

US ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (75-767) WASHINGTON, DC 20460	EPA REGISTRATION NO. 264-540	DATE OF ISSUANCE MAR 12 1994
	TERM OF ISSUANCE Conditional	
NOTICE OF PESTICIDE: <input type="checkbox"/> REGISTRATION <input checked="" type="checkbox"/> Reregistration (Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended)		
NAME OF PESTICIDE PRODUCT Buctril 4EC		

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Rhone-Poulenc
 P.O. Box 12014
 2 T.W. Alexander Drive
 Research Triangle Park, N.C.
 27709

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4."
2. Add the phrase, "EPA Registration No. 264-540" and submit five (5) copies of your final printed labeling before you release the product for shipment.

PRODUCT CHEMISTRY

3. The submission for the registration of this product is acceptable.

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL	DATE
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5/10/94
 75624
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PRECAUTIONARY REVIEW

4. See recommendations in the attached review.

LABELING

5. To update the "Environmental Hazards" section of your label, replace "Do not apply directly to water" with "For terrestrial uses, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark."

This acceptance of your label does not relieve you of any obligation to comply with the Worker Protection Standard (WPS). Under the WPS labeling regulations at 40 CFR Part 158, subpart K, section 156.200(c) (3), you are prohibited from distributing or selling any product within the scope of the WPS requirements after April 21, 1994, without amended labeling accepted by the Agency.

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BUCTRIL[®] 4EC HERBICIDE

FOR THE CONTROL OF CERTAIN BROADLEAF WEEDS IN SMALL GRAINS, SEEDLING ALFALFA, CORN, SORGHUM, FLAX, GARLIC, ONIONS, MINT AND GRASSES GROWN FOR SEED AND SOD PRODUCTION.

ACTIVE INGREDIENT:
Octanoic and heptanoic acid esters of bromoxynil* (3,5-dibromo-4-hydroxybenzonitrile).....57.2%
INERT INGREDIENTS:.....42.8%
Contains xylene range/petroleum distillates.

*Equivalent to not less than 4.0 pounds of bromoxynil per gallon.

E.P.A. Reg. No. 264-XXX E.P.A. Est. No.

KEEP OUT OF REACH OF CHILDREN AVISO WARNING

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que le etiqueta haya sido explicado ampliamente.

For **PRODUCT USE** Information Call 1-800-334-9745.

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day 1-800-334-7577.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Get medical attention. Do not induce vomiting, contains petroleum distillates. Do not give anything by mouth to an unconscious person.
IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.
IF IN EYES: Flush with water for 15 minutes. Get medical attention.

MAR 12 1994

PRECAUTIONARY STATEMENTS

WARNING

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if swallowed or absorbed through skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist.

ALL PERSONS HANDLING THE CONCENTRATE MUST OBSERVE THE FOLLOWING REQUIREMENTS.

Wear clean cotton (or cloth) coveralls that cover all parts of the body except the head, hands, and feet. The coveralls must be worn over a long sleeve shirt and long pants. Wear clean nitrile gloves, a chemical resistant apron, goggles or face shield, and chemical resistant shoes, shoe coverings, or boots.

If you will handle a total of 30 gallons or more of this product per day, you must use a mechanical transfer system for all mixing and loading operations. If this product is packaged in a 30 gallon drum, you must use a mechanical transfer system which terminates in a drip-free hard coupling which may be used only with a spray or mix tank which has been fitted with a compatible coupling. If you do not presently own or have access to a mechanical transfer system with this type of coupling, contact your dealer for information on how to obtain such a system or to modify your present system. When using a mechanical transfer system, do not remove or disconnect the pump or probe from the container until the container has been emptied and rinsed. The pump or probe system must be used to rinse the empty container and to transfer the rinsate directly to the mixing or spray tank.

ALL PERSONS APPLYING THIS PRODUCT, OR REPAIRING OR CLEANING EQUIPMENT USED WITH THIS PRODUCT, MUST OBSERVE THE FOLLOWING REQUIREMENTS.

When applying this product from a tractor (unless the tractor has a completely enclosed cab), or when repairing or cleaning equipment used with the product, you must wear clean nitrile gloves and clean cotton (or cloth) coveralls that cover all parts of the body except the head, hands, and feet. Coveralls must be worn over a long sleeve shirt and long pants.

All applicators (except for pilots) and all persons repairing or cleaning equipment used with this product must wear chemical resistant shoes, shoe coverings, or boots.

Application from a tractor with a completely enclosed cab or aerial application is required whenever this product is applied to 360 or more acres in a day. To avoid contamination, coveralls and gloves worn when handling the concentrate must be removed prior to entering an enclosed cab or cockpit. When applying from a tractor with an enclosed cab, clean coveralls and clean nitrile gloves must be kept inside the cab, and must be worn when exiting the cab to perform in-field maintenance or repair.

To reduce exposure to residues, wash the spray rig, tractor, and all other equipment used to handle or apply this product with water daily or before using the equipment for any other purpose.

APPLICATION BY CHEMIGATION must be done by fixed pipe, overhead sprinkler systems or hand moved pipe. If hand moved pipe is used for chemigation, the pipe must not be handled in any way until 24 hours after chemigation has been completed and residues have been flushed from the system. When applying by chemigation, no person may enter the application site unless in an enclosed vehicle.

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DURING AERIAL APPLICATION, human flaggers are prohibited unless in enclosed vehicles. Aerial application is prohibited within 300 feet of residential areas (e.g., homes, schools, hospitals, shopping areas, etc.)

GENERAL REQUIREMENTS FOR ALL USE

IMPORTANT! Before removing gloves or starting a new work operation, rinse the outside of the gloves thoroughly with water. Always remove gloves and wash your hands and face with soap and water before smoking, eating, drinking, or toileting.

AFTER WORK. Gloves must be discarded at the end of each day. Take off all clothes and shoes. Shower with soap and water. Do not wear or re-use contaminated clothing. Wash protective equipment with water after each use. Protective clothing worn during use must be laundered separately from other household articles.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to wildlife and fish. Use with care when applying to areas frequented by wildlife or adjacent to any body of water. Do not apply directly to water. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment washwaters.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

REENTRY STATEMENT

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

Do not enter treated areas without protective clothing until sprays have dried.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or Oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers and given in a language customarily understood by the workers. Oral and Written warnings must include the STATEMENT OF PRACTICAL TREATMENT and REENTRY STATEMENTS as they appear on the label.

STORAGE AND DISPOSAL

STORAGE

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

Do not store near fertilizers or seeds. Store at temperatures above 3° F. If allowed to freeze, remix before using.

PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

BUCTRIL® 4EC is formulated as an emulsifiable concentrate of octanoic and heptanoate esters of bromoxynil containing the equivalent of 4 pounds of bromoxynil per gallon.

BUCTRIL® 4EC is a selective postemergence herbicide for control of important broadleaf weeds infesting small grains (wheat, barley, oats, rye, triticale), seedling alfalfa, field corn, popcorn, sorghum, flax, onions, garlic, mint and grasses grown for non-residential turf, seed, or sod production. Optimum weed control is obtained when BUCTRIL® 4EC is applied to actively growing weed seedlings. BUCTRIL® 4EC is primarily a contact herbicide, therefore thorough coverage of the weed seedlings is essential for optimum control.

BUCTRIL® 4EC has little residual activity. Therefore subsequent flushes of weeds will not be controlled by the initial treatment. Generally crops that form a good canopy will help shade subsequent weed flushes. However, certain crops or short straw varieties, for example Yaccora Rojo wheat, may not develop the crop canopy fast enough to shade the subsequent flushes of weeds.

Occasional transitory leaf burn may occur. The temporary leaf burn is similar to that seen with liquid fertilizer. Because the activity of BUCTRIL® 4EC is not systemic, recovery of the crop is generally rapid with no lasting effect. Frequency and amount of leaf burn may be greater when crops are stressed by abrasive winds, cool to cold evening temperatures or mechanical injury, such as that caused by hail, sleet or insect feeding. To reduce the potential for temporary leaf burn, applications should be made to dry foliage in the recommended spray volumes per acre when weather conditions are not extreme.

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MIXING, LOADING AND HANDLING INSTRUCTIONS

2.5 Gallon Containers

It is strongly recommended that special care be taken in mixing and loading this product. Hands should be placed on the container in such a way as to avoid possible drip or splash.

30 Gallon and Bulk Containers

If you will handle a total of 30 gallons or more of this product per day, you must use a mechanical transfer system for all mixing and loading operations. If this product is packaged in a 30 gallon drum, you must use a mechanical transfer system which terminates in a drip-free hard coupling which may be used only with a spray or mix tank which has been fitted with a compatible coupling. If you do not presently own or have access to a mechanical transfer system with this type of coupling, contact your dealer for information on how to obtain such a system or to modify your present system. When using a mechanical transfer system, do not remove or disconnect the pump or probe from the container until the container has been emptied and rinsed. The pump or probe system must be used to rinse the empty container and to transfer the rinsate directly to the mixing or spray tank.

