

## **CONIFERS - ANNUAL BROADLEAF AND GRASS WEEDS**

### General Information

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through [www.atrazine-watershed.info](http://www.atrazine-watershed.info) or 1-866-365-3014. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact ADAMA for a refund.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

Sale, use and distribution of this product in Nassau and Suffolk Counties in the state of New York is prohibited.

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

### GENERAL INFORMATION

This herbicide controls many annual broadleaf and grass weeds in corn, sorghum, sugar cane, and certain other crops specified on this label. This product may be applied before or after weeds emerge.

Following many years of continuous use of this product and chemically related products, biotypes of some of the weeds listed on this label have been reported which cannot be effectively controlled by this and related herbicides. Where this is known or suspected and weeds controlled by this product are expected to be present along with resistant biotypes, we recommend the use of this product 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. Consult your state agricultural extension service for specific recommendations.

Since this product acts mainly through root absorption, its effectiveness depends on moisture to move it into the root zone. If weeds develop, a shallow cultivation or

rotary hoeing will generally result in better weed control.

This product is noncorrosive to equipment and metal surfaces, is nonflammable, and has low electrical conductivity.

Avoid using near adjacent desirable plants or in greenhouses or injury may occur.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap as crop injury may result.

Where the use directions give a range of rates, use the lower rate in coarse-textured soil and soil low in organic matter; use the higher rate on fine textured soil and soil high in organic matter.

ADAMA does not recommend applications in combination with other herbicides or oils except as specifically described on the label or in literature published by ADAMA.

When tank mixing or sequentially applying atrazine or products containing atrazine to corn or sorghum, the total lbs. of active ingredient per acre must not exceed 2.5 lbs. active ingredient (or 5 pts. of this product) per acre per year.

When tank mixing or sequentially applying atrazine or products containing atrazine to crops other than corn or sorghum, the total pounds of atrazine applied (lbs. a.i. per acre) must not exceed the specific seasonal rate limits as noted in the use directions for each crop. When an adjuvant is to be used with this product, ADAMA suggests the use of a Chemical Producers and Distributors Association certified adjuvant.

## RESISTANCE MANAGEMENT

Atrazine 4L is a Group 5 Herbicide (contains the active ingredient atrazine). Following many years of continuous use of this product and chemically related products, biotypes of some of the weeds listed on this label have been reported to which cannot be effectively controlled by this and related herbicides. Where this is known or suspected and weeds controlled by this product are expected to be present along with resistant biotypes, we recommend the use of this product in combinations or in sequence with other registered herbicides which are not solely a Group 5 Herbicide. If only resistant biotypes are expected to be present, use a registered herbicide which is not solely a Group 5 Herbicide. Consult with your state Agricultural Extension Service for specific recommendations.

## APPLICATION PROCEDURES

Ground application: Use conventional ground sprayers equipped with nozzles that provide accurate and uniform application. Be certain that nozzles are uniformly spaced and are the same size. Calibrate sprayer before use and recalibrate at the start of each season and when changing carriers.

Unless otherwise specified, use a minimum of 10 gals. of spray mixture per acre for all preplant incorporated, preplant surface, preemergence, and postemergence applications (with or without oil or surfactant) with ground equipment.

Use a pump with capacity to: (1) maintain 35 - 40 psi at nozzles, (2) provide sufficient agitation in tank to keep mixture in suspension, and (3) to provide a minimum of 20% bypass at all times. Use centrifugal pumps which provide propeller shear action for dispersing and mixing this product.

The pump should provide a minimum of 10 gal./minute/100 gals. tank size circulated through a correctly positioned sparger tube or jets.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on the suction side of the pump should be 16-mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

Aerial application: Use aerial application only where broadcast applications are specified. Apply in a minimum of 1 qt. of water for each qt. of this product applied

per acre. For postemergence treatments on corn and sorghum, apply recommended rate in a minimum of 2 gals. of water per acre.

Avoid applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin.

Application in water or liquid fertilizer: Nitrogen solution or complete liquid fertilizer may replace all or part of the water as a carrier for preemergence, preplant incorporated, or preplant surface ground application on corn and sorghum. Check the compatibility of this product with liquid fertilizer and/or nitrogen solution as shown below before use. Do not apply in nitrogen solution or complete liquid fertilizer after corn or sorghum emerges or crop injury may occur.

Compatibility Test: Since liquid fertilizers can vary always check compatibility with herbicide(s) each time before use. Be especially careful when using complete suspension or fluid fertilizers as serious compatibility problems are more likely to occur. Commercial application equipment may improve compatibility in some instances. The following test assumes a spray volume of 25 gals. per acre. For other spray volumes, make appropriate changes on the ingredients. Check compatibility using this procedure:

- Add 1 pt. of fertilizer to each of 2 one-qt. jars with tight lids.
- To one of the jars, add 1/4 tsp. or 1.2 milliliters of a compatibility agent approved for this use such as Compex or Unite (1/4 tsp. is equivalent to 2 pts./100 gals. spray). Shake or stir gently to mix.
- To both jars, add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix. The appropriate amount of herbicides for this test follows:

Dry herbicides: For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

Liquid herbicides: For each pint to be applied per acre, add 0.5 teaspoon or 2.5 milliliters to each jar.

