

# **COTTON (PREEMERGENCE: EXCEPT AZ AND CA) - SILTY CLAY, CLAY**

## General Information

### PRODUCT INFORMATION

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et.al.v.EP, C01-0132C, (W.D.WA). For further information, please refer to <http://www.epa.gov/espp/wtc/>.

Alligare Diuron 4L is a liquid flowable to be mixed with water and applied as a spray for selective control of weeds in certain crops and for nonselective weed control on noncropland areas. It is noncorrosive to equipment, nonflammable, and nonvolatile.

Alligare Diuron 4L may be applied to soil prior to emergence of weeds to control susceptible weed seedlings for an extended period of time. The degree of control and duration of effect will vary with the amount of chemical applied, soil texture, rainfall, and other conditions. Soils high in clay or organic matter require higher dosages than soils low in clay or organic matter for equivalent herbicide performance. Moisture is required to activate the herbicide. Best results occur if rainfall (or sprinkler irrigation) occurs within 2 weeks of application.

Alligare Diuron 4L applied before emergence of crop and weeds is an effective procedure because susceptible weeds are controlled in an early, vulnerable seedling stage before they compete with the crop. With favorable moisture conditions, this product continues to control weeds for some time as the crop becomes better able to compete. Should weed seedlings begin to break through the preemergence treatment in significant numbers, secondary weed control procedures should be implemented; these include cultivation and postemergence herbicide application.

This product may also be used to control emerged weeds. Results vary with rate applied and environmental conditions. Best results are obtained on succulent weeds growing under conditions of high humidity and temperature of 70°F or higher. Addition of a surfactant to the spray (where specified) increases contact effects of

## Alligare Diuron 4L.

Alligare Diuron 4L may be used as a directed postemergence application. Contact of crop foliage and/or fruit with spray or mist must be avoided on the following crops: artichoke, corn (field), cotton, sorghum (grain), sugarcane, and established plantings of apples, bananas, plantains, blueberries, caneberries, gooseberries, citrus, grapes, macadamia nuts, olives, papayas, peaches, pears, pecans, walnuts, and certain tree plantings as injury may occur.

Under specified conditions (see USE INSTRUCTIONS), this product without surfactant may be applied over the top of alfalfa (established, dormant, or semi dormant), asparagus (established), birdsfoot trefoil (established, dormant), grass seed crops (established), oats, red clover (established, dormant), sugarcane, wheat, and pineapple.

Weed species vary in susceptibility to this product and they may be more difficult to control when under stress. Combinations of this product with other herbicides (as registered) increase the number of weed species controlled. Consult labels of the companion product(s) for this and other information. Observe all precautions and limitations on labeling of all products used in mixtures.

Since the effect of Alligare Diuron 4L varies with soils, uniformity of application, and environmental conditions, it is suggested that growers limit their first use to small areas.

### IMPORTANT USE PRECAUTIONS:

Injury to or loss of desirable trees or other plants may result from failure to observe the following: Draining or flushing 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 may injure these plants. Do not use on home plantings of trees, shrubs, or herbaceous plants or lawns, walks, driveways, tennis courts, or similar areas. Trees or other desirable plants whose roots extend into a treated crop use area may be injured. Thoroughly clean all traces of this product from application equipment immediately after use. Flush tank, pumps, hoses, and boom with several changes of water after removing nozzle tips and screens (clean parts separately).

## RESISTANCE MANAGEMENT

Biotypes of certain weeds listed on the label are resistant to Alligare Diuron 4L and other herbicides with the same mode of action, even at exaggerated application rates. Biotypes are naturally occurring individuals of a species that are identical in appearance but have slightly different genetic compositions; the mode of action of an herbicide is the chemical interaction that interrupts a biological process necessary for plant growth and development.

If weed control is unsatisfactory, it may be necessary to retreat problem areas using a product with a different mode of action.

If resistant weed biotypes are suspected or known to be present, use a combination of tillage, retreatment, tank-mix partners, and/or sequential herbicide applications with Alligare Diuron 4L to help control these biotypes, or use a planned herbicide rotation program where other herbicides having different modes of action are used.

## APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION

Apply this product only through sprinkler (including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

## APPLICATION DIRECTIONS

**AERIAL APPLICATION:** For alfalfa, barley (winter), cotton (preplant or preemergence

only), grass seed crops (PNW only), sugarcane, wheat (winter) and rights-of-way, application may be made by aircraft in a minimum of 3 gallons of water per acre unless otherwise noted. Avoid overlapping of spray swath and avoid application under conditions where excessive drift may occur. Where land is bedded, make application parallel to rows.

**GROUND APPLICATION:** Use a boom power sprayer properly calibrated to a constant speed and rate of delivery. Openings in screens should be 50 mesh or larger. Continuous agitation in the spray tank is required to keep the material in suspension. Agitate by mechanical or hydraulic means. If by-pass or return line is used, it should terminate at bottom of tank. Avoid overlapping and shut off spray booms while starting, turning, slowing, or stopping or injury to crop may result.