BUCTRIL® 4EC ALONE: Fill the spray tank 1/2 to 3/4 full with clean water. Begin agitation and add the recommended amount of BUCTRIL® 4EC. Add water to the spray tank to the desired level. Maintain sufficient agitation to ensure a uniform spray mixture during application.

TANK MIXTURES: BUCTRIL® 4EC can be applied in tank mixture with many other herbicides and insecticides registered for use on approved crops. Refer to the specific crop section for rate recommendations and other restrictions. To apply BUCTRIL® 4EC in mixture with another product, fill the spray tank 1/2 to 3/4 full with clean water and begin agitation. If tankmixing with wettable powder, soluble powder, flowable or dry flowable products, add the powder or flowable product first. After the other herbicide is thoroughly mixed with water add the recommended amount of BUCTRIL® 4EC and add water to the spray tank to the desired level. If tankmixing with other product types, add the BUCTRIL® 4EC first before adding the other product. Always mix one product in water thoroughly before adding another product or compatibility problems may occur. Never mix two products together without first mixing in water.

Maintain sufficient agitation while mixing and during application to ensure a uniform spray mixture. If spray mixture is allowed to remain without agitation for short periods of time, be sure to agitate until uniformly mixed before application.

COMPATIBILITY OF INSECTICIDES WITH BUCTRIL® 4EC

The following foliar insecticides are compatible with BUCTRIL® 4EC Herbicide as tank mixtures.

INSECTICIDE COMMON NAME	TRADE NAME	FORMULATION
Diazinon	Various	Emulsifiable Concentrate
Dimethoate	Various	Emulsifiable Concentrate
Trichlorfon	Dylox ²	Soluble Powder
Carbofuran	Furadan ⁶	Flowable
Chlorpyrifos	Lorsban ⁴	Emulsifiable Concentrate
Malathion	Various	Emulsifiable Concentrate
Oxy demeton-methyl	Metasystox-R ²	Sprayable Concentrate
Permethrin	Pounce ⁶	Emulsifiable Concentrate
Fenvalerate	Pydrin ⁵	Emulsifiable Concentrate
Carbaryl	Sevin ⁹	Sprayable wettable powder or Flowable
Demeton	Systox ²	Emulsifiable Concentrate

If tank mixing with products other than those listed above or within each crop section, a compatibility test is recommended to ensure satisfactory spray preparation. To test for compatibility, use a small container and mix a small amount (0.5 to 1 quart) of spray, combining all ingredients in the same ratio as the anticipated use. If any indications of physical incompatibility develop, do not use this mixture for spraying. Indications of incompatibility usually will appear within 5 to 15 minutes after mixing. To ensure maximum crop safety and weed control, follow all cautions and limitations on this label and the labels of products used in the tank mixture with BUCTRIL® 4EC.

SPRAYABLE LIQUID FERTILIZERS AND SPRAY ADDITIVES

BUCTRIL® 4EC can be applied in combination with sprayable liquid fertilizer or spray additives such as surfactants or crop oil concentrate. When tankmixing with liquid fertilizer always add the fertilizer to the spray tank first and agitate thoroughly before adding BUCTRIL® 4EC. Always predetermine the compatibility with liquid fertilizer by mixing small proportional quantities in advance. Agitation must be maintained during filling and application operations to ensure that BUCTRIL® 4EC is evenly mixed with the fertilizer. Leaf burn may occur when BUCTRIL® 4EC is applied with liquid fertilizer, but new leaves are not adversely affected.

CAUTION: Fertilizers and spray additives can increase foliage leaf burn when applied with BUCTRIL® 4EC. Do not apply fertilizers or spray additives with BUCTRIL® 4EC if leaf burn is a major concern due to environmental conditions, crop or variety sensitivity to BUCTRIL®. Do not apply BUCTRIL® 4EC in combination with fertilizer or spray additive if restricted under the individual crop use directions.

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APPLICATION PROCEDURES

BUCTRIL® 4EC can be applied to registered use areas by ground, aerial and sprinkler irrigation equipment. The following provides recommended methods of application for each crop.

CROP	TYPE OF APPLICATION EQUIPMENT		
	GROUND	AERIAL	SPRINKLER IRRIGATION
Small grains	X	X	X
Seedling alfalfa	X	X	X
Field and Popcorn	X	X	X
Sorghum	X	X	X
Flax	X	X	
Garlic	X	X	X
Onion	X		X
Mint	X		
Grass grown for non-residential turf, seed or sod production	X	X	
Non-cropland	X	X	

(X) indicates recommended application use

GROUND APPLICATION

Use a standard herbicide boom sprayer that provides uniform and accurate application. Sprayer should be equipped with screens no finer than 50 mesh in the nozzle tips and in-line strainers.

Select a spray volume and delivery system that will ensure thorough and uniform spray coverage. For optimum spray distribution and thorough coverage use of flat fan nozzles (maximum tip size 8008) with a minimum spray pressure of 30 psi at the nozzle tips are recommended. Other nozzle types that produce coarse spray droplets may not provide adequate coverage of the weeds to ensure optimum control. Raindrop(3) nozzles are not recommended as weed control with BUCTRIL® 4EC may be reduced. In general a minimum spray volume of 10 gallons per acre (GPA) is recommended for optimum spray coverage. A minimum of 5 GPA with a minimum spray pressure of 50 psi may be used with higher speed, low volume ground application if ground terrain, crop and weed density allow effective spray distribution. When using higher speed equipment a maximum speed of 10 mph is suggested if field conditions cause excessive boom movement during application and subsequent poor spray coverage. Ground applications made when dry, dusty field conditions exist may provide reduced weed control in wheel track areas.

When weed infestations are heavy, use of higher spray volumes and spray pressure will be helpful in obtaining uniform weed coverage. When corn or grain sorghum are large enough to interfere with the spray pattern, drop nozzles should be used to obtain uniform weed coverage.

Do not apply when winds are gusty or when other conditions favor poor spray coverage and/or off target spray movement.

AERIAL APPLICATION

Use orifice discs, cores and nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage. In general a minimum spray volume of 5 GPA and a maximum pressure of 40 psi are recommended. A minimum spray volume of 3 GPA may be used if crop canopy and weed density allow adequate spray coverage at that gallonage.

Do not apply during inversion conditions, when winds are gusty or when other conditions favor poor spray coverage and/or off target spray movement. Off target spray movement can be minimized by increasing the spray volume per acre and not applying when winds exceed 10 mph.

SPRINKLER IRRIGATION APPLICATION

BUCTRIL® 4EC Herbicide can be applied through sprinkler irrigation systems to small grains, field corn, popcorn, and grain sorghum, onions, garlic, and seedling alfalfa.

Apply BUCTRIL® 4EC Herbicide through sprinkler systems including center pivot, lateral move, side (wheel) roll, solid set or hand move irrigation systems only. If hand moved pipe is used for chemigation, the pipe must not be handled in any way until 24 hours after chemigation has been completed and residues have been flushed from the system. When applying by chemigation, no person may enter the application site unless in an enclosed vehicle. Do not apply this product through any other type of irrigation system.

SPECIFIC REQUIREMENTS FOR APPLICATION THROUGH AUTOMATED SPRINKLER IRRIGATION SYSTEM.

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

5. 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.
6. 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.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Agitation is recommended in the pesticide supply tank when applying the BUCTRIL® 4EC Herbicide.
9. BUCTRIL® 4EC Herbicide should be applied continuously for the duration of the water application with center pivot and continuous lateral move systems. Application of BUCTRIL® 4EC Herbicide should be made during the last 30-45 minutes of the irrigation set with other overhead sprinkler systems.
10. For best performance, set the sprinkler system to deliver approximately 0.5 inch or less of water per acre.
11. Remove scale, pesticide residues and other foreign matter from the supply tank and entire injector system. Flush with clean water.
12. If BUCTRIL® 4EC Herbicide is diluted in the supply tank, fill the tank with half of the water amount desired, add the BUCTRIL® 4EC and then add remaining water amount with agitation. Always dilute with at least 4 parts water to 1 part BUCTRIL® 4EC.
13. Start the sprinklers and then inject BUCTRIL® 4EC Herbicide into the irrigation line. BUCTRIL® 4EC should be injected with a positive displacement pump into the main line at least 8 feet ahead of a right angle turn to insure adequate mixing. Refer to the BUCTRIL® 4EC Herbicide label for detailed information on application rates and timings.

