mixing water soluble packets with liquid fertilizer) and other dry flowables; wettable powders; aqueous suspensions, and flowables. Maintain agitation and fill spray tank to 3/4 of total spray volume. Then add emulsifiable concentrates and any solutions.

Finish filling the spray tank. Maintain continuous agitation during mixing, final filling and throughout application. If spraying and 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.

Line screens in the spray tank should be no finer than 50 mesh (100 mesh is finer than 50 mesh).

**Spray Application**

Apply Broadstrike Plus - Corn Pre/PPI in sufficient spray volume to provide uniform coverage using only properly calibrated ground equipment. Apply in a total spray volume of 10 to 40 gallons per acre using low pressure (20 to 40 pounds/square inch). Maintain sufficient agitation during mixing and spraying to ensure a uniform spray mixture. To ensure thorough coverage when applying to minimum or no-till field corn, apply in a total spray volume of 20 or more gallons per acre.

**Band Application:** Calculate the amount of herbicide needed for band treatment by the formula:

<u>Band width in inches</u>	X	Broadcast rate	=	Amount needed
row width in inches		per acre		per acre of field

**Liquid Fertilizer Mixing Instructions**

Broadstrike Plus - Corn Pre/PPI, may be added directly to ~~applied in~~ liquid fertilizer. **Note: If product is packaged in water soluble packets, a slurry must be prepared prior to adding to liquid fertilizer (see premixing instructions on this label).** ~~In all cases a slurry (see premixing instructions on this label) of the water soluble packets containing the Broadstrike Plus - Corn Pre/PPI must be made prior to use with liquid fertilizer solutions.~~ This is necessary because the water soluble film is not directly soluble in liquid fertilizer. Continuous agitation is required. When necessary, a compatibility agent can be used to ensure that Broadstrike Plus - Corn Pre/PPI mixes properly. The use of appropriate compatibility agents is especially important when tank mixing Broadstrike Plus - Corn Pre/PPI and other dry flowables, wettable powders, flowables, liquids, aqueous suspensions, or solutions with emulsifiable concentrates in liquid fertilizers. If the emulsifiable concentrate formulation rises to the surface of the fertilizer as an oil ("oils out"), the oil may combine with the wettable powder, flowable, or suspension to form oily curds (viscous phase) which are

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difficult to disperse. A jar test, utilizing relative proportions of the tank mix ingredients is recommended prior to mixing with liquid fertilizers.

**Application with Dry Bulk Fertilizer**

Dry bulk fertilizer may be impregnated or coated with Broadstrike Plus - Corn Pre/PPI. Application of dry bulk fertilizer impregnated with Broadstrike Plus - Corn Pre/PPI provides weed control equal to the same rates of Broadstrike Plus - Corn Pre/PPI applied in liquid carriers. Follow Broadstrike Plus - Corn Pre/PPI label recommendations regarding rates per acre, crops, special instructions, cautions and special precautions. Apply 200-700 pounds of the fertilizer/herbicide mixture per acre. For best results, apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential to prevent possible crop injury. Non-uniform application may also result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil may improve weed control.

**Precaution:** To avoid crop injury, do not use the fertilizer/herbicide mixture on bedded soil.

Compliance with all Federal and State regulations relating to blending pesticide mixtures with dry bulk fertilizer, registration, labeling and application are the responsibility of the individual and/or company offering the fertilizer and chemical mixture for sale.

**Limitations:** Apply a minimum of 200 pounds per acre of dry fertilizer impregnated with Broadstrike Plus - Corn Pre/PPI at the recommended rate. Most dry fertilizers can be used for impregnation with Broadstrike Plus - Corn Pre/PPI. When coated ammonium nitrate and/or limestone are used alone, do not impregnate with Broadstrike Plus - Corn Pre/PPI. These materials will not absorb the herbicide. Fertilizer blends containing coated ammonium nitrate and/or limestone as part of the fertilizer mixture of can be impregnated.

