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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 29 2000

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Entek Corp.
c/o Lewis & Harrison
122 C Street, N.W. Suite 740
Washington, DC 20001

Gentlemen:

Subject: Remove Worker Protection Standard (WPS) Posting Requirement
ETK-2301
EPA Registration No. 68891-8
Eliot Harrison's Submission Dated April 13, 2000

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

- In the ingredient declaration add the chemical name:

Monocarbamide dihydrogen sulfate

2. Submit one (1) copy of your final printed labeling before you release the product for shipment.

A stamped copy of the labeling is enclosed for your records.

Sincerely yours,

James A. Tompkins
Product Manager (25)
Herbicide Branch
Registration Division (7505C)

Enclosure

ETK-2301™

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Herbicide

ACTIVE INGREDIENTS:

1-aminomethanamide dihydrogen tetraoxosulfate	71.1%
Glyphosate. N- (phosphonomethyl) glycine	9.6%
INERT INGREDIENTS	19.3%
TOTAL	100.0%

Density in lb/gal @ 68°F 12.8

Contains 1.23 lbs. of glyphosate and 9.1 lbs. of 1-aminomethanamide dihydrogen tetraoxosulfate per gallon.

EPA Reg. No. 68891-8

EPA Est. No. _____.

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

SEE ADDITIONAL PRECAUTIONARY STATEMENTS ON THE NEXT PAGE

FIRST AID

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

IF ON SKIN: **Take off contaminated clothing.** Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

Call 1 (800) 424-9300 for further information.

WARRANTY LIMITATIONS AND DISCLAIMER

1. Entek warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated when used in accordance with the use directions under normal conditions. Entek neither makes, nor authorizes any agent or representative to make, any other warranty of fitness or of merchantability, guarantee or representation, express or implied, concerning this material.

2. Critical and unforeseeable factors beyond Entek's control prevent it from eliminating all risks in connection with the use of this material. Such risks include, but are not limited to, damage to plants and crops to which the material is applied, lack of complete control, and damage caused by drift to other plants or crops. Such risks occur even though the product is reasonably fit for uses stated herein and even though label directions are followed. Buyer and user acknowledge and assume all risks and liability resulting from the handling, storage, and use of this material (except those assumed by Entek in (1) above). Entek shall not be liable for incidental or consequential damages.

PATENTS AND PATENTS PENDING

The product contained herein is described in the following U.S. composition, manufacturing and/or method of use patents: 4397675, 4404116, 4445925, 4994101, 5034046, and 5055127. Other U.S. and foreign patents are pending.

A license is hereby granted to the purchaser under the above listed U.S. Patents only, and only for the use of the product contained herein, and only in accordance with the instructions on this label. NO OTHER LICENSE, EXPRESS OR IMPLIED, IS GRANTED. NOT FOR EXPORT.

Manufactured by

Entek Corporation
6835 Deerpath Road, Suite E
Elkridge, MD 21075
(410) 579-1622

ACCEPTED with COMMENTS In EPA Letter Dated: JUN 29 2000

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 68891-8

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

CORROSIVE. Causes irreversible eye damage. Causes skin irritation. Harmful if swallowed or absorbed through skin. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing. Wear goggles or face shield. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE): Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes and socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instruction for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENTS: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash body thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS: This product may be harmful to wildlife directly sprayed. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. Do not apply in any manner not specified on the label.

PHYSICAL OR CHEMICAL HAZARDS: Do not allow ETK-2301™ to be heated above 176°F, as the quality of the product may deteriorate. If ETK-2301™ is heated above 230°F, vigorous decomposition may occur. Do not weld equipment containing ETK-2301™.

CLOTHING: ETK-2301™ can damage cotton, nylon, and leather clothing. If ETK-2301™ contacts clothing of this type, flush with plenty of water to minimize damage.

DO NOT MIX ETK-2301™ WITH OTHER MATERIALS WITHOUT SPECIFIED AUTHORIZATION, AS HAZARDOUS COMBINATIONS MAY RESULT.

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

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

STORAGE: Material crystallizes below 32°F. Do not heat above 176°F.

Materials recommended for use with ETK-2301™ and ETK-2301™ solutions include polyethylene, polypropylene, PVC, CPVC, fiberglass made with reinforced resins such as polyesters and epoxides, and most rubbers.

Do not use with leather, nylon, or acid sensitive resins such as delrin and celcon.

ETK-2301™ is moderately corrosive to stainless steel, cast iron, mild steel, aluminum, and brass. Prolonged exposure to these metals is not recommended. Proper cleaning of application equipment after use is essential in managing the effects of corrosive materials.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent) all containers and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

EQUIPMENT CLEANING

Equipment must be rinsed after application of ETK-2301™. Prolonged exposure to spray deposit may damage acrylic plastics, certain paints and metals. Dilute residues are corrosive, so neutralization is an essential part of the cleanup. All interior surfaces should be rinsed with a neutralizing solution prior to being parked. The best neutralizing solution to use is baking soda. Add 1 to 2 pounds neutralizer to the rinse water. Run the pump long enough to clear the lines and nozzles of ETK-2301™ residue and rinse the exterior of the equipment. Areas used to rinse equipment should be rinsed well since ETK-2301™ can be corrosive to concrete.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted-entry interval, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Shoes and socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

GENERAL INFORMATION

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

AVOID CONTACT WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, SINCE SEVERE INJURY OR DESTRUCTION MAY RESULT.

Do not allow the herbicide solution to mist, drip, drift, or splash on to desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants, or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser wind velocities, will allow spray drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals, crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

This product, a water soluble liquid, mixes readily with water to be applied as a foliar spray for the control or destruction of most herbaceous plants. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water in accordance with label instructions.

This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 1 to 3 days, but on most perennial weeds may not occur for 5 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay visual effects of control. Visible effects are a gradual wilting and yellowing of the plant, which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Unless otherwise specified on this label, delay application until vegetation has emerged and reached the stages described for control of such vegetation under the "Weeds Controlled" section of this label. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow. For this reason, best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity.

Always use the higher rate of this product per acre within the recommended range when (1) weed growth is heavy or dense, or (2) weeds are growing in an undisturbed (noncultivated) area.

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the recommended stage for treatment.

Rainfall or irrigation occurring within 4 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 1 hour after application may wash the chemical off the foliage and a repeat treatment may be required.

This product does not provide residual weed control. For subsequent residual weed control follow a label approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this labeling. Mixing this product with herbicides or other materials ***not recommended*** on this label may result in reduced performance.