CHEMIGATION USER PRECAUTIONS

Application of more than 0.5 inch/acre of irrigation water may result in decreased product performance on certain soils.
 Do not apply when conditions favor drift, when system connections or fittings leak, or when nozzles do not provide uniform distribution.
 Allow sufficient time for pesticide to be flushed through all the lines and nozzles before turning off irrigation water.
 Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
 Do not connect an irrigation system used for pesticide application to a public water system.
 If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
 A person knowledgeable of the chemigation system and responsible for its operations, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

CULTIVATION

When properly utilized, timely cultivations of row crops may aid overall weed control efforts as well as crop growth. However, cultivation BEFORE or DURING BUCTRIL® 4EC applications may place target weeds under stress, resulting in erratic weed control. Whenever BUCTRIL® 4EC is being utilized in an overall weed control program, plan to postpone any anticipated cultivations until 5-7 days after application to ensure best performance.

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GENERAL WEED LIST

Postemergence application of BUCTRIL® 4EC Herbicide will control the following weeds when sprayed in the seedling stage. Maximum weed stage of growth is listed under RECOMMENDED USES for each crop.

MOST SUSCEPTIBLE BROADLEAF WEED SPECIES

Annual Sowthistle	(<i>Sonchus oleraceus</i>)
Black Nightshade	(<i>Solanum nigrum</i>)
Blue Mustard	(<i>Chorispora tenella</i>)
Bristly starbur	(<i>Acanthospermum hispidum</i>)
Coast Fiddleneck	(<i>Amsinckia intermedia</i>)
Common Cocklebur	(<i>Xanthium strumarium</i>)
Common Lambsquarters	(<i>Chenopodium album</i>)
Common Tarweed	(<i>Hemizonia congesta</i>)
Cutleaf Nightshade	(<i>Solanum triflorum</i>)
Eastern Black Nightshade	(<i>Solanum ptycanthum</i>)
Field Pennycress	(<i>Thlaspi arvense</i>)
Green Smartweed	(<i>Polygonum scabrum</i>)
Hairy Nightshade	(<i>Solanum sarachoides</i>)
Jimsonweed	(<i>Datura stramonium</i>)
Ladysthumb	(<i>Polygonum persicaria</i>)
Pennsylvania Smartweed	(<i>Polygonum pennsylvanicum</i>)
Pepperweed spp.	(annual) (<i>Lepidium spp.</i>)
Shepherdspurse	(<i>Capsella bursa-pastoris</i>)
Silverleaf Nightshade	(<i>Solanum elaeagnifolium</i>)
Tartary Buckwheat	(<i>Fagopyrum tataricum</i>)
¹ Sunflower	(<i>Helianthus annuus</i>)
Wild Buckwheat	(<i>Polygonum convolvulus</i>)

¹For control of sunflower, delay application until first emerging sunflower seedlings are 4 inches in height.

SUSCEPTIBLE BROADLEAF WEED SPECIES

Buffalobur	(<i>Solanum rostratum</i>)
Common Groundsel	(<i>Senecio vulgaris</i>)
Common ragweed	(<i>Ambrosia artemisiifolia</i>)
Corn Chamomile	(<i>Anthemis arvensis</i>)
Corn Gromwell	(<i>Lithospermum arvense</i>)
Cow Cockle	(<i>Saponaria vaccaria</i>)
Giant Ragweed	(<i>Ambrosia trifida</i>)
Hemp Sesbania	(<i>Sesbania exaltata</i>)
Ivyleaf morningglory	(<i>Ipomoea hederacea</i>)
Knawel	(<i>Scleranthus annuus</i>)
² Kochia	(<i>Kochia scoparia</i>)
London Rocket	(<i>Sisymbrium irio</i>)
Mayweed	(<i>Anthemis cotula</i>)
Prostrate Knotweed	(<i>Polygonum aviculare</i>)
Puncture Vine	(<i>Tribulus terrestris</i>)
² Redroot Pigweed	(<i>Amaranthus retroflexus</i>)
Russian Thistle	(<i>Salsola kali</i>)
² Spiny Pigweed	(<i>Amaranthus spinosus</i>)
Tall Morningglory	(<i>Pomoea purpurea</i>)
² Tall Waterhemp	(<i>Amaranthus tuberculatus</i>)
Tumble mustard	(<i>Sisymbrium altissimum</i>)
Velvetleaf	(<i>Abutilon theophrasti</i>)
Venice Mallow	(<i>Hibiscus trionum</i>)
Wild Mustard	(<i>Sinapis arvensis</i>)
Wild Radish	(<i>Raphanus raphanistrum</i>)

² For effective control, these weeds should not exceed the 4 leaf stage or 2 inches in height, whichever comes first.

WEED SUPPRESSION

BUCTRIL® 4EC suppresses the growth of Canada thistle (*Cirsium arvense*) by burning down top growth. Regrowth may occur.

SPECIFIC CROP RECOMMENDATIONS

CEREAL GRAIN CROPS

- Corn (Field and Pop) and Sorghum (Grain and Forage)
- Small Grains (Wheat, Barley, Oats, Rye and Triticale)

FORAGE, FIBER AND SPECIALITY CROPS

- Alfalfa (Seedling)
- Flax
- Garlic
- Mint (Established Peppermint and Spearmint)
- Onions

GRASS CROPS

- Conservation Reserve Program Areas (CRP)
- Grass Grown for Non-Residential Turf, Seed or Sod Production

NONCROPLAND

- Noncropland and Industrial Sites

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CEREAL GRAIN CROPS

CORN (FIELD AND POP) AND SORGHUM (GRAIN AND FORAGE)

BUCTRIL® 4EC RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC	Preemergence 1/2-3/4 pint/A	Apply to corn or sorghum before planting until just prior to crop emergence.	See CORN AND SORGHUM APPLICATION RATE TABLE - BUCTRIL® 4EC for list of weeds and corresponding stages of growth that are controlled by BUCTRIL® 4EC at recommended rates of application. For control of additional weeds not listed in the rate table see the GENERAL WEED LIST.
	1/2 pint/A	Apply to corn after emergence but prior to tassel emergence. Apply to sorghum after emergence but prior to the preboot stage (growth stage 4).	
	3/4 pint/A	Apply to corn between the 4 leaf stage and prior to tassel emergence. Apply to sorghum between the 4 leaf stage and prior to preboot stage (growth stage 4).	
	Chemigation only 1 pint/A	Apply to corn after emergence but prior to tassel emergence. Apply to sorghum after emergence but prior to preboot stage (growth stage 4). Apply through automated sprinkler irrigation systems with a mechanical transfer loading system only. See MIXING, LOADING AND HANDLING INSTRUCTIONS section for complete details.	Apply to MOST SUSCEPTIBLE broadleaf weeds up to the 8 leaf stage or 4 inches in height or 2 inches in diameter, whichever comes first. Apply to SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

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CORN AND SORGHUM APPLICATION RATE TABLE - BUCTRIL® 4EC

WEED SPECIES ¹		1/2 Pint/A		3/4 Pints/A	
When determining leaf stage, count all leaves except cotyledonary leaves		Max. Leaf Stage	Max. Weed Height (Inches)	Max. Leaf Stage	Max. Weed Height (Inches)
Black Nightshade	(<i>Solanum nigrum</i>)	6	6	6	6
Buffalobur	(<i>Solanum rostratum</i>)	4	2	6	4
Common Cocklebur	(<i>Xanthium strumarium</i>)	6	8	8	10
Common Lambsquarters	(<i>Chenopodium album</i>)	-	6	-	8
Common Ragweed	(<i>Ambrosia artemisiifolia</i>)	6	4	8	6
Eastern Black Nightshade	(<i>Solanum ptycanthum</i>)	6	6	6	6
Giant Ragweed	(<i>Ambrosia trifida</i>)	6	4	6	6
Hemp Sesbania	(<i>Sesbania exaltata</i>)	-	-	4	4
Ivyleaf Morningglory	(<i>Ipomoea hederacea</i>)	3	3	4	4
Jimsonweed	(<i>Datura stramonium</i>)	4	4	6	6
Kochia	(<i>Kochia scoparia</i>)	-	-	-	2
Ladysthumb	(<i>Polygonum persicaria</i>)	4	4	6	6
Pennsylvania Smartweed	(<i>Polygonum pensylvanicum</i>)	4	4	6	6
Redroot Pigweed ³	(<i>Amaranthus retroflexus</i>)	-	-	4	2
Spiny Pigweed ³	(<i>Amaranthus spinosus</i>)	-	-	4	2
Sunflower	(<i>Helianthus annuus</i>)	4	6	6	8
Tall Morningglory	(<i>Ipomoea purpurea</i>)	3	3	4	4
Tall Water hemp ³	(<i>Amaranthus tuberculatus</i>)	-	-	4	2
Velvetleaf	(<i>Abutilon theophrasti</i>)	4	3	6	5
Venice Mallow	(<i>Hibiscus trionum</i>)	-	-	4	2
Wild Buckwheat	(<i>Polygonum convolvulus</i>)	4	6	6	8
Wild Mustard	(<i>Sinapis arvensis</i>)	-	-	4	4
WEEDS SUPPRESSED²					
Canada Thistle	(<i>Cirsium arvense</i>)	Not Recommended		8 inch to bud stage	

¹ When determining leaf stage, count all leaves except cotyledonary leaves.