**PREEMERGENCE:** For preemergence application, use sufficient spray volume and pressure to uniformly distribute the spray solution over treated soil. Preemergence weed control will be reduced on high organic matter soils such as peat or muck.

**POSTEMERGENCE:** For postemergence application, use sufficient spray volume and pressure for thorough coverage of weed foliage. For selective applications and applications near sensitive crops, use low spray pressure to keep spray drift to a minimum. This product at specified rates controls seedling annual weeds such as annual morningglory, barnyardgrass (watergrass), crabgrass, crowfoot, goosegrass, pigweed, and purslane. Addition of a surfactant to the spray (where specified) increases contact effects of Alligare Diuron 4L. Best results are obtained on succulent weeds growing under conditions of high humidity and temperatures over 70°F or higher.

**RATES:** All rates of Alligare Diuron 4L are expressed as broadcast rates. Where band applications are specified, use proportionately less. For example, use 1/3 of the broadcast rate when treating a 14-inch band where row spacing is 42 inches. Where a range of dosages is given, use the lower rate on coarse-textured soils low in clay or organic matter and the higher rate on the fine-textured soils high in clay or organic matter. For postemergence application, use the lower rate on smaller weeds and the higher rate on the larger weeds.

**SOIL LIMITATIONS:** Crop injury may result from failure to observe the following: Unless otherwise directed, do not use on sand, loamy sand, gravelly soils, or exposed subsoils; nor on pecans where organic matter is less than 0.5%; nor on

alfalfa, apples, artichokes, barley (winter), citrus, cotton, grapes, oats, olives, papayas, peaches, pears, sorghum, sugarcane, walnuts, and winter wheat where organic matter is less than 1%; nor on blueberries, birdsfoot trefoil, caneberries, gooseberries, macadamia nuts, and peppermint where organic matter is less than 2%.

**FIELD CROPS (see SOIL LIMITATIONS):** A good seedbed must be prepared before preemergence use of this product as crop injury may result if application is made to ground which is cloddy or compacted resulting in improperly planted seed. Plant seed to depth specified. Unless otherwise directed, the surface of the soil should not be cultivated or disturbed after application of Alligare Diuron 4L and before emergence of the crop as weed control may be reduced and crop injury may result. However, if moisture is insufficient to activate the herbicide, a shallow cultivation (rotary hoe preferred) should be made after emergence of crops while weeds are small enough to be controlled by mechanical means.

**FRUIT AND NUT CROPS: (see SOIL LIMITATIONS)** Unless otherwise directed, make a single application per year as a directed spray, avoiding contact of foliage and fruit with spray or drift. Do not graze livestock in treated orchards or groves.

#### Limitations, Restrictions, and Exceptions

##### COTTON

**Use Precautions:** During a single crop season, do not exceed the following amount of Diuron 4L per acre, as injury to subsequent crops may result; 0.8 quart on sandy loam, 1.5 quarts on clay loam, and 2.2 quarts on clay. Do not make more than 3 applications of Diuron 4L per year.

**DO NOT SPRAY OVER THE TOP OF COTTON PLANTS.**

Do not apply to sand or loamy sand soils except as noted.

Do not use on soils with less than 1% organic matter, as crop injury may result.

Seedling disease may weaken plants and increase the possibility of injury from the use of trifluralin products followed by Diuron 4L. These treatments should be used only in conjunction with a standard fungicide seed treatment plus a good supplemental soil fungicide program such as captan-PCNB mixture.

Do not use Diuron 4L in preplant or preemergence applications where soil-applied organophosphate insecticides are used due to potential for severe cotton injury and possible stand loss.

Do not allow livestock to graze treated cotton.

Note: When using Diuron 4L in a sequential treatment program, allow a minimum of 21 days between applications.

## PREEMERGENCE

Except Arizona, California: Use Diuron 4L alone or apply as a separate operation following preplant treatment with trifluralin products. Apply Diuron 4L after planting but before cotton emerges.

Do not treat cotton in deep furrows, as crop injury may result. Use only where cotton is planted on flat or raised seedbeds. Shallow incorporation (no deeper than 0.25 inch) with a rotary hoe or similar equipment following planting usually improves results, especially during dry weather. A wide press wheel should be used on the planter to provide a level seedbed for subsequent early season postemergence treatments. If moisture is insufficient to activate Diuron 4L or if soil becomes crusted before crop emerges, a shallow rotary hoeing (no deeper than 0.25 inch) should be made before weeds become established. Diuron 4L should not be applied preemergence following application of the maximum rate for a given soil applied preplant. If less than the maximum rate is used preplant, additional Diuron 4L may be applied preemergence. However, the total amount of Diuron 4L applied preplant and preemergence must not exceed the maximum suggested use rate for either preplant or preemergence applications.

Diuron 4L Alone: Make a single application as a broadcast or band spray, using the following broadcast rates. Use proportionately less for band treatment.

### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

Rates

[field\\_rates 0](#)

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Restricted Entry Interval

12 hours

Soils

[Silty Clay](#)

[Clay](#)

Timings

[Preemergence \(Crop\)](#)

[Preemergence \(Weed\)](#)

[Postplant](#)