

# **ALFALFA - 1-5% ORGANIC MATTER - COARSE, MEDIUM AND FINE**

## General Information

### PRODUCT INFORMATION

Tide Hexar 2SL is a water-dispersible liquid that is mixed in water and applied as a spray for weed control in certain crops, Christmas trees, forestry site preparation and release areas, and industrial areas. It may also be applied undiluted as a basal soil treatment for brush control in reforestation areas, rangeland, pastures and noncrop areas or by stem injection for brush control.

Tide Hexar 2SL is an effective general herbicide providing both contact and residual control of many annual, biennial and perennial weeds and woody plants.

Tide Hexar 2SL is noncorrosive to equipment.

Care must be exercised when applying Tide Hexar 2SL near desirable trees or shrubs as they can absorb Tide Hexar 2SL through roots extending into treated areas.

This product may be applied on agricultural and non-agricultural sites that contain areas of temporary surface water caused by collection of water between planting beds, in equipment ruts, or in other depressions created by management activities. It is permissible to treat intermittent drainage, intermittently flooded low lying sites, seasonally dry flood plains and transitional areas between upland and lowland sites when no water is present. It is also permissible to treat marshes, swamps and bogs after water has receded, as well as seasonally dry flood deltas. DO NOT make applications to natural or man-made bodies of water such as lakes, reservoirs, ponds, streams and canals.

### ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

Tide Hexar 2SL is absorbed through the roots and foliage. Moisture is required to activate Tide Hexar 2SL in the soil. Best results are obtained when the soil is moist at the time of application and  $\frac{1}{4}$  -  $\frac{1}{2}$  inches of rainfall occurs within 2 weeks after application.

For best results, apply Tide Hexar 2SL preemergence or postemergence when weeds are less than 2 inches in height or diameter. Foliar activity is most effective under conditions of high temperature (above 80°F), high humidity, and good soil moisture. Foliar activity may be reduced when vegetation is dormant, semi-dormant, or under stress.

On herbaceous plants, symptoms usually appear within 2 weeks after application under warm, humid conditions, while 4-6 weeks may be required when weather is cool or dry, or when plants are under stress. If rainfall after application is inadequate to activate Tide Hexar 2SL in the soil, plants may recover from contact effects and continue to grow.

On woody plants, symptoms usually appear within 3-6 weeks after sufficient rainfall has carried the herbicide into the root zone during periods of active growth. Defoliation and refoliation may occur, but susceptible plants are killed.

The degree and duration of control will depend on the following:

- Use rate
- Weed spectrum and size at time of application
- Environmental conditions at and following treatment

Where a rate range is shown, use the higher levels of the dosage range on hard-to-control species, fine-textured soils, or soils containing greater than 5% organic matter or carbon. Use the lower levels of the dosage range on coarse-textured soils and/or on soils low in organic matter. Refer to specific uses for rate ranges.

#### APPLICATION INFORMATION

Tide Hexar 2SL may be applied by ground equipment and where permitted, aerial equipment. Use rates, minimum spray gallonage, and other application information are described for various uses.

Dispose of the equipment washwater by applying it to a use-site listed on this label or in accordance with directions given in the STORAGE AND DISPOSAL section of this label.

Before spraying, calibrate equipment to determine the quantity of water necessary to uniformly and thoroughly cover the vegetation and soil in a measured area to be treated.

#### INVASIVE SPECIES MANAGEMENT

This product may be considered for use on public, private, and tribal lands to treat certain weed species infestations that have been determined to be invasive, consistent with the Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW) National Early Detection and Rapid Response (EDRR) System for invasive plants. Effective EDRR systems address invasions by eradicating the invader where possible, and controlling them when the invasive species is too established to be feasibly eradicated. Once an EDRR assessment has been completed and action is advised, a Rapid Response needs to be taken to quickly contain, deny reproduction, and if possible eliminate the invader. Consult your appropriate state extension service, forest service, or regional multidisciplinary invasive species management coordination team to determine the appropriate Rapid Response provisions and allowed treatments in your area.

#### MODE OF ACTION

Hexazinone is a Group 5 herbicide based on the mode of action classification system of the Weed Science Society of America and a C1 photosynthesis photosystem II inhibitor as classified by the Herbicide Resistance Action Committee (HRAC).

#### 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 instructions available in your area.

## INTEGRATED PEST MANAGEMENT

This product may be used as a 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.

## CHEMIGATION

Apply this product through irrigation equipment only to crops and diseases for which the chemigation use is specified. Apply this product only through center pivot or linear-move sprinkler irrigation systems. Do not apply Tide Hexar 2SL through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. Therefore, to ensure that the mixture is applied evenly at the labeled rate, use sufficient water, apply the mixture for the proper length of time and ensure sprinkler produces a uniform water pattern. Do not permit run-off during chemigation. 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, must shut the system down and make necessary adjustments should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Maintain continuous agitation in mix tank during mixing and application to assure a uniform suspension. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. Pesticide may be applied continuously for the duration of the water application.