² BUCTRIL® 4EC suppresses the growth by burning down of top growth. Regrowth may occur.

³ Control of pigweeds in the high plains areas of Texas and Oklahoma may not be satisfactory with BUCTRIL® 4EC Herbicide. Repeat applications may be necessary to achieve satisfactory control.

BUCTRIL® 4EC TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC + atrazine	Preemergence 3/8-3/4 pint/A + 1/2-1 1/5 lb ai/A	Apply to corn or sorghum before planting until just prior to crop emergence.	See CORN AND SORGHUM APPLICATION RATE TABLE - BUCTRIL® 4EC + ATRAZINE TANK MIXTURES for list of weeds and corresponding stages of growth that are controlled by BUCTRIL® 4EC + Atrazine
	3/8-1/2 pint/A + 1/2-1 1/5 lb ai/A	Apply to corn after emergence but before corn is 12 inches tall. Apply to sorghum after the 3 leaf stage but before sorghum is 12 inches tall.	tank mixtures at recommended rates of application. For control of additional weeds not listed in the rate table see the GENERAL WEED LIST.
	3/4 pint/A + 1/2-1 1/5 lb ai/A	Apply to corn between the 4 leaf stage and before corn is 12 inches tall. Apply to sorghum between the 4 leaf stage and before sorghum is 12 inches tall.	

ATRAZINE TANK MIX RESTRICTIONS

Atrazine is a Restricted Use Herbicide due to ground water concerns, users must read and follow all precautionary statements and instructions on the atrazine label in order to minimize the potential for atrazine to reach ground water.

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CORN AND SORGHUM APPLICATION RATE TABLE - BUCTRIL® 4EC + ATRAZINE TANK MIXTURES

WEED SPECIES ¹		BUCTRIL® 4EC AND ATRAZINE RATE (TANK MIX)											
		3/8 Pint/A + 1/2 lb ai/A		3/8 Pint/A + 1 1/5 lb ai/A		1/2 Pint/A + 1/2 lb ai/A		1/2 Pint/A + 1 1/5 lb ai/A		3/4 Pint/A + 1/2 lb ai/A		3/4 Pint/A + 1 1/5 lb ai/A	
When determining leaf stage, count all leaves except cotyledonary leaves		MAX LEAF STAGE	MAX WEED HEIGHT	MAX LEAF STAGE	MAX WEED HEIGHT	MAX LEAF STAGE	MAX WEED HEIGHT	MAX LEAF STAGE	MAX WEED HEIGHT	MAX LEAF STAGE	MAX WEED HEIGHT	MAX LEAF STAGE	MAX WEED HEIGHT
Black Nightshade (<i>Solanum nigrum</i>)		4	4	4	4	6	6	6	6	6	6	6	6
Buffalobur (<i>Solanum rostratum</i>)		4	4	4	4	6	4	6	4	6	4	6	4
Burcucumber (<i>Sicyos angulatus</i>)		4	4	4	4	4	4	6	6	6	6	6	6
Common Cocklebur (<i>Xanthium strumarium</i>)		6	8	8	10	8	10	10	12	10	12	10	12
Common Lambsquarters (<i>Chenopodium album</i>)		-	6	-	10	-	10	-	12	-	12	-	12
Common Ragweed (<i>Ambrosia artemisiifolia</i>)		6	4	8	6	8	6	8	6	8	6	8	6
Eastern Black Nightshade (<i>Solanum pycnanthum</i>)		4	4	4	4	6	7	6	6	6	6	6	6
Entireleaf Morningglory (<i>Ipomoea hederacea</i>)		-	-	4	3	4	3	4	3	4	3	4	3
Giant Ragweed (<i>Ambrosia trifida</i>)		4	6	6	8	6	8	6	8	8	10	8	10
Hemp Sesbania (<i>Sesbania exaltata</i>)		4	4	4	4	4	4	4	4	4	4	4	4
Ipyleaf Morningglory (<i>Ipomoea hederacea</i>)		3	3	4	4	4	4	4	4	4	4	4	4
Jimsonweed (<i>Datura stramonium</i>)		4	4	4	4	6	6	6	6	6	6	6	6
Kochia (<i>Kochia scoparia</i>)		-	2	-	2	-	2	-	2	-	4	-	4
Ladysthumb (<i>Polygonum persicaria</i>)		4	4	4	4	6	6	8	8	8	8	8	8
Palmleaf Morningglory (<i>Ipomoea wrightii</i>)		-	-	4	3	4	3	4	3	4	3	4	3
Pennsylvania Smartweed (<i>Polygonum pensylvanicum</i>)		4	4	4	4	6	6	8	8	8	8	8	8
Prickly Sida (<i>Sida spinosa</i>)		-	-	6	2	4	1	6	2	4	1	6	2
Puncturevine (<i>Tribulus terrestris</i>)		-	-	-	-	-	-	6	4	6	4	6	4
Purple Morningglory (<i>Ipomoea mucicata</i>)		-	-	2	3	2	3	2	3	2	3	2	3
Redroot Pigweed ³ (<i>Amaranthus retroflexus</i>)		4	2	8	6	6	4	8	6	6	4	8	6
Smallflower Morningglory (<i>Jacquemontia tamnifolia</i>)		-	-	4	3	4	3	4	3	4	3	4	3
Smooth Pigweed ³ (<i>Amaranthus hybridus</i>)		4	2	6	4	4	2	6	4	6	4	6	4
Spiny Pigweed ³ (<i>Amaranthus spinosus</i>)		4	2	8	6	6	4	8	6	6	4	8	6
Sunflower (<i>Helianthus annuus</i>)		6	8	8	10	8	10	10	12	10	12	10	12
Tall Morningglory (<i>Ipomoea purpurea</i>)		3	3	4	4	4	4	4	4	4	4	4	4
Tall Waterhemp ³ (<i>Amaranthus tricoloratus</i>)		4	2	8	6	6	4	8	6	6	4	8	6
Toothed Spurge (<i>Euphorbia dentata</i>)		2	2	2	2	4	4	4	4	4	4	4	4
Velvetleaf (<i>Abutilon theophrasti</i>)		4	3	4	3	6	5	6	5	8	6	8	6
Venice Mallow (<i>Hibiscus trionum</i>)		4	2	4	2	4	2	4	2	4	2	4	2
Wild Buckwheat (<i>Polygonum convolvulus</i>)		6	8	8	10	8	10	10	12	10	12	10	12
Wild Mustard (<i>Sinapis arvensis</i>)		4	4	4	4	4	4	4	4	4	4	4	4

WEEDS SUPPRESSED ²		Not Recommended		8"-bud		8"-bud		8"-bud		8"-bud	
Canada thistle (<i>Cirsium arvense</i>)		Not Recommended	Not Recommended	8"-bud	8"-bud	8"-bud	8"-bud	8"-bud	8"-bud	8"-bud	8"-bud

- When determining leaf stage, count all leaves except cotyledonary leaves.
- Selected rates of BUCTRIL® 4EC + atrazine tank mixtures suppress the growth by burning down of top growth. Regrowth may occur.
- If pigweeds (*Amaranthus sp.*) present in the field to be treated have been identified as triazine resistant biotypes, use BUCTRIL® 4EC at 3/4 pint/A in a tank mixture with atrazine at 1/2 or 1 1/5 lb ai/A. Applications should be made when pigweeds do not exceed the 4-leaf stage and 2 inches in height. Control of pigweeds in the high plains areas of Texas and Oklahoma may not be satisfactory with BUCTRIL® 4EC + atrazine tank mixtures. Repeat applications may be necessary to achieve satisfactory control.

ATRAZINE CONVERSION TABLE^{1/}

ATRAZINE FORMULATION	ATRAZINE RATE POUNDS OF ACTIVE INGREDIENT PER ACRE	ATRAZINE FORMULATION RATE PER ACRE
Atrazine 4L	1/2	1 Pint
Atrazine 80WP	1 1/5	2 2/5 Pints
	1/2	5/8 Pound
Aatrex® Nine-O ¹²	1 1/5	1 1/2 Pounds
	1/2	3/5 Pound
	1 1/5	1 1/3 Pounds

^{1/}Follow all precautions and limitations on the labels of products used in tank mixture with BUCTRIL® 4EC.