For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES. DO NOT APPLY WHEN WIND OR OTHER CONDITIONS FAVOR DRIFT. HAND-GUN APPLICATIONS SHOULD BE PROPERLY DIRECTED TO AVOID SPRAYING DESIRABLE PLANTS.

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS WATER FROM PONDS AND UNLINED DITCHES.

Exposed equipment should be rinsed thoroughly after use. The final rinse should include 1 to 2 pounds of baking soda per 100 gallons of water or similar alkaline material to neutralize any residue.

MIXING PROCEDURE

Agitation is essential during mixing due to the density and viscosity of the concentrated material.

ETK-2301™ alone

1. Fill spray tank ½ full of water.
2. Begin agitation.
3. Add ETK-2301™ into mix tank.
4. Add additional water as needed.
5. Add an agriculturally approved, non-ionic surfactant.
6. Continue to agitate for 3 to 5 minutes or until thoroughly mixed.

TANK MIXTURES

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

ETK-2301™ may be tank mixed with the following products: atrazine, bromoxynil, cacodylic acid, dalapon, diquat, diuron, simazine, 2,4-D, AAtrex®, Banvel®, Basagran®, Bicep™, Bladex®, Blazer®, Bueno® 6, Bullet®, Butoxone®, Canopy®, Cobra®, Command™, Cotoran®, Curtail®, Cyanazine, Distinct®, Drexel Atrazine, Drexel Diuron, Drexel MSMA, Drexel Simazine, Dual™, Evik®, Frontier®, Garlon™, Gemini™, Goal®, Gramoxone®, Guardsman®, Harness®, Harness Extra®, Hyvar® X, Krovar® I & II, Lariat®, Lasso®, Lexone™, Liberty®, Lorox®, Lorox™Plus, Micro-Tech®, MSMA, Partner®, Plus™, Poast®, Preview™, Prowl™, Pursuit, Rescue®, Scepter™, Sencor™, Sinbar®, Solicam®, Squadron™, Storm®, Surflan®, Surpass®, Surpass 100®, Tordon™, Turbo™ for use on crops/sites identified in other sections of this label and only in accordance with the more (most) restrictive of label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibiton against such mixing.

NEVER MIX UNDILUTED CHLORATES WITH ETK-2301™ AS AN EXPLOSION MAY RESULT.

Mix labeled tank mixtures of this product with water as follows:

1. Place a 20 to 35 mesh screen or wetting basket over filling port.
2. Through the screen, fill the sprayer tank one-half full with water and start agitation.
3. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
4. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
5. Continue filling the sprayer tank with water and add the required amount of this product near the end of the filling process.
6. Add recommended nonionic surfactant at the appropriate dose, before completing the filling process.
7. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive, water soluble liquid followed by surfactant.

   Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

   Keep by-pass line on or near bottom of tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh. Carefully select proper nozzle to avoid spraying a fine mist. For best results with conventional ground application equipment, use flat fan nozzles.

   Exposed equipment should be rinsed thoroughly after use. The final rinse should include 1 to 2 pounds of baking soda per 100 gallons of water or similar alkaline material to neutralize any residue.

ADDITIVES

SURFACTANTS

Nonionic surfactants, which are labeled for use with herbicides and cleared for application to growing crops, are required with this product.

When using surfactants that contain at least 80 percent active ingredient, use 0.5 percent surfactant concentration (2 quarts per 100 gallons of spray solution). For those surfactants containing less than 80 percent active ingredient, use 1.0 percent surfactant concentration (4 quarts per 100 gallons of spray solution). Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

APPLICATION METHODS

DO NOT APPLY THIS PRODUCT THROUGH ANY TYPE OF IRRIGATION SYSTEM.

ETK-2301™ may be applied using the following application equipment:

- Broadcast spray
- Hand-Held and High-Volume Spray Equipment — Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.
- Selective equipment—Recirculating sprayers and shielded sprayers.

Broadcast Equipment

For control of annual or perennial weeds listed on this label using broadcast equipment use the recommended rates of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre as a broadcast spray unless otherwise specified on this label. See the "Weeds Controlled" section of this label for specific rates. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzle to avoid spraying a fine mist. For best results with conventional ground application equipment, use flat fan nozzles.

■ AERIAL EQUIPMENT ■

Use the recommended rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. See the "WEEDS CONTROLLED" section of this label for specific rates. Unless otherwise specified, do not exceed 2 quarts per acre. **Aerial applications of this product may be made in annual cropping conventional tillage systems, fallow and reduced tillage systems, and preharvest. Refer to the individual use area sections of this label for recommended volumes and application rates.**

Avoid direct application to any body of water.

AVOID DRIFT – DO NOT APPLY DURING INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Coarse sprays are less likely to drift, therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

Drift control additives may be used. When a drift control additive is use, read and carefully observe the cautionary statements and all other information appearing on the additive label. *

Ensure uniform application – To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Thoroughly was aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

Hand-Held and High Volume Equipment

Use coarse sprays only.

Mix this product in clean water and apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff.

For control of annual weeds listed on this label, apply a 1.5 percent solution of this product plus nonionic surfactant to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. Allow three or more days before tillage or mowing.

For annual weeds over 6 inches tall, or when not using additional surfactant, or unless otherwise specified, use a 2.5 percent solution. For best results, use a 5 percent solution on harder-to-control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods, which result in less than complete coverage, use a 10 percent solution for annual and perennial weeds and a 10 to 20 percent solution for woody brush and trees.

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Solution
Amount of ETK-2301™

Desired Volume	1.5%	2.5%	5%	10%	15%	20%
1 gal.	2 fl. oz.	3 ¼ fl. oz.	6 ½ fl. oz.	12 ¾ fl. oz.	19 ¼ fl. oz.	25 2/3 fl. oz.
25 gal.	3 pt.	2 ½ qt.	5 qt.	2 ½ gal.	3 ¾ gal.	5 gal.
100 gal.	1 ½ gal.	2 ½ gal.	5 gal.	10 gal.	15 gal.	20 gal.

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the amount of this product be mixed with water in a larger sprayer with the mixed solution.

Selective Equipment

This product may be applied through a recirculating spray system, or a shielded applicator after dilution and thorough mixing with water to listed weeds growing in any noncrop site specified on this label and only when specifically recommended in "Cropping Systems".

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

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A shielded applicator directs the herbicide solution onto weeds while shielding desirable vegetation from the herbicide. **Avoid contact with desired vegetation.**

Contact of the herbicide solution with the desirable vegetation may result in damage or destruction. Applicators used above desired vegetation should be adjusted so that the lowest spray stream is at least 2 inches above the desirable vegetation. Droplets, mist, foam, or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting, or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when the height of the weeds varies so that not all weeds are contacted. In these instances repeat treatment may be necessary.