**Impregnation:** A water slurry (~~see premixing instructions on this label~~) of the Broadstrike Plus - Corn Pre/PPI packets must be made and sprayed onto the fertilizer at a minimum volume of 6 pints per ton of fertilizer. To make the water slurry, add the required rate of Broadstrike Plus - Corn Pre/PPI (see formula below) to enough water to give a total volume of at least six (6) pints of solution per ton of fertilizer. Make sure the Broadstrike Plus - Corn Pre/PPI is thoroughly dispersed in the water before spraying onto the fertilizer. Spray nozzles should be placed to provide uniform spray coverage onto the fertilizer. Care should be taken to aim the spray directly onto the fertilizer and avoid spraying the walls of the blender. Use any closed drum, belt, ribbon or other commonly used dry bulk fertilizer blender.

Calculate amounts of Broadstrike Plus - Corn Pre/PPI by the following formula:

$$\frac{2,000}{\text{Pounds of fertilizer per acre}} \times \text{Pounds/acre of Broadstrike Plus - Corn Pre/PPI} = \text{Pounds of product per ton of fertilizer}$$

**Note:** Thoroughly clean dry fertilizer blending equipment prior to use with other herbicides. It is important to clean the blender, herbicide spray tank and spraying apparatus thoroughly. Rinse the sides of the blender and the herbicide tank with water. Then, impregnate the rinsate onto a load of dry fertilizer intended for an approved crop. Use a maximum rate of 1 gallon of rinsate/ton of fertilizer. Follow with 1 - 2 loads of unimpregnated fertilizer in the blender before switching herbicides. The fertilizer application equipment must be empty, clean and dry before applying any material to crops other than corn.

**Approved Uses**

**FIELD CORN**

**Soil Applied Treatments**

Broadstrike Plus - Corn Pre/PPI may be soil applied as a preplant surface, preplant incorporated or preemergence treatment. Apply alone or in tank mix combination with a grass herbicide such as Microtech, Dual, Dual II, Eradicane, Sutan+ Frontier, Surpass or Harness Plus.

**Note:** Broadstrike Plus - Corn Pre/PPI may be tank mixed with other herbicides registered for use on field corn, unless tank mixing is specifically prohibited by the label of the tank mix product. When Broadstrike

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Plus - Corn Pre/PPI is tank-mixed with a companion herbicide, follow relevant use directions, including precautions, restrictions and limitations listed on the manufacturer's label.

### Preplant Surface Applied

For minimum-tillage or no tillage systems, Broadstrike Plus - Corn Pre/PPI alone and with certain tank mixtures may be applied up to 30 days before planting. If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide such as Gramoxone Extra or Roundup. Observe directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

### Preplant Incorporated Application

Apply and incorporate Broadstrike Plus - Corn Pre/PPI from 0 to 30 days before planting. Preplant incorporated treatments may be applied in water or liquid fertilizer. Uniformly incorporate the herbicide treatment into the top 2 to 3 inches of the final seedbed.

### Preemergence Application

Apply at the time of planting or after planting but prior to crop or weed emergence. Adequate soil moisture is required for optimum herbicidal activity. For surface applications, rainfall or overhead sprinkler irrigation is necessary to move Broadstrike Plus - Corn Pre/PPI into the weed germination zone. The amount of rainfall or irrigation required following application depends on existing soil moisture, soil texture, and organic matter content. Sufficient water to moisten the soil to a depth of 2 inches is generally adequate. If adequate soil moisture is not received within 7 to 10 days after a surface applied treatment, a shallow cultivation is recommended to control established weeds and move the herbicide into the weed germination zone. When adequate soil moisture is received following dry conditions, performance may vary with weed species and the depth of the weed root system in the soil.