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SPECIAL USE DIRECTIONS FOR OTHER WEED PROBLEMS IN CORN AND SORGHUM

Large Common Cocklebur, Common Lambsquarters and Sunflower

For control of common cocklebur and common lambsquarters up to 14 inches in height and sunflower up to 18 inches in height, use a postemergence application of BUCTRIL® 4EC at 1 pint/A. Make a second application of BUCTRIL® 4EC at the same rate 7 to 10 days later.

Large Velvetleaf

For control of velvetleaf up to 14 inches in height, use postemergence application of BUCTRIL® 4EC at 1 1/2 pints/A or BUCTRIL® 4EC + atrazine tank mixture at 1 pint/A + 1 1/5 lb ai/A. Make a second application of BUCTRIL® 4EC at 1 pint/A 7 to 10 days later.

Canada Thistle Management

For effective management of Canada thistle, the following BUCTRIL® 4EC treatments should be applied to thistle from 8" to bud stage for in-season burndown of top growth:

- BUCTRIL® 4EC at 3/4 pint/A
- BUCTRIL® 4EC at 1/2-3/4 pint/A + atrazine at 1/2 - 1 1/5 lbs ai/A
- BUCTRIL® 4EC at 1/2-3/4 pint/A + Banvel at 1/4 - 1/2 pint/A
- BUCTRIL® 4EC at 1/2-3/4 pint/A + atrazine at 1/2 - 1 1/5 lbs ai/A + Banvel at 1/8 - 1/4 pint/A
- BUCTRIL® 4EC at 1/2-3/4 pint/A + 2,4-D at 1/8 - 1/4 lb ai/A
- BUCTRIL® 4EC at 1/2-3/4 pint/A + atrazine at 1/2 - 1 1/5 lbs ai/A + 2,4-D at 1/8 - 1/4 lb ai/A

If possible follow with cultivation 14-21 days after treatment. In the fall apply 2,4-D (such as Weedone⁹ 638), Banvel¹⁰ or Roundup⁸ at recommended rates to Canada thistle 4-8 inches tall prior to killing frost. Follow with a similar control program in next years rotational crop.

ADDITIONAL BUCTRIL® 4EC TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC + Banvel ¹⁰	1/2 pint/A + 1/8-1/2 pint/A	Apply to field corn after emergence but before corn is 36 inches tall or 15 days before tassel emergence, whichever comes first. Apply to sorghum after the 3 leaf stage but before sorghum is 15 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BUCTRIL® 4EC at recommended rates of application plus improved control of pigweed. For Canada thistle burndown and field bindweed suppression up to the mid-bloom stage, use 1/4 - 1/2 pint/A of Banvel with BUCTRIL® 4EC.
	3/4 pint/A + 1/8-1/2 pint/A	Apply to field corn between the 4 leaf stage and before corn is 36 inches tall or 15 days before tassel emergence, whichever comes first. Apply to sorghum between the 4 leaf stage and before sorghum is 15 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	
BUCTRIL® 4EC + atrazine + Banvel ¹⁰	1/2 pint/A + 1/2-1 1/5 lb ai/A + 1/8-1/4 pint/A	Apply to field corn after emergence but before corn is 12 inches tall. Apply to sorghum after the 3 leaf stage but before sorghum is 12 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BUCTRIL® 4EC + atrazine tank mixtures at recommended rates of application plus improved control of pigweed. For field bindweed suppression, use 1/4 pint/A of Banvel with BUCTRIL® 4EC.
	3/4 pint/A + 1/2-1 1/5 lb ai/A + 1/8-1/4 pint/A	Apply to field corn between the 4 leaf stage and before corn is 12 inches tall. Apply to sorghum between the 4 leaf stage and before sorghum is 12 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	

CORN (FIELD AND POP) AND SORGHUM (GRAIN AND FORAGE)

ADDITIONAL BUCTRIL® 4EC TANK MIXTURE RECOMMENDATIONS (continued)

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC + 2,4-D (such as WEEDONE® and WEEDAR® Brand)	1/2 pint/A + 1/16-1/4 lb ai/A	Apply to field corn after emergence but prior to tassel emergence. Use drop nozzles if crop is taller than 8 inches. Apply to sorghum after emergence but before sorghum is 15 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BUCTRIL® 4EC at recommended rates plus improved pigweed and kochia control. For Canada thistle burndown and field bindweed suppression up to the mid-bloom stage, use 1/8 - 1/4 lb ai/A of 2,4-D with BUCTRIL® 4EC.
	3/4 pint/A + 1/16-1/4 lb ai/A	Apply to field corn between the 4 leaf stage and prior to tassel emergence. Use drop nozzles if crop is taller than 8 inches. Apply to sorghum between the 4 leaf stage and before sorghum is 15 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	
BUCTRIL® 4EC + atrazine + 2,4-D (such as WEEDONE® and WEEDAR® Brand)	1/2 pint/A + 1/2-1 1/5 lb ai/A + 1/16 -1/4 lb ai/A	Apply to field corn after emergence but before the corn is 12 inches tall. Use drop nozzles if crop is taller than 8 inches. Apply to sorghum after the 3 leaf stage but before sorghum is 12 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BUCTRIL® 4EC + atrazine tank mixtures at recommended rates of application plus improved devils claw control. For Canada thistle burndown and field bindweed suppression, use 1/8 - 1/4 lb ai/A of 2,4-D with BUCTRIL® 4EC.
	3/4 pint/A + 1/2-1 1/5 lb ai/A + 1/16-1/4 lb ai/A	Apply to field corn between the 4 leaf stage and before the corn is 12 inches tall. Use drop nozzles if crop is taller than 8 inches. Apply to sorghum between the 4 leaf stage and before sorghum is 12 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	
BUCTRIL® 4EC + Accent ⁵ + non-ionic surfactant	1/2 pint/A + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn preemergence or postemergence up to 36 inches tall. Use drop nozzles only when corn is 24 - 36 inches tall.	All broadleaf weeds controlled by BUCTRIL® 4EC at 1/2-3/4 p/A plus grasses and broadleaves controlled by Accent. For optimum weed control, treat when broadleaves and grasses are in the recommended growth stage or size. Follow the weed size guideline on the BUCTRIL® 4EC or Accent labels that are least restrictive.
	3/4 pint/A + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn postemergence after the 4 leaf stage up to 36 inches in height. Use drop nozzles only when corn is 24 - 36 inches tall.	

CORN (FIELD AND POP) AND SORGHUM (GRAIN AND FORAGE)

ADDITIONAL BUCTRIL® 4EC TANK MIXTURE RECOMMENDATIONS (continued)

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC + atrazine + Accent ⁵ + non-ionic surfactant	1/2 pint/A + 1/2 - 1 1/5 lb ai/A + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn preemergence through postemergence but before the corn is 12 inches tall.	All broadleaf weeds controlled by BUCTRIL® 4EC + atrazine plus grasses and broadleaves controlled by Accent. For optimum weed control, treat when broadleaves and grasses are in the recommended growth stage or size. Follow the weed size guideline on the BUCTRIL® 4EC or Accent labels that are least restrictive.
	3/4 pint/A + 1/2 - 1 1/5 lb ai/A + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn after the 4 leaf stage of crop growth but before the corn is 12 inches tall.	
BUCTRIL® 4EC + Beacon ¹² + non-ionic surfactant	1/2 pint/A + 0.38-0.76 oz/A ¹ (1-2 packets/4 acres) + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn from 4 to 20 inches in height. ¹ The 0.38 oz/A (1 packet/4A) rate of Beacon is 1/2 of a split application treatment program. BUCTRIL® 4EC tank mixture may be used in either half of the split application.	All broadleaf weeds controlled by BUCTRIL® 4EC at 1/2 pt/A plus grasses and broadleaves controlled by Beacon. For optimum weed control treat when broadleaves and grasses are in the recommended growth stage or size. Follow the weed size guidelines on the BUCTRIL® 4EC or Beacon labels that are least restrictive.
BUCTRIL® 4EC + Stinger ⁴	1/2-3/4 pint/A + 1/3-2/3 pint/A	Apply to field corn after emergence up to 24 inches in height.	All weeds controlled by BUCTRIL® 4EC at recommended rates of application plus improved Canada thistle burndown. For optimum performance apply to Canada thistle at least 4 inches in diameter or height but before bud stage.
	3/4 pint/A + 1/3 - 2/3 pint/A	Apply to field corn from 4 leaf stage up to 24 inches in height.	
BUCTRIL® 4EC + Atrazine + Stinger ⁴	1/2 pint/A + 1/2-1 1/5 lb ai/A + 1/3-2/3 pint/A	Apply to field corn after emergence but before corn is 12 inches tall.	All weeds controlled by BUCTRIL® 4EC + atrazine tank mixtures at recommended rates of application plus improved Canada thistle burndown. For optimum performance apply to Canada thistle at least 4 inches in diameter or height but before bud stage.
	3/4 pint/A + 1/2 - 1 1/5 lb ai/A + 1/3 - 2/3 pint/A	Apply to field corn from 4 leaf stage but before corn is 12 inches tall.	