- After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix.

Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film in the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (A) slurry the dry herbicide(s) in water before addition, or (B) add  $\frac{1}{2}$  of the compatibility agent to the fertilizer and the other  $\frac{1}{2}$  to the emulsifiable concentrate or flowable herbicide before addition to the mixture. If incompatibility is still observed, do not use the mixture.

Application in water plus emulsifiable oil or oil concentrate: Adding emulsifiable oil (petroleum-derived, petroleum-derived oil concentrate, or single or mixed crop-derived oil concentrate) to postemergence water-based sprays in corn and sorghum may improve weed control. However, under certain conditions, the use of either type of oil may seriously injure the crop. To minimize this possibility, observe the following directions:

Use one of the following properly emulsified:

- A suitable oil concentrate containing a least 1%, but not more than 20% suitable emulsifier or surfactant blend.
- Petroleum-derived oil containing at least 1% suitable emulsifier.

In the event of a compatibility problem when mixing oil with this product and water, a compatibility agent such as Compex or Unite should be used.

Any of the above oils contaminated with water or other materials can cause compatibility problems and/or crop injury.

Mixing Procedures – All Uses: (1) Be sure sprayer is clean and not contaminated with any other materials or crop injury or sprayer clogging may result. (2) Fill tank 1/4 full with clean water, nitrogen solution, or complete liquid fertilizer. (3) Start

agitation. (4) Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. (5) Pour product directly from container into tank. (6) Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action. (7) Add emulsifiable oil, oil concentrate, or tank mix herbicide( s) after this product is thoroughly suspended. (8) Finish filling tank. (9) Empty tank as completely as possible before refilling to prevent buildup of oil or emulsifiable concentrate residue. Maintain agitation to avoid separation of materials. (10) If an oil or emulsifiable concentrate film starts to build up in the tank, drain it and clean with strong detergent solution or solvent. (11) Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent.

Rotational Crops - All Uses: (1) Do not rotate to any crop except corn or sorghum until the following year or injury may occur. (2) If applied after June 10, do not rotate with crops other than corn or sorghum the next year or crop injury may occur. (3) In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use only when corn or sorghum is to follow corn or sorghum or when a crop of untreated corn or sorghum is to precede other rotational crops. (4) In eastern parts of the Dakotas, KS, western MN, and NE, do not rotate to soybeans if the rate applied to corn or sorghum was more than 4 pts./A or equivalent band application rate or soybean injury may occur. (5) Injury may occur to soybeans planted the year following application on soils having a calcareous surface layer. (6) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year following application or injury may occur.

#### Limitations, Restrictions, and Exceptions

#### CONIFERS

For control of annual broadleaf and grass weeds prior to transplanting, after transplanting, or in established conifers (including Douglas fir, grand fir, noble fir, white fir, Austrian pine, bishop pine, Jeffrey pine, knobcone pine, loblolly pine, lodgepole pine (shore pine), Monterey pine, ponderosa pine, Scotch pine, slash pine, blue spruce, and Sitka spruce): Broadcast 4 - 8 pts./A of this product in a minimum of 5 gals. of water per acre by air or 10 gals. by ground before weeds are 1 1/2 inches tall. Apply to established trees between fall and early spring while trees are dormant. For new transplants, apply during or soon after transplanting. For

applications prior to transplanting, allow sufficient precipitation to activate Atrazine 4L before transplanting. In areas where spring and summer rainfall is inadequate to activate Atrazine 4L, apply during fall prior to spring transplanting.

For the list of weeds controlled, see Atrazine 4L Applied Alone – Corn or Grain Sorghum – Preplant Surface-Applied, Preplant Incorporated, or Preemergence.

Precautions:

- In areas west of the Rocky Mountains (except the Great Basin), grazing may begin 7 months after a fall application or 3 months after a winter or spring application.
- Temporary injury to trees may occur following use of Atrazine 4L on coarse-textured soil.
- To avoid crop injury, do not apply to seedbeds. Also apply only once per year.

To prevent illegal residues:

- Do not graze treated areas of the Great Basin or areas east of the Rocky Mountains.

Aerial application: In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 ft. above vegetation using low-drift nozzles at a maximum pressure of 40 psi and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive non-target plants, apply Atrazine 4L by aircraft at a minimum upwind distance of 400 ft. from sensitive plants.

Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

Rates

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Restricted Entry Interval

12 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.

Timings

[Pretransplant](#)

[Post-Transplant](#)