Shielded applicators

When applied as directed under conditions described for shielded applicators, this product will control those weeds listed in the "Weeds Controlled" section of this label.

Use the following equation to convert from a broadcast rate per acre to a band rate per acre.

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast Herbicide RATE per acre} = \text{Herbicide band RATE per acre}$$

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast VOLUME of solution per acre} = \text{Band VOLUME of solution per acre}$$

Use nozzles that provide uniform coverage within the treated area. Keep shields on shielded sprayers adjusted to protect desirable vegetation. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT WITH DESIRABLE VEGETATION.

For specific rates of application and instructions for control of various annual and perennial weeds, see the "Weeds Controlled" section of this label.

WEEDS CONTROLLED

This herbicide controls many annual and perennial grasses and broadleaf weeds.

ANNUAL WEEDS

APPLY to actively growing grass and broadleaf weeds.

- Allow at least 3 days after treatment before tillage.
- For maximum agronomic benefit, apply when weeds are 6 inches or less in height.
- To prevent seed production, applications should be made **prior to seed-head** formation.
- This product does not provide residual control; therefore, delay application until maximum weed emergence. Repeat treatments may be necessary to control later germinating weeds.

LOW-VOLUME BROADCAST APPLICATION

When applied as directed under the conditions described, this product will control the weeds listed below when:

1.) Water carrier volumes of 10-15 gallons per acre for ground applications.

2.) A nonionic surfactant is added at 0.5 to 1 percent by total spray volume. Use 0.5 percent surfactant concentration when using surfactants that contain at least 80 % active ingredient. Use 1 percent surfactant concentration when using surfactants that contain less than 80 percent active ingredient.

For weeds that have been mowed, grazed, or cut, allow regrowth to occur prior to treatment.

Weed Species	Maximum Height/ Length	Rate Per Acre* (Fluid Ounces)
Foxtail *Serana spp*	12"	20 fl. oz.
Barnyardgrass *Echinochloa crus-galli*	6" 0 to 4" 4 to 6"	24 fl. oz. 32 fl. oz.[1] 48 fl. oz.[1]
Bluegrass, annual *Poa annua* **Brome, downy**** *Bromus tectorum* **Mustards blue** *Chorispora tenella* **Mustard, tansy** *Descuralnia pinnata* **Mustard, tumble** *Sisymbrium altissimum* **Mustards wild** *Sinapis arvensis* **Spurry, umbrella** *Holosteum umbellatum*		
Barley *Hordeum vulgare* **Rye** *Secale cereale* **Sandbur, field** *Cenchrus spp* **Shattercane** *Sorghum bicolor* **Stinkgrass** *Eragrostis cilianensis*	12"	24 fl. oz.
Wheat *Triticum aestivum*	18"	24 fl. oz.
Morningglory *Ipomoea spp* **Sicklepod** *Cassia obtusifolia*	2"	40 fl. oz.
Bluegrass, bulbous *Poa bulbosa* **Cheat** *Bromius secalinus* **Chickweed, common** *Stellaria media* **Chickweed, mouseear** *Cerastium vulgatum* **Corn** *Zia mays* **Goatgrass, jointed** *Aegilops cylindrica* **Groundsel, common** *Senecio vulgaris* **Lambsquarters** **Pennycress, field** *Fanweed Thlaspi arvense* **Rocket, London** *Sisymbrium irio* **Ryegrass, Italian** *Lolium multiflorum* **Shepherdspurse** *Capsella bursa-pastoris* **Spurge, annual** *Euphorbia spp.*	6"	32 fl. oz.
Buttercup *Ranunculus spp.* **Cocklebur** *Xanthium strumarium* **Crabgrass** *Digitaria spp.* **Dwarfdandelion** *Krigia cespitosa* **Falseflax, smallseed** *Camelina microcarpa* **Foxtail, Carolina** *Alopecurus carolinianus* **Johnsongrass, seedling** *Sorghum halepense* **Oats, Wild** *Avena fatua* **Panicum, fall** *Panicum dichotomiflorum* **Panicum, Texas** *Panicum texanum*	12"	32 fl. oz.

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Pigweed, redroot *Amaranthus retroflexus* **Pigweed, smooth** *Amaranthus hybridus* **Witchgrass** *Panicum capillare*		
Sicklepod *Cassia obtusifolia* **Signalgrass, broadleaf** *Brachiaria platyphylla*	3 to 4" 4"	60 fl. oz.
Horseweed/Marestail *Conyza canadensis* **Lambsquarters, common** *Chenopodium album* **Spurge, annual** *Euphorbia spp.*	7 to 12"	60 fl. oz.
Rice, red *Oryza sativa* **Teaweed** *Sida spinosa*	4"	64 fl. oz.
Sprangletop *Leptochloa spp*	6"	64 fl. oz.
Geranium, Carolina *Geranium Carolinianum*	12"	64 fl. oz.
Goosegrass *Eleusine indica* **Primrose, cutleaf evening** *Oenothera laciniate* **Pusley, Florida** *Richardia scabra* **Sicklepod** *Cassia obtusifolia* **Spanishneedles** *Bidens bipinnata*	5 to 12"	64 fl. oz.
Filaree *Erodium spp.* **Sprangletop** *Leptochloa spp.*	12"	100 fl. oz.

[1] Use these rates to control barnyardgrass in Alabama, Arkansas, Mississippi, Missouri, Louisiana and Texas for preplant treatments.

* For those rates less than 80 fluid ounces per acre, this product at rates up to 80 fluid ounces per acre may be used where heavy weed density exist.

** For control in no-till systems, use 40 fluid ounces per acre.

TANK MIXTURES

ETK-2301™ plus BANVEL® plus NONIONIC SURFACTANT

ETK-2301™ plus 2, 4-D plus NONIONIC SURFACTANT

These tank mixtures are recommended for use in fallow and reduced tillage areas only. Follow use directions as given in the "LOW-VOLUME BROADCAST APPLICATION" section.

This product plus Banvel or 2,4-D will control the annual grasses and broadleaf weeds listed for this product alone at the indicated heights (except 16 fluid ounces per acre application), plus the following broadleaf weeds. For those weeds previously listed at 16 fluid ounces of this product alone per acre, use 24 fluid ounces in these tank mixtures.

Note: Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if Banvel is applied within 45 days of planting. The addition of Banvel in a mixture with this product may provide short-term residual control of selected weed species.