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CORN (FIELD AND POP) AND SORGHUM (GRAIN AND FORAGE)

ADDITIONAL BUCTRIL® 4EC TANK MIXTURE RECOMMENDATIONS (continued)

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC + Bladex 80W ⁵ or Bladex 90DF ⁵	1/2 pint/A + 1 1/2-2 1/2 lb/A ¹ or 1 3/10-2 1/5 lb/A ¹	Apply to field corn between the 3 leaf stage and before the fifth leaf is visible in the whorl. Tank mixture with Bladex or Extrazine may cause browning, yellowing or stunting of field corn. Do not apply BUCTRIL® 4EC in tank	All weeds controlled by BUCTRIL® 4EC at 3/4 pint/A plus suppression or control of foxtails and other annual grasses that do not exceed 1 1/2 inches in height.
BUCTRIL® 4EC + Extrazine II DF ⁵ or Extrazine 90DF ⁵	1/2 pint/A + 1 3/10-2 1/5 lb/A ¹	mixture with Bladex or Extrazine under cold, wet weather conditions or to weather, storm, disease or insect-stressed field corn. Do not add adjuvants such as surfactants or crop oils or fertilizer solutions as excessive crop injury may occur. Do not apply to popcorn or corn grown for seed.	¹ Determine the Bladex or Extrazine use rate by consulting the tank mixture product use directions for soil texture, organic matter and previous herbicide application to that crop.
BUCTRIL® 4EC + Roundup ⁸	Preemergence 1/2-3/4 pints/A + 1/2-3 pints/A	Apply to corn or sorghum before planting time up until just prior to crop emergence.	All weeds controlled by BUCTRIL® 4EC at recommended rates of application plus control of certain grass and perennial weeds. Refer to Roundup label for rate to use depending on weeds present at time of application.

RESTRICTIONS AND PRECAUTIONS: Corn (Field and Pop) and Sorghum (Grain and Forage)

- BUCTRIL® 4EC does not control grasses. Therefore, it is recommended that a suitable grass control program be used to provide any required grass control.
- Addition of a spray additive or mixture with liquid fertilizers may cause excessive crop leafburn.
- Seed corn producers should consult the respective seed corn company regarding tolerance of certain seed production inbred lines to BUCTRIL® 4EC.
- Do not apply BUCTRIL® 4EC to postemergence to seed corn inbreds or popcorn prior to the 3 leaf stage of crop growth as excessive crop leaf burn may occur.
- Do not plant rotational crops until the following season.
- Do not cut crop for feed, fodder or graze within 30 days of application.
- The total cumulative rate should not exceed 1 1/2 pints/A per season.
- Postemergence application prior to the 3 leaf growth stage of corn or sorghum may result in increased crop leaf burn.
- Tank mixtures with Accent/nonionic surfactant or Beacon/nonionic surfactant may result in increased initial crop leaf burn. Use of crop oil concentrate, nitrogen fertilizer solution or other adjuvants in BUCTRIL® 4EC + Accent or BUCTRIL® 4EC + Beacon tank mixtures may result in a further increase in crop leaf burn.
- Special care should be taken when using BUCTRIL® 4EC and Banvel or 2,4-D tank mixtures to avoid off target drift to sensitive crops.
- Tank mixtures with 2,4-D or Banvel can cause stalk brittleness to field corn or sorghum. Winds or cultivation may cause breakage while crop is brittle.
- Follow all restrictions and precautions on the label of all products used in tank mixture with BUCTRIL® 4EC.

SMALL GRAINS (WHEAT, BARLEY, OATS, RYE AND TRITICALE)

BUCTRIL® 4EC RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC	3/4 pint/A	Fall seeded wheat, barley, rye and triticale throughout the United States and spring seeded wheat, barley and oats in Idaho, Oregon, Washington, Colorado, Wyoming and Montana. Apply to wheat, barley, oats, rye and triticale from emergence to the boot stage.	Apply to MOST SUSCEPTIBLE weeds (see GENERAL WEED LIST) up to the 8 leaf stage or 4 inches in height, whichever comes first. If weed forms rosette apply before weeds exceed 2 inch in diameter.
	1 pint/A	Fall seeded wheat, barley, rye and triticale throughout the United States and spring seeded wheat, barley and oats in Idaho, Oregon, Washington, Colorado, Wyoming and Montana. Apply to wheat, barley, oats, rye and triticale from emergence to the boot stage.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE weeds (see GENERAL WEED LIST) up to the 4 leaf stage or 2 inches in height, whichever comes first. If weed forms rosette apply before weeds exceed 1 inch in diameter.
	1/2-3/4 pint/A	Spring seeded wheat, barley and oats except Idaho, Oregon, Washington, Colorado, Wyoming and Montana. Apply to wheat, barley and oats from emergence to the boot stage.	Apply 1 pint/A to MOST SUSCEPTIBLE and 3/4 pints/A to SUSCEPTIBLE weeds that do not exceed the 4 leaf stage or 2 inches in height, whichever comes first. If weed forms rosette, apply before weeds exceed 1 inch in diameter. Use BUCTRIL® 4EC at 3/4 pint/A for control of kochia that is 2 - 4 inches in height and pigweed that does not exceed the 4 leaf stage or 2 inches in height, whichever comes first.
	Chemigation Only 1 pint/A	Apply to wheat, barley, oats, rye and triticale from emergence to the boot stage. Apply through automated sprinkler irrigation systems with a mechanical transfer loading system only. See MIXING, LOADING AND HANDLING INSTRUCTIONS section for complete details.	Apply to MOST SUSCEPTIBLE broadleaf weeds up to the 8 leaf stage or 4 inches in height or 2 inches in diameter, whichever comes first. Apply to SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
	Small Grains underseeded with Alfalfa 1/2-3/4 pint/A	Apply to small grains (wheat, barley, oats, rye or triticale) underseeded with alfalfa after small grains emergence up to the boot stage and when underseeded alfalfa has a minimum of 4 trifoliate leaves. Do not apply BUCTRIL® 4EC if temperatures are expected to exceed 70° F at or 3 days following application or unacceptable alfalfa injury may occur.	Apply 1/2 pint/A to MOST SUSCEPTIBLE and 3/4 pint/A to SUSCEPTIBLE broadleaf weeds that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

BUCTRIL® 4EC TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC + 2,4-D (such as WEEDONE ⁹ or WEEDAR ⁹ brand)	1/2-1 pint/A + 1/4-1/2 lb ai/A	Apply to wheat, barley, oats and rye from the fully tillered but before jointing stage.	This tankmix improves control of mustards and pigweed. Apply to weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
	3/8-1/2 pint/A + 1/4-1/2 lb ai/A	Apply to wheat and barley in Minnesota, North and South Dakota from the fully tillered but before jointing stage.	This tankmix improves control of wild buckwheat, redroot pigweed and wild mustard. Apply to weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
BUCTRIL® 4EC + MCPA (such as RHONOX ⁹ or RHOMENE ⁹)	1/2-1 pint/A + 1/4-1/2 lb ai/A	Apply to wheat, barley, oats and rye from the 4 leaf stage but before jointing.	This tankmix improves control of mustards, pigweed and kochia. Apply to weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
BUCTRIL® 4EC + Banvel ¹⁰	1/2-3/4 pint/A + 1/8-1/4 pint/A	Fall seeded wheat apply prior to the jointing stage. Spring seeded wheat apply up to the 5 leaf stage.	This tankmix improves control of broadleaves such as prostrate knotweed. Apply to weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
BUCTRIL® 4EC + Glean ⁵ + nonionic surfactant	3/8-3/4 pint/A + 1/6-1/3 oz/A + 1 qt/100 gal of water	Apply to wheat and barley from the 2 leaf stage but before boot stage. Refer to Glean label for crop rotation and other restrictions.	This tankmix improves control of broadleaves such as henbit, tansy mustard and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BUCTRIL® 4EC + Ally ⁵ + nonionic surfactant	3/8-3/4 pint/A + 1/10 oz/A + 1 qt/100 gal of water	Apply to wheat and barley from the 2 leaf stage but before the boot stage. Refer to Ally label for crop rotation and other restrictions.	This tankmix improves control of broadleaves such as tansy mustard and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BUCTRIL® 4EC + Finesse ⁵ + nonionic surfactant	3/8-3/4 pint/A + 1/6-1/3 oz/A + 1 qt/100 gal of water	Apply to wheat and barley from the 2 leaf stage but before the boot stage. Refer to Finesse label for crop rotation and other restrictions.	This tankmix improves control of broadleaves such as tansy mustard, henbit, chickweed and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BUCTRIL® 4EC + Amber ¹² + nonionic surfactant	3/8-3/4 pint/A + 0.28-0.56 oz/A + 0.25-0.5% v/v	Apply to wheat and barley after the 3 leaf stage but before the flagleaf is visible. Refer to the Amber label for crop rotation and other restrictions.	This tankmix improves control of broadleaves such as tansy mustard, henbit, and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.

