

# **CORN - CONVENTIONAL TILLAGE SYSTEMS - FINE TEXTURED SOIL - LESS THAN 3% ORGANIC MATTER**

## General Information

### INFORMATION

For use only on field corn, production seed corn, silage corn, sweet corn and popcorn. Corn in the label refers to all four types: field corn, production seed corn, silage corn, sweet corn and popcorn.

DuPont BREAKFREE ATZ LITE herbicide is a unique combination of the herbicides acetochlor and atrazine plus the antidote or safener, dichlormid. While the acetochlor and atrazine provide weed control, the dichlormid safens corn against herbicide injury. BREAKFREE ATZ LITE may be applied to the surface or incorporated into the top 1-2 inch layer of soil. It is recommended for control alone, or in tank mix combinations, for the weeds listed in the \"Target Weeds\" section of these use directions. BREAKFREE ATZ LITE controls weeds by interfering with normal germination and seedling development. BREAKFREE ATZ LITE does not control established or germinated weeds present at application.

### Use Restrictions

- Do not apply to the following soils within 150 feet of any well where the depth to groundwater is 30 feet or less: sands with less than 3% organic matter; loamy sands with less than 2% organic matter; or sandy loams with less than 1% organic matter.
- This product must not be mixed or loaded, or used within 50 feet of all wells, including abandoned wells, drainage wells, and sinks holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material

removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

Additional State imposed requirements regarding wellhead setbacks and operational area containment must be observed.

- This product may not be mixed or loaded within 50 ft. of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied by ground within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66-foot buffer or setback from runoff entry points must be planted to crop, seeded with grass or other suitable crop.

- Tile-Outletted Fields Containing Standpipes

One of the following restrictions must be used in applying this product to tile-outletted fields containing standpipes:

1. Do not apply this product within 66 feet of standpipes in tile-outletted fields.
2. Apply this product to the entire tile-outletted field and immediately incorporate it to a depth of 2-3 inches in the entire tile-outletted field.
3. Apply this product to the entire tile-outletted field under a no-till practice only when high crop residue management practices are used. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during or after crop harvest.

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

- Do not use flood irrigation to apply or incorporate this product.

- Product must be used in a manner that will prevent back siphoning in wells, spills

or improper disposal of excess pesticide, spray mixtures or rinsates.

- Do not apply under conditions that favor runoff or wind erosion of soil containing this product 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 soils.

- 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.

- Aerial Application: Do not apply this product using aerial application equipment.

- Do not apply when wind 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.

- 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.

- Make application when the wind velocity favors on-target product deposition (approximately 3 to 10 mph).

Do not apply when wind velocity exceeds 15 mph.

Avoid application when gusts approach 15 mph.

- Low humidity and high temperatures increase the likelihood of spray drift to

sensitive areas. Avoid spraying during conditions of low humidity and/or high temperatures.

Do not apply during inversion conditions.

- Maximum Application Rates:

Maximum broadcast application rates for corn must be as follows:

- If no atrazine was applied prior to corn emergence, apply a maximum of 2 pounds active ingredient per acre broadcast. If postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds active ingredient per acre per calendar year.

- Apply a maximum of 2.0 pounds active ingredient per acre as a single preemergence application is made on soils that are not highly erodible or on highly erodible soil if at least 30% of the soil is covered with plant residues, or

- Apply a maximum of 1.6 pounds active ingredient per acre as a single preemergence application on highly erodible soils if less than 30% of the soil is covered with plant residues; or 2.0 pounds active ingredient per acre if only applied postemergence.

- Preharvest Interval: Do not apply DuPont BREAKFREE ATZ LITE within 60 days of harvest of field corn for forage uses or within 45 days of harvest of sweet corn for forage uses.

- Postemergence applications of atrazine to corn must be made before the crop reaches 12 inches in height.

#### Use Precautions

- Failure to strictly follow label directions may result in exceeding the maximum annual atrazine use rates as stipulated by the Environmental Protection Agency.