Apply 24 to 32 fluid ounces of this product plus 0.25 lb. a.i. of Banvel or 0.5 to 1 percent nonionic surfactant by total spray volume per acre to control dense populations of the following annual broadleaf weeds when less than the height indicated:

Cocklebur (12")
Xanthium strumarium

Kochia* (6")
Kochia scoparia

Lambsquarters (12")
Chenopodium album

Lettuce, prickly (6")
Lactuca serriola

Marestail/Horseweed (6")
Conyza canadensis

Morningglory (6")
Ipomea spp.

Pigweed, redroot (12")
Amaranthus retroflexus

Pigweed, smooth (12")
Amaranthus hybridus

Thistle, Russian (12")
Salsola kali

* Controlled with Banvel tank mixture only.

Apply 32 fluidounces of this product plus 0.5 pound a.i. of 2,4-D, plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre to control the following annual broadleaf weeds when less than 6 inches in height.

Ragweed, common
Ambrosia artemisiifolia

Ragweed, giant
Ambrosia trifida

Smartweed, Pennsylvania
Polygonum pensylvanicum

Velvetleaf
Abutilon rheophrasti

HIGH-VOLUME BROADCAST APPLICATIONS

When applied as directed under the conditions described, this product will control the weeds listed below when water carrier volumes are 10 to 40 gallons per acre for ground applications.

Apply 2 to 4 quarts of this product per acre plus 0.5 to 1.0 percent nonionic surfactant by total spray volume. Use 2 quarts per acre if weeds are less than 6 inches tall and 3 to 4 quarts per acre if weeds are over 6 inches tall. If weeds have been mowed, grazed, or cut, allow adequate time for new growth to reach recommended stages prior to treatment. These rates will also provide control of weeds listed in the "LOW-VOLUME BROADCAST APPLICATION" section.

Annual Weed Species
Balsamapple* *Momordica charantia*
Bassia, fivehook *Bassia hyssopifolia*
Brome *Bromus* spp.
Fiddleneck *Amsinckia spp.*
Flaxleaf Fleabane *Conyza bonariensi*
Fleabane *Erigeron spp.*
Kochia *Kochia scoparia*
Lettuce, prickly *Lactuca serriola*
Panicum *Panicum spp*
Polygonum pensylvanicum
Ragweed, *common Ambrosia artemisiifolia*
Ragweed, giant *Ambrosia trifida*
Smartweed, Pennsylvania
Sowthistle, annual *Sonchus oleraceus*
Sunflower *Helianthus annuns*
Thistle, Russian *Salsola kali*
Velvetleaf *Abutilon theophrasti*

* Apply with hand held equipment only.

PERENNIAL WEEDS

Apply this product as follows to control or destroy most perennial weeds.

NOTE: If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the recommended stages.

Repeat treatments may be necessary to control weeds generating from underground parts or seeds. Repeat treatments must be made prior to crop emergence.

When applied as recommended under the conditions described, this product WILL CONTROL the following:

PERENNIAL WEEDS:

Alfalfa *Medicago sativa*
*Alligatorweed *Altemanthera philoxeroides*
Artichoke, Jerusalem *Helianthus tuberosus*
Bahiagrass *Paspalum noatum*
Bentgrass *Agrostis spp.*
Bermudagrass *Cynodon dactylon*
Bermudagrass, water (knotgrass) *Paspalum distichium*
Bindweeds field *Convolvulus arvensis*
Bluegrass, Kentucky *Poa spp.*
Blueweed, Texas *Helianthus*
Brackenfern *Pteridium aquilinum*
Bromegrass, smooth *Bromus inermis*
Bursage, woollyleaf *Franseria tomentosa*
Canarygrass, reed *Phalaris arundinacea*
Cattail *Typha spp.*
Clover, red *Trifolium pratense*
Clover, white *Trifolium repens*
Cogongrass *Imperata cyclindrica*
Dallisgrass *Paspalum dilatatum*
Dandelion *Taraxacum officinale*
Dock, curly *Rumex crispus*
Dogbane, hemp *Apocynum cannabinum*
Fescues *Festuca spp.*
Fescue, tall *Festuca arundinaceaa*
Guineagrass *Panicum maximum*
Horsenettle *Solanum carolinense*
Horseradish *Amoracia rusticana*
Johnsongrass *Sorghum halepense*
Kikuyugrass *Pesnnisetum clatidestinun*
Knapweed *Centaurea repens*
Lantanna *Lantana camara*
Milkweed *Asclepias spp.*
Muhly, wirestem
Muhlenbergia frondonsa
Mullein, common *Verbascum thaspsus*
Napiergrass *Pennisetum purpureum*
Nightshade, silverleaf *Solanum elaeagnifolium*
Nutsedge, purple, yellow
Cyperus rotundus, *Cyperus esculentus*
Orchardgrass *Dactylis glomerata*
Pampasgrass, *Cortaderia jubata*
Paragrass *Brachiaria mutica*
*Phragmites *Phragmites spp.*
Quackgrass *Agropyron repens*
Redvine* *Brunnichia ovata*
Reed, giant *Arundo donax*
Ryegrass, perennial *Lolium perenne*
Smartweed, swamp *Polygonum coccineum*
Spurge, leafy *Euphorbia esula*
Sweet potato wild *Ipomoca pandurata*
Thistle, Canada *Cirsium arvense*
Timothy *Phleum pratense*
*Torpedograss *Panicum repens*
*Trumpetcreeper *Campsis radicans*
Vaseygrass *Paspalum urvillei*
Wheatgrass, western *Agropyron smithii*

*Partial control

See "Directions for Use" and "Mixing, Additives and Application Instructions" sections of this label for labeled uses and specific application instructions.

Alfalfa—Apply 2.5 quarts of this product per acre plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Make application after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.

Alligatorweed—Apply 8 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre or apply a 3.75 percent solution with hand-held equipment to provide partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain such control.

Bentgrass—For suppression in grass seed production areas. For ground applications only, apply 3 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should be actively growing and have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results. Failure to use tillage after treatment may result in unacceptable control.

Bermudagrass—For control, apply 10 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre. For partial control, apply 7.5 quarts per acre. Treat when bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control. Allow 7 or more days after application before tillage

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Bermudagrass, water (knotgrass)—Apply 3.75 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Apply when water bermudagrass is actively growing and 12 to 18 inches in length. Allow 7 or more days before tilling, flushing, or flooding the field.

Fall applications only—Apply 2.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water bermudagrass that is actively growing and 12 to 18 inches in length. Allow 7 or more days before tillage.