SMALL GRAINS (WHEAT, BARLEY, OATS, RYE AND TRITICALE)

BUCTRIL® 4EC TANK MIXTURE RECOMMENDATIONS (continued)

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC + Express ⁵ + nonionic surfactant	1/2-3/4 pint/A + 1/6-1/3 oz/A + 1 qt/100 gal of water	Winter wheat. Apply after crop is in the 2 leaf stage but before the flag leaf is visible. Refer to Express label for crop rotation and other restrictions.	This tankmix improves control of broadleaf weeds such as redroot pigweed, tansy mustard and suppression of Canada thistle. Apply to annual weeds up to the 4 leaf stage, 4 inches tall or across and up to Canada thistle 4 to 8 inches tall with 2 to 6 inches of new growth.
	3/8-3/4 pint/A + 1/6-1/3 oz/A + 1 qt/100 gal of water	Spring wheat and barley. Apply after crop is in the 2 leaf stage but before the flag leaf is visible. Refer to Express label for crop rotation and other restrictions.	
BUCTRIL® 4EC + Harmony Extra + nonionic surfactant	3/8-3/4 pint/A + 3/10 oz/A + 1 qt/100 gal of water	Winter wheat. Apply after the 2 leaf stage but before the 3rd node is detectable. Refer to the Harmony Extra label for crop rotation and other restrictions.	This tankmix improves control of broadleaf weeds such as henbit, chickweed and redroot pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or across, whichever comes first.
		Spring wheat and barley. Apply after the 2 leaf stage but before the 1st node is detectable. Refer to the Harmony Extra label for crop rotation and other restrictions.	
BUCTRIL® 4EC + Curtail ⁴ or Curtail M ⁴	1/2-3/4 pint/A + 2 pints/A	Apply to wheat and barley after the crop begins to tiller up to the 1st node detectable.	This tankmix improves control of kochia, wild buckwheat and Canada thistle. Apply to annual broadleaf weeds up to the 8 leaf stage up to 4 inches in height or 2 inches in diameter and Canada thistle in the rosette to prebud stage.
BUCTRIL® 4EC + metribuzin (Sencor ² or Lexone ⁵)	1/2-5/8 pint/A + 1/8-1/4 lb ai/A	Winter wheat in Idaho, Montana, Oregon and Washington. Apply in spring after growth has started and secondary roots with a minimum of 3 to 4 tillers have been established but before boot stage. Avoid application when crop has experienced winter kill, frost damage, disease or drought.	This tankmix improves control of broadleaves such as chickweed, filaree, henbit and dogfennel. Apply to weeds that do not exceed 2 inches tall or rosettes of 2 inches in diameter. The higher use rates of both products should be used only in emergency weed situations and if some minor crop injury is acceptable. A recognized authority should be consulted concerning the use of this mixture in your area.
BUCTRIL® 4EC + diuron	1/2 pint/A + 4/10 lb ai/A	Winter wheat and winter barley in Idaho, Oregon and Washington. Use only in areas where annual rainfall exceeds 16 inches. One fall application after emergence but before soil freezes or in spring as soon as soil thaws.	This tankmix improves control of broadleaves such as henbit and gromwell. Apply to weeds before they are 2 inches tall or 2 inches in diameter.
BUCTRIL® 4EC + Tiller ⁷	1/2 pint/A + 1 pint/A	Spring wheat. Apply when crop begins to tiller (3 - 4 leaf stage) up to the 6 leaf stage. Refer to the Tiller label for complete use directions and restrictions.	In addition to broadleaf weeds controlled by BUCTRIL® 4EC, this tankmix will control green foxtail from the 2-leaf to 2-tiller stage of growth.

SMALL GRAINS (WHEAT, BARLEY, OATS, RYE AND TRITICALE)

BUCTRIL® 4EC TANK MIXTURE RECOMMENDATIONS (continued)

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC + Hoelon ⁷	1/2-3/4 pint/A + 2 2/3 pints/A	Spring Barley. After emergence but before jointing. Avoid using this tank mixture on barley exposed to cold (lower than 40 degrees F) and/or prolonged wet weather conditions as crop injury may result.	This tankmix will provide wild oat, green foxtail and annual ryegrass control in addition to broadleaves. Apply to grasses 1-3 leaf stage and broadleaves no larger than 4 leaf stage or rosettes of 1.5 inches in diameter.
		Winter wheat and spring wheat. After emergence but before jointing.	This tankmix will provide wild oat, green foxtail and annual ryegrass control in addition to broadleaves. Apply to grassed 1-4 leaf stage and broadleaves no larger than 4 leaf stage or rosettes of 1.5 inches in diameter.
BUCTRIL® 4EC + Avenge ¹	1/2-1 pint/A + 2 1/2-4 pints/A	Winter Wheat. Four leaf to tillering stage. Refer to Avenge label for varietal and other restrictions.	This tankmix will provide wild oat control in addition to broadleaves. Apply to wild oats in the 3-5 leaf stage and broadleaves that do not exceed the 4 leaf stage or rosettes of 1.5 inches in diameter. Avenge use rates per acre are 2.5 pints (1-10 oats per sq. ft.), 3 pints (11-25 oats per sq.ft.) or 4 pints (more than 25 oats per sq. ft.).
		Spring Wheat. Five to 6 leaf stage. Refer to Avenge label for varietal and other restrictions.	
		Barley. Two to 7 leaf stage.	

RESTRICTIONS AND PRECAUTIONS: Small Grains (Wheat, Barley, Oats, Rye and Triticale)

- Do not graze treated fields within 30 days following treatment.
- Do not apply when crops are under moisture stress.
- Do not apply when crop canopy covers the weeds as poor weed control will result.
- Do not apply when underseeded alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.
- Do not add a surfactant or crop oil when applying to underseeded alfalfa or increased injury will occur.
- Do not cut for feed or graze spring treated underseeded alfalfa within 30 days following treatment.
- Do not cut for feed or graze fall or winter treated underseeded alfalfa until spring, at least 60 days following treatment.
- Reduced weed control may occur when weeds are stressed from lack of moisture or cold temperatures.
- Refer to labels of products used in tank mixture of additional restrictions and precautions.

FORAGE, FIBER AND SPECIALITY CROPS

ALFALFA (SEEDLING)

BUCTRIL® 4EC RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC	1/2-3/4 pint/A	Apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leafburn, unacceptable crop injury may occur to alfalfa in the 2 trifoliolate or smaller stage of growth. In the states of Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, and the western halves of North Dakota, South Dakota, Nebraska and Kansas, BUCTRIL® 4EC application made when temperatures are expected to exceed 80°F at and 3 days following application can result in unacceptable crop injury. In the remaining states BUCTRIL® 4EC application made when temperatures are expected to exceed 70°F at and 3 days following application can result in unacceptable crop injury.	Apply 1/2 pint/A to MOST SUSCEPTIBLE broadleaf weeds and 3/4 pint/A for SUSCEPTIBLE broadleaf weeds (See general weed list) when weeds do not exceed 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first. BUCTRIL® 4EC will not adequately control over-wintered pennycress, henbit and mustards.
BUCTRIL® 4EC	Chemigation Only 1 pint/A	Apply to seedling alfalfa with a minimum of 2 trifoliolate leaves. Apply through automated sprinkler irrigation systems with a mechanical transfer loading system only. See MIXING LOADING AND HANDLING INSTRUCTIONS Section for complete details. BUCTRIL® 4EC applications made when temperatures are expected to exceed 85°F at and 3 days following application can result in unacceptable crop injury.	Apply to MOST SUSCEPTIBLE broadleaf weeds up to the 8 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first. Apply to SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

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BUCTRIL® 4EC TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC + BUTYRAC® 200 ⁹ (2,4-DB)	1/2 pint/A + 1 quart/A	Apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leafburn, unacceptable crop injury may occur to alfalfa in the 2 trifoliolate or smaller stage of growth. In the states of Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, and the western halves of North Dakota, South Dakota, Nebraska and Kansas, BUCTRIL® 4EC application made when temperatures are expected to exceed 80°F at and 3 days following application can result in unacceptable crop injury. In the remaining states BUCTRIL® 4EC application made when temperatures are expected to exceed 70°F at and 3 days following application can result in unacceptable crop injury.	This tankmix improves control of pigweed(sp), kochia, and tansy mustard. Apply when weeds do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first. BUCTRIL® 4EC + BUTYRAC 200 tank mixtures will not adequately control over-wintered pennycress, henbit and mustards.

