

## **PREPLANT BURNDOWN - COTTON**

### General Information

#### GENERAL INFORMATION

This product is a dry flowable granule that is used for selective post-emergence weed control in wheat (including durum), barley, oat, triticale and fallow. The best control is obtained when this product is applied to young, actively growing weeds. The use rate will depend on weed spectrum and size of weed at time of application. The degree and duration of control may depend on the following:

- weed spectrum and infestation intensity
- weed size at application
- environmental conditions at and following treatment

This product is noncorrosive, nonflammable, nonvolatile, and does not freeze. This product should be mixed in water and applied as a uniform broadcast spray.

#### BIOLOGICAL ACTIVITY AND ENVIRONMENTAL CONDITIONS

This product is absorbed primarily through the foliage of plants, rapidly inhibiting the growth of susceptible weeds. One to 3 weeks after application to weeds (2 to 5 weeks for wild garlic), leaves of susceptible plants appear chlorotic, and the growing point subsequently dies.

This product provides the best control in vigorously growing crops that shade competitive weeds. Weed control in areas of thin crop stand or seeding skips may not be as satisfactory. However, a crop canopy that is too dense at application can intercept spray and reduce weed control.

The herbicidal action of this product may be affected in crops stressed from adverse environmental conditions (such as extreme temperatures or moisture), abnormal soil conditions, cultural practices, or variations in crop variety. In warm, moist conditions, the expression of herbicide symptoms is accelerated; in cold, dry conditions, expression of herbicide symptoms is delayed. In addition, weeds hardened-off by drought stress are less susceptible to this product.

## PRODUCT MEASUREMENT

This product is measured using the product volumetric measuring cylinder. The degree of accuracy of this cylinder varies by  $\pm 7.5\%$ . For more precise measurement, use scales calibrated in ounces.

## CROP ROTATION - ALL USES

Wheat (including durum), Barley, Triticale and Oat may be replanted anytime after the application of this product.

Cotton can be planted 14 days after the application of this product. Sugarbeets, Winter Rape, and Canola can be planted 60 days after the application of this product. Any other crop may be planted 45 days after the application of this product.

## SURFACTANTS - ALL USES

Unless otherwise specified, add a DuPont recommended nonionic surfactant having at least 80% active ingredient at 1 to 2 qt per 100 gal of spray solution (0.25 to 0.5% v/v -refer to TANK MIXTURES for specific adjuvant instructions when this product is used in a tank mix).

For pre-plant burndown in Cotton, include a nonionic surfactant, petroleum based crop oil concentrate, or a vegetable-seed oil-based product (methylated seed oils are considered a vegetable seed-based oil). If another herbicide is tank mixed with this product to increase the broadleaf weed spectrum, select adjuvants based on the adjuvant limitations of the companion herbicide.

Consult your agricultural dealer, applicator, or DuPont representative for a listing of recommended surfactants. Antifoaming agents may be used if needed.

Do not use low rates of liquid nitrogen fertilizer solution as a substitute for surfactant.

## GROUND APPLICATION - ALL USES

For optimum spray distribution and thorough coverage, use flat-fan or low-volume flood nozzles.

For flat-fan nozzles, use a spray volume of at least 5 gal per acre (GPA).

For flood nozzles on 30" spacings, use at least 10 GPA, flood nozzles no larger than TK10 (or the equivalent), and a pressure of at least 30 psi. For 40" nozzle spacings, use at least 13 GPA; for 60" spacings use at least 20 GPA. It is essential to overlap the nozzles 100% for all spacings.

Raindrop RA nozzles are not recommended for product applications, as weed control performance may be reduced.

Use screens that are 50-mesh or larger.

#### AERIAL APPLICATION - ALL USES

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage at 2 to 5 GPA. Use at least 3 GPA in Idaho, Oregon, or Utah.

Do not apply this product by air in the state of New York.

See the Spray Drift Management section of this label.

#### GRAZING

Do not graze livestock in treated areas. In addition, do not feed forage or hay from treated areas to livestock (harvested straw may be used for bedding and/or feed).