Bindweed, field— For control, apply 8 to 10 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre west of the Mississippi River and 6 to 8 quarts east of the Mississippi River. Apply when the weeds are actively growing and are at or beyond full bloom. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost. Allow 7 or more days after application before tillage.

For suppression on irrigated land where annual tillage is performed, apply 2.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Apply to actively growing bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth. Allow 7 or more days after application before tillage.

Also for control, apply 4 quarts of this product plus 0.5 pound a.i. of Banvel in 10 to 20 gallons of water per acre. At these rates, apply using ground application only.

The following tank mixtures with 2,4-D may be applied using aerial application equipment (except in California) in fallow and reduced tillage systems only.

For suppression on irrigated agricultural land, apply 2 to 4 quarts of this product plus 1 pound a.i. of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.

For suppression, apply 1.5 quarts of this product plus 0.5 pound a.i. of 2,4-D plus 0.5 to 1 percent nonionic surfactant by total spray volume in 5 to 15 gallons of water per acre for ground applications and 5 to 10 gallons of water per care for aerial applications. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

Bluegrass, Kentucky/Bromegrass, smooth/Orchardgrass—Apply 4 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre when the grasses are actively growing and most plants have reached boot-to-early seed-head stage of developments For partial control in pasture or hay crop renovation, apply 2.5 to 3.75 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in to 10 to 40 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height. Allow 7 or more days after application before tillage.

Orchardgrass (sods going to no till corn)—Apply 2.5 to 4 quarts of this product per acre plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting.

Blueweed Texas—Apply 8 to 10 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre west of the Mississippi River and 7.5 to 10 quarts per acre east of the Mississippi River. Apply when weed is actively growing and is at or beyond full bloom. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth. New leaf development indicates active growth. For best results apply in late summer or fall. Fall treatments must be applied before a killing frost. Allow 7 or more days after application before tillage.

Brackenfern—Apply 7.5 to 10 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre as a broadcast spray or as up to a 1.5 percent solution with hand-held equipment. Apply to fully expanded fronds, which are at least 18 inches long.

Canarygrass reed/Timothy/Wheatgrass, western—Apply 4 to 6 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre. For best results apply to actively growing plants when most have reached the boot-to-head stage of growth. Allow 7 or more days after application before tillage.

Cogongrass—Apply 7 to 12 quarts of this product plus 0.5 to 1 percent nonionic surfactant in 10 to 40 gallons of water per acre. Apply when Cogongrass is at least 18 inches tall and actively growing in late summer or fall. Allow 7 or more days after application before tillage or mowing. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.

Dandelion/Dock, curly A 7.5 to 12.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre when plants are actively growing and most have reached the early bud stage of growth. Allow 7 or more days after application before tillage.

Also for control, apply 1.5 quarts of this product plus 0.5 pound a.i. 2,4-D plus 0.5 to 1 percent nonionic surfactant by total spray volume in 5 to 15 gallons of water per acre.

Dogbane hemp/Knapweed/Horseradish—Apply 10 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre. Apply when actively growing and when most weeds have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall. Allow 7 or more days after application before tillage.

For suppression, apply 32 fluid ounces of this product plus 0.5 pound a.i. of 2,4-D plus 0.5 to 1 percent nonionic surfactant by

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total spray volume in 5 to 15 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum emergence of dogbane has occurred.

Fescue, tall—Apply 6 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre to actively growing plants when most have reached boot-to-early seedhead stage of development.

Fall applications only—Apply 2 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Apply to fescue in the fall when actively growing and plants have 6 to 12 inches of new growth. Allow 7 or more days after application before tillage. A sequential application of 2.5 pints per acre of this product plus nonionic surfactant will improve long-term control and control seedlings germinating after fall treatments or the following spring.

Guineagrass—Apply 7.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre or use a 2.5 percent solution with hand-held equipment. Apply to actively growing guineagrass when most have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment. Allow 7 or more days after application before tillage.

Johnson/Ryegrass perennial—Apply 2.5 to 7.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre. In annual cropping systems apply 2.5 to 5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. In noncrop or areas where annual tillage (no-till), is not performed, apply 5 to 7.5 quarts of this product in 10 to 40 gallons of water per acre. For best results apply to actively growing plants when most have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank-mix with residual herbicides when using the 2.5 quart per acre rate.

For burndown of Johnsongrass, apply 2.5 pints per acre plus 0.5 to 1 percent nonionic surfactant in 10 to 40 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.

Spot treatment (partial control or suppression)—Apply a 2.5 percent solution of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

Kikuyugrass—Apply 4 to 6 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre. Spray when most kikuyugrass as at least 8 inches in height (3 or 4 leaf stage of growth) and actively growing. Allow 3 or more days after application before tillage.

Knapweed/Horseradish—Apply 10 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre. Apply when actively growing and when most weeds have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results apply in late summer or fall. Allow 7 or more days after application before tillage.

Lantana—Apply this product as a 2.5 to 3 percent solution plus 0.5 to 1 percent nonionic surfactant by total spray volume using hand-held equipment only. Apply to actively growing lantana at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth. Allow 7 or more days after application before tillage.

Milkweed, common—Apply 7.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre. Apply when actively growing and most of the milkweed has reached the late bud to flower stage of growth. Following small grain harvest or mowing, allow milkweed to regrow to a mature stage prior to treatment. Allow 7 or more days after application before tillage.

Muhly, wirestem—Use 2.5 to 5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Use 5 quarts of this product when applying in pasture sod or noncrop areas. Spray when the wirestem muhly is 8 inches or more in height and actively growing. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Allow 3 or more days after application before tillage. This product will not provide residual control of wirestem muhly from seeds, which germinate after application of this product. Do not tank mix with residual herbicides when using the 2.5 quart per acre rate.

Nightshade silverleaf—For control apply 5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total volume in 10 to 40 gallons of water per acre. Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost. Allow 7 or more days after application before tillage. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth.

Nutsedge: purple, yellow—Apply 8 to 10 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre as a broadcast spray, or apply a 2.5 to 5 percent solution from hand-held equipment to control existing nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets, which have not germinated, will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.

Sequential applications of 2.5 to 5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre will provide control. Make applications when a majority of the plants are in the 3 to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3-to 5-leaf stage. Subsequent applications will be necessary for long-term control.

For suppression to partial control of existing plants, apply 2.5 pints to 5 quarts of this product per acre plus 0.5 to 1 percent nonionic surfactant in 10 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants. Wait 7 days after treatment before tillage or mowing.