### Application Rates and Weeds Controlled by Soil Applied Treatments to Field Corn:

#### Broadleaf Weeds Controlled By Soil Applied Broadstrike Plus - Corn Pre/PPI

- |                        |                   |
|------------------------|-------------------|
| amaranth, Palmer       | pigweed, redroot  |
| anoda, spurred         | pigweed, smooth   |
| beggarweed, Florida    | poinsettia, wild  |
| <u>buckwheat, wild</u> | puncturevine      |
| <u>carpetweed</u>      | purslane          |
| chickweed              | ragweed, common   |
| cocklebur, common      | ragweed, giant†   |
| <u>clover, red</u>     | Russian thistle   |
| henbit                 | shepherd's purse  |
| horseweed (maretail)   | sicklepod         |
| jimsonweed             | sida, prickly     |
| Kochia                 | smartweed         |
| ladysthumb             | spurge, nodding   |
| lambsquarters, common  | spurge, spotted   |
| mallow, Venice         | spurge, prostrate |
| morningglory species   | sunflower, common |
| mustard, wild          | velvetleaf        |
| nightshade, black      | waterhemp, tall   |

†Weeds partially controlled.

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## Broadcast Application Rates

Preplant Surface Applied, Preplant Incorporated and Postplant Preemergence Treatments

Soil Texture	lb of Broadstrike Plus - Corn Pre/PPI/acre	Packet Factor (acres/packet)
Course	0.20 - 0.25	2.5 - 2.0
Medium or Fine	0.25 - 0.30	2.0 - 1.67

Note: Use the high end of the rate range on soils with greater than 3.0% organic matter and/or when applications are made 14-30 days before planting.

### Tank Mixes

Note: When tank mixing with a companion herbicide, read and follow each manufacturer's label for weeds controlled, applicable use directions, precautions and limitations.

**1. Broadstrike Plus - Corn Pre/PPI plus Gramoxone Extra or Roundup for minimum-tillage or no-tillage systems**

In minimum-tillage or no-tillage situations where corn is planted directly into a cover crop, stale seedbed or previous crop residues, the contact herbicides Gramoxone Extra or Roundup may be tank mixed with Broadstrike Plus - Corn Pre/PPI. Apply in 20 to 60 gallons of water or fluid fertilizer per acre with ground equipment.

**Application Timing:** Apply before, during (behind the planter) or after planting but before the crop emerges.

**Gramoxone Extra:** See the Gramoxone Extra herbicide label for weeds controlled, recommended rates for specific weeds and application instructions. Do not apply combinations containing Gramoxone Extra in suspension type fertilizers as the activity of the active ingredient paraquat will be reduced.

**Roundup:** See the Roundup herbicide label for weeds controlled, recommended rates for specific weeds and application instructions.

**2. Broadstrike Plus - Corn Pre/PPI plus 2,4-D for minimum-tillage or no-tillage systems**

Where heavy crop residues exist, add 1-2 pints/acre of an appropriately labeled 3.8 lb. ae/gallon 2,4-D amine or ester to the spray tank and apply in a minimum of 25 20 gallons of carrier/acre.

As carriers, nitrogen solutions and complete liquid fertilizers applied before corn emergence enhance burndown of existing weeds and, therefore, are recommended instead of water. Add X-77 surfactant at 1.0 to 2.0 quarts/100 gallons diluted spray or another appropriate surfactant at its recommended rate. Apply before weeds exceed 3 inches high. This tank mixture will not control emerged grasses.

### Broadstrike Plus - Corn Pre/PPI Followed By Postemergence Treatments

Broadleaf weeds not controlled by Broadstrike Plus - Corn Pre/PPI may be controlled with postemergence herbicide products such as Barvel, Clarity, 2,4-D, Marksman, Buctril or Beacon plus 2,4-D. Read and follow each manufacturer's label for weeds controlled, applicable use directions, precautions and limitations before use.

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#### Warranty Disclaimer

DowElanco 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. DowElanco 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 the label instructions (including adverse 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 DowElanco or the seller. All such risks shall be assumed by the buyer.

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**Limitation of Remedies**

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The exclusive remedy for losses or damages resulting from the use of this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at DowElanco's 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.

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

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of DowElanco or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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