#### SPRAY EQUIPMENT

For specific application equipment, refer to the manufacturer's recommendations for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc.

Be sure to calibrate air or ground equipment properly before application. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern with minimum drift. Use higher spray volumes to obtain better coverage when crop canopy is dense. Avoid swath overlapping, and shut off spray booms while starting, turning, slowing, or stopping, to avoid injury to the crop.

Do not make applications using equipment and/or spray volumes or during weather conditions that might cause spray to drift onto nontarget sites. For additional information on spray drift refer to Spray Drift Management section of label. Continuous agitation is required to keep this product in suspension.

#### SPRAYER CLEANUP

The spray equipment must be cleaned before this product is sprayed. Follow the cleanup procedures specified on the labels of the previously applied products. If no directions are provided, follow the six steps outlined in After Spraying This Product.

#### AT THE END OF THE DAY

It is recommended that during periods when multiple loads of this product are applied, at the end of each day of spraying the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits which can accumulate in the application equipment.

#### AFTER SPRAYING THIS PRODUCT AND BEFORE SPRAYING CROPS OTHER THAN WHEAT, BARLEY, TRITICALE AND OAT

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of this product as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gal of household ammonia\* (contains 3% active) for every 100 gal of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 min. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only Ammonia is used as a cleaner, the rinsate solution may be applied back to the crop(s) recommended on this label. Do not exceed the maximum labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

\*Equivalent amounts of an alternate-strength ammonia solution or a DuPont-approved cleaner can be used in the cleanout procedure.

Carefully read and follow the individual cleaner instructions. Consult your Ag dealer, applicator, or DuPont representative for a listing of approved cleaners.

#### Notes:

1. CAUTION: Do not use chlorine bleach with ammonia as dangerous gases will

form. Do not clean equipment in an enclosed area.

2. Steam-cleaning aerial spray tanks is recommended prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.

3. When this product is tank mixed with other pesticides, all cleanout procedures should be examined and the most rigorous procedure should be followed.

4. In addition to this cleanout procedure, all pre-cleanout guidelines on subsequently applied products should be followed as per the individual labels.

5. Where routine spraying practices include shared equipment frequently being switched between applications of this product and applications of other pesticides to product-sensitive crops during the same spray season, it is recommended that a sprayer be dedicated to this product to further reduce the chance of crop injury.

## RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

## INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other

detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

## PRECAUTIONS

Injury to or loss of adjacent sensitive crops, desirable trees or vegetation may result from failure to observe the following:

- Do not apply, drain or flush equipment on or near desirable trees or other plants or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.
- Do not use on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of spray to desirable plants.
- Take all necessary precautions to avoid all direct or indirect contact (such as spray drift) with non-target plants or areas.
- Carefully observe all sprayer cleanup instructions both prior to and after using this product, as spray tank residue may damage crops other than wheat, barley, triticale or oat.

This product is only registered on wheat, barley, oat, triticale and fallow. Do not use on any other crop.

The total rate of this product for wheat (including durum), barley and triticale cannot exceed 1.0 ounce product per acre applied to any one crop during one growing season.

The total rate of this product for oat (spring and winter) cannot exceed 0.4 ounces product per acre applied to any one crop during one growing season.

Varieties of wheat (including durum), barley and triticale may differ in their response to various herbicides. DuPont recommends that you first consult your state experiment station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use to a small area.

Under certain conditions such as heavy rainfall, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after product application, temporary discoloration and/or crop injury may occur. To reduce the potential of crop injury, tank mix this product with 2,4-D (ester formulations perform best-see

Tank Mixtures) and apply after the crop is in the tillering stage of growth.

This product should not be applied to wheat, barley, triticale or oat that is stressed by severe weather conditions, drought, low fertility, water-saturated soil, disease, or insect damage, as crop injury may result. Risk of injury is greatest when crop is in the 2 to 5- leaf stage. Severe winter stress, drought, disease, or insect damage following application also may result in crop injury.