Pampasgrass—Apply this product as a 3 to 5 percent solution plus 0.5 to 1 percent nonionic surfactant by total spray volume using hand-held equipment. Apply to plants that are actively growing at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

Phragmites—For partial control of phragmites in Florida and the counties of other states bordering the Gulf of Mexico, apply 12.5 quarts plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre as a broadcast spray or apply a 5 percent solution from hand-held equipment. In other areas of the U.S., apply 7.5 quarts per acre as a broadcast spray or apply a 2.5 percent solution from hand-held equipment for partial control. For best results, treat during late summer or fall months or when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.

Quackgrass—In Annual Cropping Systems or in Pastures and Sods Followed by Deep Tillage: Apply 2 to 5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Spray when quackgrass is 6 to 8 inches in height and actively growing. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, for best results use a moldboard plow.

Quackgrass—Pasture or Sod or Other Noncrop Areas Where Deep Tillage is Not Planned Following Application: Apply 5 to 7.5 quarts plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Spray when the quackgrass is greater than 8 inches tall and actively growing. Do not till between harvest and fall application or in fall or spring prior to spring application. Allow 3 or more days after application before tillage.

Redvine—For suppression apply 3.75 pints of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre at each of two applications 7 to 14 days apart or a single application of 5 quarts per acre. Apply recommended rates in 10 to 40 gallons of water per acre plus 0.5 to 1 percent nonionic surfactant by total volume. Apply to actively growing plants in late September or early October which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Reed, giant—For control of giant reed apply a 5 percent solution of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume when plants are actively growing. Best results are obtained when applications are made in late summer to fall.

Smartweed, swamp—Apply 7.5 to 12.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre when plants are actively growing and most have reached the early bud stage of growth. Allow 7 or more days after application before tillage.

Sweet Potato, wild—Apply this product as a 5 percent solution plus 0.5 to 1 percent nonionic surfactant by total spray volume using hand-held equipment. Apply to actively growing weeds that are at or beyond the bloom stage of growth. Repeat applications will be required. Allow the plant to reach the recommended stage of growth before retreatment. Allow 7 or more days before tillage.

Thistle, Canada—Apply 4 to 6 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre. Apply to actively growing thistles when most are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

Also for control, apply 2 quarts of this product plus 0.5 pound a.i. 2,4-D plus 0.5 to 1 percent nonionic surfactant by total spray volume in 5 to 15 gallons of water per acre.

Torpedograss—Apply 10 to 12.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre to provide partial control of torpedograss. Apply to actively growing torpedograss when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost. Allow 7 or more days after application before tillage.

Trumpetcreeper—For control, apply 5 quarts of this product per acre plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Apply to actively growing plants in late September or October, which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least once a week before a killing frost.

Other perennials listed on this label—Apply 7.5 to 10 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume per acre. Apply when actively growing and most have reached early head or early bud stage of growth. Allow 7 or more days after application before tillage.

CROPPING SYSTEMS

When applied as directed for "Cropping Systems," under the conditions described, this product controls annual and perennial weeds listed on this label, prior to the emergence of direct seeded crops or prior to transplanting of crops listed on this label.

See "GENERAL INFORMATION" and "MIXING, ADDITIVES and APPLICATION INSTRUCTIONS" sections of this label for essential product performance information.

See the following "CROPPING SYSTEMS" sections for specific recommended uses.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE, GREEN STEMS OR FRUIT OF DESIRABLE CROPS, PLANTS, TREES OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Except as otherwise specified on this label, repeat treatments must be

made before the crop emerges in accordance with the instructions of this label.

Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 20 quarts per acre of this product per year.

Do not plant subsequent crops other than those on the label for 30 days following application.

Do not harvest or feed treated vegetation for 8 weeks following application. Following spot treatment or selective equipment use allow 14 days before grazing domestic livestock.

ROW CROPS	CEREAL GRAINS
Cotton*	Wheat (All)*
Peanuts	
Corn (All)*	
Soybeans	

TREE FRUITS
Apple
Nectarine
Peach

CITRUS

Calamondin	Lime
Chironia	Mandarin Orange
Citron	Orange (All)
Grapefruit	Pummelo
Kumquat	Tangelo
Lemon	Tangerine
	Tangors

VEGETABLES

Broccoli (all)	Brussel Sprouts
Cabbage (all)	Cabbage, Chinese
Cantaloupe**	Cauliflower
Casaba Melon**	Celery
Chard, Swiss	Collards
Crenshaw Melon**	Cucumber**
Eggplant***	Endive
Garlic**	Gourds
Honeydew Melon**	Honeyball Melon**
Kale	Kohlrabi
Leek	Lettuce
Mango Melon**	Melons (all)**
Muskmelon**	Mustard Greens
Onion (all)	Rape Greens
Parsley	Pepper (all)**
Persian Melon**	Potato
Pumpkin**	Rhubarb
Spinach (all)	Squash (Summer, Winter)**
Tomatillo**	Tomato**†
Watermelon	

* Spot treatments may be applied in these crops.
** Apply only prior to planting. Allow at least 3 days between application and planting.
*** Do not feed or graze treated pineapple forage following application.
† Use is restricted to direct seeded crops only.

When applying this product prior to transplanting crops into plastic mulch, care must be taken to remove residues of this product from the plastic prior to transplanting. Residues can be removed by 0.5 inch natural rainfall or by applying water via a sprinkler irrigation system.

Spot Treatment - (Only those crops with "*" can be spot treated). Applications must be made prior to boll opening on cotton.

For dilution and rates of application using boom or hand held equipment see "MIXING, ADDITIVES and APPLICATION INSTRUCTIONS" and "WEEDS CONTROLLED" sections of this label.

THE CROP RECEIVING SPRAY IN TREATED AREA WILL BE KILLED. TAKE CARE TO AVOID DRIFT OR SPRAY OUTSIDE TARGET AREA FOR THE SAME REASON.

Selective Equipment—This product may be applied through recirculating sprayers or shielded applicators in cotton. Shielded applicators may also be used in tree crops.

See the "Selective Equipment" part of the "Application Methods" section of this label for information on proper use and calibration of equipment.

Allow at least the following time intervals between application and harvest:

Cotton	7 Days
Apples, Pear	14 Days
Soybeans	7 Days
Citrus	14 Days
Wheat	35 Days

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COTTON

Broadcast Applications—This product may be applied using ground spray equipment. For ground applications with broadcast equipment, apply this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre.

Weed Control—For specific rates of application and instructions for control of various annual and perennial weeds, see the "WEEDS CONTROLLED" section of this label.