- Caution: This product contains atrazine and thus may not control weeds that are known or suspected to be triazine resistant. Following many years of continuous use of atrazine and chemically related products, biotypes of some of the weeds listed on the label have been reported which cannot be effectively controlled by atrazine and related herbicides. Where this is known or suspected and weeds controlled by

atrazine are expected to be present along with resistant biotypes, it is recommended that atrazine be used in combinations or in sequence with other registered herbicides which are not triazines. If only resistant biotypes are expected to be present, use a registered non-triazine herbicide.

- Do not use BREAKFREE ATZ LITE on any crop other than field corn, production seed corn, silage corn, sweet corn and popcorn.
- BREAKFREE ATZ LITE should not be used on corn seed stock such as Breeders, Foundation, or Increase.
- Do not contaminate irrigation water used for crops other than corn or water used for domestic purposes.
- Do not apply BREAKFREE ATZ LITE before pre-irrigation in irrigated areas.
- Do not allow BREAKFREE ATZ LITE to contaminate feed or food.
- BREAKFREE ATZ LITE should not be stored near seeds, fertilizers, or foodstuffs.
- All containers of BREAKFREE ATZ LITE should be kept tightly closed when not in use.
- Applied according to directions and under normal growing conditions, BREAKFREE ATZ LITE will not harm the treated crop. During germination and early stages of growth, extended periods of unusually cold and wet or hot and dry weather, insect or plant disease attack, carryover pesticide residues, the use of certain soil applied systemic insecticides, improperly placed fertilizers or soil insecticides may create abnormal conditions that weaken crop seedlings. BREAKFREE ATZ LITE used under these abnormal conditions could result in crop injury.

#### Weeds Controlled

BREAKFREE ATZ LITE applied as directed in the label will control or partially control the weeds listed in Table 4 of the label. Additional weeds may be controlled with tank mixes. See the "Tank Mix Combinations" section of the label for tank mix recommendations. Always consult the tank mix product labels for specific use rates and directions. Always follow the most restrictive label when tank mixing DuPont BREAKFREE ATZ LITE with another product.

BREAKFREE ATZ LITE may be tank mixed with any other registered corn product as long as compatibility is verified and it is not prohibited by the label of the tank mix product. Note: This product contains atrazine and thus may not control weeds that are known or suspected to be triazine resistant.

(1) For best control of yellow nutsedge use preplant incorporation or tank mix with additional Surpass EC or atrazine.

Velvetleaf, Cocklebur: (2) Activity may be reduced under dry conditions or following early (more than 14 days) preplant applications. Sequential herbicides or additional atrazine may be needed for complete control.

Panicum Texas, Signalgrass Broadleaf: (3) Best control is achieved when BREAKFREE ATZ LITE is applied within 5 days of planting and rainfall occurs shortly after application or mechanical incorporation is used to activate the herbicide. If rainfall does not occur within 7 days after application, shallow cultivation will enhance activity. Excessive rainfall after application may reduce control. Under adverse weather conditions and/or heavy infestations, a cultivation or follow-up herbicide may be needed.

Refer in the label regarding tank mix information.

#### Limitations, Restrictions, and Exceptions

#### Application Directions – Corn

#### Application Timing and Methods

Early Preplant: On medium and fine textured soils (Table 1), BREAKFREE ATZ LITE may be applied up to 30 days prior to planting.

Preplant Incorporation: BREAKFREE ATZ LITE may be mechanically incorporated in the top 2 inches of the soil with field cultivators, discs, or spring tooth harrows at any time within 14 days prior to planting. Improper incorporation, excessive crop residues, or poor soil tilth may result in erratic, streaked or otherwise unsatisfactory weed control.

Avoid moving or shaping soil after incorporation.

Preemergence Surface: BREAKFREE ATZ LITE and certain tank mixes may be

applied to the soil surface as a broadcast or banded application. Precipitation or sprinkler irrigation of at least 0.25 inch is required to bring BREAKFREE ATZ LITE into contact with germinating seeds. If rain or sprinkler irrigation does not occur within 7 days after application, weed control may be improved by using a rotary hoe, or similar device, to incorporate the herbicide. The device used should be run at a shallow depth to prevent disturbing the corn seed. Do not remove BREAKFREE ATZ LITE from the weed control zone or dilute it with untreated soil.