Do not apply to wheat, barley, triticale or oat crops underseeded with another crop.

Dry, dusty field conditions may result in reduced control in wheel track areas.

Do not harvest sooner than 45 days after the last application of this product.

### Limitations, Restrictions, and Exceptions

#### PREPLANT BURNDOWN

##### Cotton

This product may be applied for burndown of emerged weeds prior to the emergence of cotton.

This product may be used as part of a pre-plant burn-down treatment, in combination with other suitable registered pre-plant herbicides.

Read and follow all manufacturers' label instructions for the companion herbicide. If those instructions conflict with this label, do not tank mix the herbicide with this product. Apply this product at 0.3 to 0.5 oz per acre for control or partial control of the weeds listed on this label. Allow at least 14 days between application of this product and planting of cotton. Include a non-ionic surfactant, petroleum based crop oil concentrate, or vegetable-seed oil-based product (methylated seed oils are considered a vegetable seed-based oil).

If another herbicide is tank mixed with this product to increase the broadleaf weed spectrum, select adjuvants based on the adjuvant limitations of the companion herbicide.

#### SPRAY ADJUVANTS

##### Nonionic Surfactant (NIS)

Apply at a rate (concentration) of 0.25-0.5% v/v (1-2 qt per 100 gal spray solution).

Use the higher rate in hot and dry conditions to enhance control.

#### Crop Oil Concentrate

Under dry conditions or during cool weather, a petroleum based crop oil concentrate, or vegetable-seed oil-based product may be used in place of a nonionic surfactant at 1-2 gallon/100 gal of spray solution (1-2% v/v) to enhance weed control. Use a petroleum-based crop oil concentrate with at least 14% emulsifiers/surfactant and 80% oil.

#### Ammonium Nitrogen Fertilizer

An ammonium nitrogen fertilizer can be added to a surfactant or a crop oil concentrate to enhance control. Alternatively, a high-quality, sprayable grade of ammonium sulfate (21-0-0) may be used.

#### IMPORTANT PRECAUTIONS

Seedling disease, nematodes, cold weather, deep planting (more than 2"), excessive moisture, high salt concentration, and/or drought may weaken cotton seedlings and increases the possibility of crop injury. Cotton resumes normal growth once favorable growing conditions return.

**RESTRICTION: DO NOT** apply later than 14 days before planting cotton.

#### Cotton

Apply this product at 0.3 to 0.5 oz per acre as a burndown treatment to cotton. Allow at least 14 days between application of this product and planting of cotton. Include a nonionic surfactant, petroleum based crop oil concentrate, or vegetable-seed oil-based product (methylated seed oils are considered a vegetable seed-based oil). If another herbicide is tank mixed with this product to increase the broadleaf weed spectrum, select adjuvants based on the adjuvant limitations of the companion herbicide.

#### TANK MIXTURES IN PRE-PLANT BURNDOWN

This product may be used as a pre-plant burndown treatment alone or tank mixed with other herbicides that are registered for use as a pre-plant burndown product, such as Landmaster II, Fallow Master, Credit plus Diablo/Diablo SGF/Clarity, or Diablo/Diablo SGF/Clarity alone.

Read and follow all manufacturers' label instructions for the companion herbicide. If those instructions conflict with this label, follow the most restrictive labeling (such



as planting interval after application), or do not tank mix the herbicide with this product.

#### Notes

- Partial control: A visual reduction of weed population as well as a significant loss of vigor for individual weed plants. For better results, use 0.5 or 0.6 ounce of this product per acre and include a tank mix partner such as 2,4-D, MCPA, Buctril, Bison, Bronate or Bronate Advanced), or dicamba (such as Diablo/Clarity), refer to the TANK MIXTURES section of this label.

- Naturally occurring resistant biotypes of kochia, prickly lettuce and Russian thistle are known to occur. See the TANK MIXTURES and SPECIFIC WEED PROBLEMS sections of this label for additional details.

#### Rates

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Restricted Entry Interval

12 hours

#### Timings

[When this product is applied to young, actively growing weeds.](#)