To control Johnsongrass using multiple-directed or broadcast over-the-top spray equipment, apply 2.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Ensure complete coverage.

For partial control of field bindweed, apply 2.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Apply when bindweed is actively growing and 12 inches or greater in length. Reduced performance may result if bindweed is under drought stress.

FALLOW AND REDUCED TILLAGE AND SYSTEMS

NOT FOR USE IN CALIFORNIA

Use this product in fallow and reduced tillage systems for control of annual weeds prior to emergence of crops listed in this label. Refer to the "WEEDS CONTROLLED" section of this label for specific rates and instructions. This product may be applied using ground or aerial spray equipment. See the 'APPLICATION EQUIPMENT and TECHNIQUES" section of this label for instructions.

- **TANK MIXTURES**
- **ETK 2301 plus BANVEL plus NONIONIC SURFACTANT**
- **ETK 2301 plus 2, 4-D plus NONIONIC SURFACTANT**
- **ETK 2301 plus GOAL™ plus NONIONIC SURFACTANT**

Applications of 2,4-D or Banvel must be made at least 7 days prior to planting corn.

The addition of Banvel in a mixture with this product may provide short-term residual control of selected weed species. Some crop injury may occur if Banvel is applied within 45 days of planting. Refer to the Banvel and 2, 4-D labels for cropping restrictions and other use instructions.

ETK- 2301 plus Goal Tank Mixtures

This product alone or in tank mixtures with Goal plus 0.5 to 1 percent nonionic surfactant by total spray volume will provide control of those weeds listed below.

Make applications when weeds are actively growing and at the recommended stages of growth. Avoid spraying when weeds are subject to moisture stress, when dust is on the foliage or when straw canopy covers the weeds.

ETK-2301™ 24 fluid oz/acre		ETK-2301™ 32 fluid oz/acre	
Wheat	18"*	Annual grasses at left plus:	
Barley	12"	Ryegrass, annual	6"
Bluegrass, annual	6"	Chickweed	6"
Barnyardgrass	6"	Groundsel	6"
Rye	6"	Marestail	6"
		Rocket, London	6"
		Shepherdspurse	6"
		Crabgrass	12"
		Johnsongrass, seedling	12"
		Lambsquarters	12"
		Oats, wild	12"
		Mustards	12"

ETK-2301™ 24 fluid oz/acre + GOAL** 2 to 4 fluid oz/acre		ETK-2301™ 32 fluid oz/acre + GOAL** 2 to 4 fluid oz/acre	
Annual grasses above plus:		Annual weeds above plus:	
Cheeseweed, common	3"	Cheeseweed, common	6"
Chickweed	3"	Groundsel	6"
Groundsel	3"	Chickweed	12"
Rocket, London	6"	Rocket, London	12"
Shepherdspurse	6"	Shepherdspurse	12"

Note: Use 2 quarts of this product per acre in mixtures with 2 to 4 fluid ounces of Goal per acre where heavy weed densities exist.

* Maximum height or length in inches.

** Use the higher rate of Goal when weeds approach maximum recommended height or stands are dense.

These recommended tank mixtures may be applied using ground or aerial spray equipment. Refer to the "WEEDS CONTROLLED" section of this label for specific rates and instructions.

ECOFARMING SYSTEMS

The recommendations made in this section are not registered for use in California.

The Ecofarming System consists of the following rotation: winter wheat, corn/sorghum, and ecofallow.

Use the following tank mixtures for control of emerged annual weeds before planting corn or sorghum in the Ecofarming System.

ETK 2301 at 32 to 48 fluid ounces per acre
plus
2,4-D at 0.375 to 0.5 pound a.i. per acre
plus
ATRAZINE at 0.75 to 1 pound a.i. per acre
plus
LASSO® at 2.5 to 3 quarts per acre

The above tank mixture should be at 20 to 30 gallons per acre.

WEEDS CONTROLLED – The following weeds, up to a maximum height of 4 inches, will be controlled:

Brome, downy
Bromus tectorum

Cheat
Bromus secalinus

Foxtail, green
Setaria viridis

Foxtail, yellow
Setaria lutescens

Kochia*
Kochia scoparia

Lettuce, prickly
Lactuca serriola

Pigweed, redroot
Amaranthus retroflexus

Thistle, Russian
Salsola kali

Wheat, volunteer
Triticum aestivum

Risk of crop injury from 2,4-D or Banvel can be reduced by applying this treatment 7 to 14 days before planting.

Refer to the label booklet for Lasso herbicide for pre-emergence weed control achieved by this tank mixture.

Refer to the specific product labels for crop rotation restrictions and cautionary statements for all products used in these tank mixtures.

AID TO TILLAGE

This product, when used in conjunction with preplant tillage practices, will provide control of downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 16 fluid ounces of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 5 to 15 gallons of water per acre. Make applications when weeds are actively growing and before they are 6 inches in height. Application must be followed by conventional tillage practices no later than 15 days after treatment and before regrowth occurs. Allow at least 1 day after application before tillage. Tank mixtures with residual herbicides may result in reduced performance.

CONSERVATION TILLAGE, MINIMUM TILLAGE AND NO-TILL SYSTEMS CORN AND SOYBEANS Tank Mixtures

The recommendations made in this section are not registered for use in California.

When applied as recommended under the conditions described, the tank mixtures listed in this section control many emerged weeds, and give pre-emergence control of many annual weeds where corn or soybeans will be planted directly into a cover crop, established sod or in previous crop residues.

Refer to specific product labels for crop rotation restrictions and cautionary statements of all products used in these tank mixtures. For mixing instructions, see the "MIXING, ADDITIVES and APPLICATIONS INSTRUCTIONS" section of this label.

Apply these tank mixtures in 10 to 20 gallons of water. Do not apply these mixtures after crop emergence.

When tank mixing with residual herbicides, add an agriculturally approved nonionic surfactant at 0.5 to 1 percent by volume of spray solution.

Note: When using these tank mixtures, do not exceed 8 quarts of this product per acre.

CORN

For residual control, this product may be tank-mixed with the following herbicides or combination of herbicides:

LASSO® / ALACHLOR	ATRAZINE
LARIAT®	CYANAZINE
BULLET®	SIMAZINE
DUAL™	PROWL™
BICEP™	MICRO-TECH®
PARTNER®	

For improved burndown, this product may be tank-mixed with 2,4-D or dicamba. Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn. See the "WEEDS CONTROLLED" section for specific rate information.