Postplant-Preemergence: BREAKFREE ATZ LITE may be applied immediately after planting but prior to corn emergence. If rain or sprinkler irrigation does not occur within 7 days after application, weed control may be improved by using a rotary hoe, or similar device, to shallowly incorporate the herbicide. Do not disturb the germinating corn. Do not remove BREAKFREE ATZ LITE from the weed control zone or dilute it with untreated soil.

Banding-Preemergence: BREAKFREE ATZ LITE may be applied in a 10 to 14 inch band after corn planting but prior to corn emergence. If rain or sprinkler irrigation does not occur within 7 days after application, weed control may be improved by using a rotary hoe or similar device to incorporate the herbicide. Do not disturb the germinating corn. Do not remove BREAKFREE ATZ LITE from the weed control zone or dilute it with untreated soil.

Early Postemergence: BREAKFREE ATZ LITE may be applied early postemergence to corn up to 11" tall.

Applications must be made prior to weed seedling emergence or in a tank mixture that controls the emerged weeds. Read and follow restrictions and directions on tank mix product labels.

Sprinkler Irrigation: Do not apply DuPont

BREAKFREE ATZ LITE through sprinkler irrigation systems. Use a sprinkler system only to incorporate BREAKFREE ATZ LITE after application. After BREAKFREE ATZ LITE has been applied, a sprinkler irrigation system set to deliver 0.25 to 0.75 inch of water per acre may be used to incorporate the product. Using more than 0.75 inch of water could result in reduced performance.

On sandy soils low in organic matter, use no more than 0.5 inch of water. Do not use flood irrigation to apply or incorporate BREAKFREE ATZ LITE.

## Planting

Planting should be done as close to the time of application of BREAKFREE ATZ LITE as possible. This allows BREAKFREE ATZ LITE to provide effective weed control during the time it is most critical in the production of corn.

## Cultivation

Cultivation should be delayed as long as possible. Should weeds develop, a shallow cultivation or rotary hoeing will generally result in improved weed control. If BREAKFREE ATZ LITE was incorporated, cultivate to a depth of less than half the depth of incorporation.

If cultivation is necessary due to soil crusting, compaction, or escaped weeds, adjust equipment to run shallow and minimize soil movement. This will decrease the possibility of diluting or moving the herbicide from the weed control zone.

## Soil Texture and Organic Matter

Soil texture and organic matter content of the field to which the application is to be made must be determined prior to application. The use rate of BREAKFREE ATZ LITE is determined by a combination of these two factors.

## Use Rates in Conventional Tillage Systems

Table 2: BREAKFREE ATZ LITE Use Rates (qt/acre) by Soil Texture and Organic Matter Content in Conventional Tillage Systems.

The following use rates are for preplant incorporated, preemergence, and early postemergence applications (see Application Timing and Methods). Consult Table 3 if no-till applications are made or the product is applied more than 14 days prior to planting under conventional tillage.

**Organic Matter:** If the organic matter content of the soil is at the lower end of the range, use the lower rates in the rate range provided in Table 2. If the organic matter content is at the upper end of the range, use the higher rates.

**Weed Infestation:** If the weed infestation is lighter, use a rate at the lower end of



the rate range for the soil texture and organic matter content. If the weed infestation is heavier, use the higher rates in the rate range for the soil conditions.

Method

[Surface](#)

[Band application](#)

[Soil incorporation](#)

[Broadcast](#)

[Surface](#)

[Band application](#)

[Soil incorporation](#)

[Broadcast](#)

[Surface](#)

[Band application](#)

[Soil incorporation](#)

[Broadcast](#)

Rates

[field rates 0](#)

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Restricted Entry Interval

12 hours

Soils

[Fine](#)

[Silty Clay Loam](#)

[Sandy Clay Loam](#)

[Silty Clay](#)

[Sandy Clay](#)

[Clay Loam](#)

[Clay](#)

Tillages

[Conventional](#)

Timings

[Postemergence \(Crop\)](#)

[Preemergence \(Crop\)](#)

[Preplant Incorporated](#)