#### POSTING OF AREAS TO BE TREATED

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, daycare centers, hospitals, in-patient clinics, nursing homes, or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as

golf courses or retail greenhouses.

Posting must conform to all the following requirements:

- Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas.
- The printed side of the sign must face away from the treated area towards the sensitive area. The signs shall be printed in English.
- Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.
- All words shall consist of letters at least 2 ½ inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words "KEEP OUT", followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word "STOP". Below the symbol shall be the words "PESTICIDE IN IRRIGATION WATER".
- Posting required for chemigation does not replace other posting and reentry requirements for farm worker safety.

#### Limitations, Restrictions, and Exceptions

##### ALFALFA

Tide Hexar 2SL is labeled for control of certain weeds in established alfalfa grown for hay or seed production.

##### USE RESTRICTIONS - ALFALFA

- Do not apply within 30 days of harvest (cutting for hay), or feeding of forage or grazing.
- Do not exceed 6 pints per acre per application.
- Do not exceed 6 pints (1.5 pounds active ingredient hexazinone) per acre per year.

## APPLICATION INFORMATION

### NON-DORMANT AND SEMI-DORMANT VARIETIES

In the following states, make a single application of Tide Hexar 2SL during the winter months when alfalfa plants are in the least active stage of growth.

Arizona, Montana, Oklahoma, Washington, California, Nebraska, Oregon, Wyoming, Colorado, Nevada, South Dakota, Idaho, New Mexico, Texas, Kansas, North Dakota, Utah

In the following states, make a single application of Tide Hexar™ 2SL either in the spring before new growth exceeds 2 inches in height or to alfalfa stubble after cutting, following hay removal and before regrowth exceeds 2 inches in height.

Arkansas, Maine, New Jersey, Vermont, Connecticut, Maryland, New York, Virginia, Delaware, Massachusetts, North Carolina, West Virginia, Illinois, Michigan, Ohio, Wisconsin, Indiana, Minnesota, Pennsylvania, Iowa, Missouri, Rhode Island, Kentucky, New Hampshire, Tennessee

### DORMANT VARIETIES

Make a single application of Tide Hexar 2SL after alfalfa becomes dormant and before new growth exceeds 2 inches in height in the spring. Where weeds have emerged, use a surfactant.

### USE RATES

Use higher rates on hard-to-control species, (see Weeds Controlled section below) fine textured soils, soils containing greater than 5% organic matter, or under adverse environmental conditions such as temperature extremes or when weeds are stressed due to low rainfall.

For dormant alfalfa, use a surfactant approved for crops at the rate of 0.25% v/v (1 quart per 100 gallons of spray solution).

### RESTRICTIONS:

- In the states of MT, ND, SD, and WY, do not exceed a use rate of 4 pints per acre on medium and fine textured soils.
- In the state of Montana (MT), do not apply to soils with less than 1.5% organic

matter.

- In the state of Wyoming (WY):
- Do not apply to soils with less than 0.5% organic matter.
- Apply to irrigated alfalfa only.

#### SPRAY EQUIPMENT

Apply Tide Hexar 2SL using a fixed boom power sprayer or aerial equipment. For ground applications apply in a minimum of 20 gallons of spray solution per acre and by air in a minimum of 5 gallons. Use at least 5 pints of water per each 1 pint of Tide Hexar 2SL.

#### CHEMIGATION - ALFALFA

Apply this product to alfalfa only through center pivot or linear-move sprinkler 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.

Severe alfalfa injury may result following application after cutting if either the regrowth is more than 2" high or significant stubble is left after alfalfa cutting.

#### SPRINKLER CHEMIGATION

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off



the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

#### DORMANT APPLICATIONS - ALFALFA

Select the appropriate rate (see Use Rates section) for soil texture and organic matter content using 0.25" to 0.75" of sprinkler irrigation as a continuous injection during the application. Best results are obtained when soil is moist at time of application, and when weeds have not germinated or are less than 2" tall or across.

#### ALFALFA - IMPREGNATION ON DRY BULK FERTILIZER (EXCEPT CALIFORNIA AND ARIZONA)

Dry bulk fertilizer may be impregnated or coated with Tide Hexar 2SL for application to established alfalfa. All instructions and precautions on this label must be followed along with state regulations relating to dry bulk fertilizer blending, impregnating and labeling.

If fertilizer materials are excessively dusty, use a suitable additive to reduce dust prior to impregnation, as dusty fertilizer will result in poor distribution during application. The dry fertilizer must be properly impregnated and uniformly applied to the alfalfa to prevent crop injury and/or poor weed control.

To impregnate the fertilizer, use a system consisting of a conveyor or closed drum used to blend dry bulk fertilizer. Any commonly used fertilizer can be impregnated with Tide Hexar 2SL, except potassium nitrate or sodium nitrate. Do not use Tide Hexar 2SL on limestone.