SOYBEANS

For residual control, this product may be tank-mixed with the following herbicides or combination of herbicides:

CANOPY*	LOROX™ PLUS
COMMAND™	PREVIEW™
DUAL™	PROWL™
GEMINI™	TURBO™
LASSO® /ALACHLOR	SCEPTER™
LEXONE™	SENCOR™
LINURON	SQUADRON™
PURSUIT™	PURSUIT PLUS™
PARTNER® FRONTIER®	MICRO-TECH®

For improved burndown, this product may be tank-mixed with the following herbicides:

2,4-DB	2,4-D*

* See label for 2,4-D for intervals between applications and planting.

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CORN AND SOYBEANS

Annual Weeds – For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 2 quarts per acre in these tank mixtures. For other labeled annual weeds, apply 2 to 3 pints of this product per acre when weeds are less than 6 inches tall, and 4 to 6 pints when weeds are over 6 inches tall. For a complete list of annual weeds controlled, see the "WEEDS CONTROLLED" section of this label.

Perennial Weeds – At normal application times in minimum tillage systems, perennial weeds may not be at the proper stage of growth for control. See the "WEEDS CONTROLLED" section of this label for the proper stage of growth for perennial weeds.

Use of 5 to 10 quarts of this product per acre in the tank mixtures mentioned above, under these conditions provides top kill and reduces competition from many emerged perennial grass and broadleaf weeds. For emerged perennial weeds controlled, see the "WEEDS CONTROLLED" section of this label.

To obtain the desired stage of growth, it may be necessary to apply this product alone in the late summer or fall and then follow with a label-approved, seedling weed control program at planting.

USE OF THESE TANK MIXTURES FOR BERMUDAGRASS OR JOHNSONGRASS CONTROL IN MINIMUM TILLAGE SYSTEMS IS NOT RECOMMENDED. For bermudagrass control, follow the instructions under "CONTROL OF PERENNIAL WEEDS" section of this label and then use a label-approved, seedling weed-control program in a minimum tillage or conventional tillage system. For Johnsongrass control, follow instructions under "CONTROL OF PERENNIAL WEEDS" section of this label, and then use a label-approved, seedling weed-control program with conventional tillage.

COTTON

Broadcast Applications – This product may be applied using ground spray equipment. For ground applications with broadcast equipment, apply this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre.

Weed Control – For specific rates of application and instructions for control of various annual and perennial weeds, see the "WEEDS CONTROLLED" section of this label.

To control Johnsongrass using multiple-directed or broadcast over-the-top spray equipment, apply 2.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Ensure complete coverage.

For partial control of field bindweed, apply 2.5 quarts of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 10 to 40 gallons of water per acre. Apply when bindweed is actively growing and 12 inches or greater in length. Reduced performance may result if bindweed is under drought stress.

TREE CROPS

This product is recommended for weed control in established orchards or for site preparation prior to transplanting crops listed in this section. Applications may be made with boom equipment, shielded sprayers, hand-held and high-volume wands, or lances. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for specific information on use of equipment.

When applying ETK-2301™, refer to the "WEEDS CONTROLLED" section of this label and to the specific recommendations in this section for rates to be used.

NOTE: Repeat treatments may be necessary to control weeds originating from underground parts of untreated weeds or from seeds. ETK-2301™ does not provide residual weed control. For subsequent weed control, use repeated applications. Do not apply more than 26.5 quarts of this product per acre per year.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE SOLUTION, SPRAY, DRIFT, OR MIST WITH FOLIAGE OR GREEN BARK OF TRUNK, BRANCHES, FRUIT, OR OTHER PARTS OF TREES. CONTACT OF ETK-2301™ WITH OTHER THAN MATURED BROWN BARK CAN RESULT IN SERIOUS CROP DAMAGE.

Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed or cut and have not been allowed to regrow to the recommended stage for treatment.

For specific rates of applications and instructions, see the "WEEDS CONTROLLED" section of this label, and specific recommendations which follow.

CITRUS

This product can be tank mixed with the following products for weed control in citrus.

Surflan®	Krovar® I
Simazine	Krovar® II
Solicam®	

For specific rates of applications and instructions, see the "WEEDS CONTROLLED" section of this label, and specific recommendations which follow.

Refer to the specific product labels for instructions for use and cautionary statements for all products used in these tank mixes.

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MIDDLES MANAGEMENT
FOR ANNUAL WEEDS IN MIDDLES BETWEEN ROWS OF TREE CROPS

For citrus crops treat uniformly between trees.

■ ETK-2301™ ■

■ ETK-2301™ plus GOAL™ ■

This product alone or in mixtures with Goal will control or suppress the annual weeds listed below.

Apply the recommended rates of this product, either alone or in mixtures with Goal, plus 0.5 to 1 percent nonionic surfactant by spray volume in 5 to 20 gallons of water per acre. Apply when weeds are actively growing and less than 6 inches in height or diameter. If weeds are under drought stress, irrigate prior to application. Reduced control may occur if weeds have been mowed prior to application. Up to 3 quarts per acre of this product may be used to control weeds, which have been mowed, are stressed, or are growing in dense populations.

WEED SPECIES	MAXIMUM HEIGHT/ DIAMETER (INCHES)	RATE PER ACRE ETK-2301™ (FLUID OUNCES)	RATE PER ACRE GOAL (FLUID OUNCES)
Barley Hordeum vulgare **Bluegrass, annual** Poa annua	6	16	–
Barnyardgrass Echinochloa crus-galli **Chickweed, common** Stellaria media **Red Maids** Calandrinia ciliata	6	24	–
Crabgrass Digitaria spp. **Fleabane, hairy** Conza bonariensis **Groundsel, common** Senecio vulgaris **Junglerice** Echinochloa colonum **Lamgsquarters, common** Chenopodium album **Rocket, London** Sisymbrium irio **Ryegrass, common** Lolium multiflorum **Shepherdspurse** Capsella bursa-pastoris **Sowthistle, annual** Sanchus oleraceus	6	32 or 32 to 64 + 4 to 16**	–
Pigweed, redroot Amaranthus retroflexus	6 12	3 qts. 4 qts.	4 to 16 4 to 16
Cheeseweed, common Malva spp.	3	24 to 64 + 4 to 16	
Cheeseweed, common Malva spp. **Filaree*** Erodium spp. **Horseweed/Marestail** Conyza canadensis **Nettle, stinging** Urtica dioica **Purselane, common*** Purtualaca oleracea	6	32 to 64 + 4 to 16	

* Suppression only

** The mixture of this product plus Goal is recommended when weeds are stressed or growing in dense populations.

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