Use a minimum of 250 lb. dry bulk fertilizer per acre and up to a maximum of 450 lb. per acre. To impregnate or coat the dry bulk fertilizer with Tide Hexar 2SL, direct the nozzles to deliver a fine spray of this suspension toward the fertilizer for thorough coverage while avoiding spray contact with mixing equipment. Uniform

impregnation of Tide Hexar 2SL to dry bulk fertilizer will vary, and if the absorptivity is not adequate, the use of an absorptive powder may be required to produce a dry, free-flowing mixture. "Microcel E" is the absorbent powder of choice. When another herbicide is used with Tide Hexar 2SL, mix and impregnate the fertilizer immediately.

Apply impregnated fertilizer as soon as possible after impregnation for optimum performance.

Select the rate of Tide Hexar 2SL to apply per acre from the appropriate section of this label. Then refer to the rate chart below to determine the amount of Tide Hexar 2SL that is to be impregnated on a ton of dry bulk fertilizer, based on the amount of fertilizer to be distributed in one acre.

#### APPLICATION

Uniform application of Tide Hexar 2SL -impregnated dry fertilizer is essential for satisfactory weed control. Accurate calibration of the application equipment is essential for uniform distribution to the surface. The customary method of application is to apply  $\frac{1}{2}$  the labeled rate and overlap 50%. This results in the best distribution pattern.

#### USE PRECAUTIONS - ALFALFA

- Best results are obtained when  $\frac{1}{2}$  - 1 inch of rainfall or sprinkler irrigation occurs within two weeks after application, when soil is moist at time of application, and when weeds have not germinated or are less than 2 inches in height or diameter. Heavy rainfall or excessive irrigation after application may result in crop injury or poor performance of the herbicide.
- On soils high in organic matter (greater than 5%), the effectiveness of Tide Hexar 2SL can be significantly reduced and weed control may be unsatisfactory.
- Prevent overlapping of spray swaths and shut off spray booms while starting, turning, slowing or stopping or crop injury may result.
- Crop injury, including mortality, may result in fields with restricted root growth due to non-uniform soil profiles such as gravel bases and clay lenses.

- Crop injury may result if hot weather, mid-to-high 90 degree range or higher, occurs within a few days after application.
- Crop injury to alfalfa can be influenced by several factors including alfalfa variety, soil conditions, uniformity of application and environmental conditions, etc., if no prior use history for the site or variety, treat only a small area when first using Tide Hexar 2SL.
- If abnormally dry conditions exist following application, restrict the first irrigation to no more than ½ acre inch of water.
- Temporary yellowing of alfalfa may occur following Tide Hexar 2SL applications.
- In California, fall planted alfalfa may be treated in the following winter months with Tide Hexar 2SL at 1 to 2 pints per acre (use higher rate for fine textured soils) provided:
  - alfalfa root growth exceeds 6 inches in length
  - vegetative top growth of alfalfa has lateral development of secondary growth
  - alfalfa is healthy and vigorous, not growing under stress from insect, disease, winter injury or other types of stress.
- To prevent injury to alfalfa plants, treat only stands of alfalfa established for one year or for one growing season (except in California), provided:
  - The alfalfa stand has a well-developed tap root structure that is at least 10 inches in length (0.25 inch diameter below the crown) throughout the field and the crop is healthy, vigorous, and not under stress from weather conditions, low fertility, insects or disease damage.
- In areas with shorter growing seasons, such as, higher elevations, adequate alfalfa tap root growth may not occur and especially when alfalfa is grown together with a cover or nurse crop. If an adequate tap root is not present, delay application of Tide Hexar 2SL until the alfalfa has gone through a minimum of two growing seasons.

#### USE RESTRICTIONS- ALFALFA

- Do not apply to snow-covered or frozen ground.
- Do not use Tide Hexar 2SL on seedling alfalfa, alfalfa-grass mixtures, or other

mixed stands as injury may result to the seedling alfalfa or companion crop.

- Do not use a surfactant with Tide Hexar 2SL when treating non-dormant alfalfa.
- Do not use Tide Hexar 2SL on gravelly or rocky soils, exposed subsoils, hardpan, sand poorly drained soil, or alkali soils.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

#### Rates

[field\\_rates 0](#)

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#### Restricted Entry Interval

48 hours

#### Soils

[Coarse](#)

[Loamy Sand](#)

[Sandy Loam](#)

[Medium](#)

[Loam](#)

[Silt Loam](#)

[Silt](#)

[Fine](#)

[Silty Clay Loam](#)

[Sandy Clay Loam](#)

[Silty Clay](#)

[Sandy Clay](#)

[Clay Loam](#)

[Clay](#)

#### Timings

[Preemergence \(Weed\)](#)

[Early Postemergence](#)