RESTRICTIONS AND PRECAUTIONS: Alfalfa (Seedling)

- Crop leafburn can occur following BUCTRIL® 4EC application. Warm, humid conditions may enhance leaf burn. New crop growth will not be affected. Alfalfa yield should not be reduced although total biomass tonnage may decrease compared to a weedy field due to weed removal.
- Do not apply when alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.
- Do not add a surfactant or crop oil unless specified in the use directions because increased alfalfa injury will occur.
- Do not cut for feed or graze spring treated alfalfa within 30 days following treatment.
- Do not cut for feed or graze fall or winter treated alfalfa until spring, at least 60 days following treatment.
- The total cumulative rate of BUCTRIL® 4EC should not exceed 1 pint/A per season.
- The use of Eptam¹¹ preemergence may enhance crop leaf burn from postemergence application of BUCTRIL® 4EC and should be considered prior to using BUCTRIL® 4EC.
- Follow all restrictions and precautions on the tank mixture product label when a BUCTRIL® 4EC tank mixture is used.
- Tank mixture with 2,4-DB may result in unacceptable crop leaf burn especially under warm, humid weather conditions.

FLAX (*Linum usitatissimum* only)

BUCTRIL® 4EC RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC	1/2 pint/A	Apply to flax that is 2 to 8 inches in height. Do not apply BUCTRIL® 4EC to flax during or after the bud stage.	Apply to MOST SUSCEPTIBLE weeds that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

BUCTRIL® 4EC TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC + Hoelon	1/2 pint/A + 2-2 2/3 pints/A	Apply to flax that is 2 to 8 inches in height. Do not apply BUCTRIL® 4EC to flax during or after the bud stage.	This tankmix will control broadleaf weeds plus wild oats, green foxtail and annual ryegrass. Apply to grasses in the 1-3 leaf stage and broadleaves no larger than 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

RESTRICTIONS AND PRECAUTIONS: Flax (*Linum usitatissimum* only)

- Do not apply if temperatures are expected to exceed 85° F at or 3 days following application or crop injury may occur.
- Unacceptable crop injury may occur following BUCTRIL® 4EC application to flax grown on high organic, peat type soils.
- Application under high humidity conditions can injure flax.
- Do not apply BUCTRIL® 4EC with crop oil concentrate, surfactants or nitrogen solutions.
- Follow all precautions, directions and restrictions on the Hoelon label when using in tank mixture with BUCTRIL® 4EC.
- Do not use on ornamental flax.

GARLIC

BUCTRIL® 4EC RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC	3/4 - 1 pint/A	Apply to garlic after emergence but before 12 inches in height.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

PRECAUTIONS AND RESTRICTIONS: Garlic

- Use a minimum of 20 gallons per acre for ground application.
- BUCTRIL® 4EC can be applied through automated sprinkler irrigation application.
- Do not harvest within 112 days following treatment.

MINT

ESTABLISHED PEPPERMINT AND SPEARMINT ONLY

BUCTRIL® 4EC RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC	1/2-3/4 pint/A	Apply to dormant or actively growing established peppermint or spearmint which has been harvested for at least one year prior to treatment.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE weeds that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

RESTRICTIONS AND PRECAUTIONS: Mint

- Application made to mint when temperatures are expected to exceed 70°F at or 5 days following application may result in unacceptable crop injury. This injury is more likely to occur following BUCTRIL® 4EC application in the spring.
- Do not apply to mint growing under adverse conditions including diseases, insects, nematodes, high salt content soil, drought, excessive moisture, winter damage or other environmental stress.
- Application of BUCTRIL® 4EC to mint that has been previously treated with Sinbar⁵ herbicide may result in unacceptable crop injury.
- Do not use in spring or on newly established mint. Fall applications to spring planted mint should be acceptable if the crop is well established.
- BUCTRIL® 4EC can cause temporary stunting and discoloration of the mint particularly from the spring application. However the injury symptoms are only temporary and have not caused yield reduction.
- Use of BUCTRIL® 4EC in combination with other products may increase temporary stunting and discoloration.
- Do not harvest within 70 days following treatment.
- Do not apply more than 6.0 pints total product per acre in a single growing season.

ONIONS

BUCTRIL® 4EC RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC	Preplant/Preemergence 1/2-3/4 pint/A	Apply to onions at least 3 to 4 days prior to emergence. Rainfall or irrigation within 2 days following preemergence applications or 3 days prior to crop emergence may result in unacceptable crop injury.	Apply BUCTRIL® 4EC at 1/2 pint/A to control MOST SUSCEPTIBLE weeds and 3/4 pint/A for SUSCEPTIBLE weeds. Weeds should not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
	Postemergence 1/2-3/4 pint/A	<p>Apply only to onions which have 2 to 5 true leaves.</p> <p>Use at least 50-70 gallons of water per acre and apply by ground equipment or chemigation only. Water volume is important - CONCENTRATED SPRAYS KILL ONIONS. Thorough and uniform coverage is necessary for good weed control.</p> <p>In onion-producing areas, certain environmental conditions reduce development of waxy coating on the onion leaves, thus increasing the possibility of injury. Dry soil, dry onion foliage, high light intensity, low humidity, and high temperatures tend to increase the waxy coating on onion leaves and thus reducing chances for injury. It is essential that the soil and onion foliage be dry at the time of application. Humidity should be low and dew should be off the plants.</p>	

RESTRICTIONS AND PRECAUTIONS: Onions

- The sensitivity of onions to BUCTRIL® 4EC varies with the variety and environmental conditions. Therefore, even if all the label directions are followed, BUCTRIL® 4EC application still may cause injury to onions under certain circumstances.
- Do not irrigate onions that have received a preemergence application of BUCTRIL® 4EC for 2 days following application or within 3 days of crop emergence.
- Do not use BUCTRIL® 4EC Herbicide on onions grown under low light intensity, in areas such as Oregon, west of the Cascades.
- Do not treat onions damaged by sand, insects, or diseases.
- Do not apply with aerial equipment.
- Do not add surfactant.

GRASS CROPS

CONSERVATION RESERVE PROGRAM AREAS (CRP)

BUCTRIL® 4EC RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC	1/2 - 1 pint/A	Apply to grasses after emergence. If alfalfa is planted apply after the 4 trifoliate leaf stage.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

BUCTRIL® 4EC TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC + Rhomene® or Rhonox® (MCPA)	1/2 - 1 pint/A + 1/4 - 1/2 pint/A	Apply to CRP areas after grasses have reached the 3 leaf stage. Do not use this tank mixture in areas where alfalfa or other legumes have been planted.	This tankmix improves control of mustards, pigweed, and kochia. Apply up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

RESTRICTIONS AND PRECAUTIONS: CRP AREAS

- Do not allow livestock to graze in treated areas or feed treated grass and forage to livestock.
- Do not add spray adjuvants or fluid fertilizers when applying BUCTRIL® 4EC to CRP areas planted with alfalfa or other legumes.
- Do not apply BUCTRIL® 4EC to CRP areas planted with alfalfa if temperatures are expected to exceed 80°F or severe crop injury may occur. If legumes other than alfalfa have been planted, severe crop injury may occur at any application temperature.
- Do not apply more than 1 1/2 pints/A of BUCTRIL® 4EC to CRP acres that are underseeded with alfalfa.

GRASS FOR NON-RESIDENTIAL TURF, SEED OR SOD PRODUCTION

BUCTRIL® 4EC RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC	1/2 - 1 pint/A	Apply to established and newly seeded grasses for non-residential turf, seed or sod production before the boot stage. Established grasses tolerant to BUCTRIL® 4EC include bentgrasses, Kentucky Bluegrass, Fescues, Ryegrass, Bermudagrass, St. Augustinegrass and Zoysiagrass. BUCTRIL® 4EC may also be used on seedling grasses such as Merion, Park, Delta, or common Kentucky Bluegrasses, Pennlawn, Chewings, Illahee or Alta Fescues, Orchard grass, Highland, Seaside or Astoria Bentgrasses, perennial Ryegrasses, Bahiagrass and newly sprigged Zoysiagrass planted for seed or sod production, or forage grasses planted for seed production only.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE broadleaf weeds that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

RESTRICTIONS AND PRECAUTIONS: Grass for non-residential turf, seed or sod production

- Do not feed grasses grown for seed or sod production to livestock.
- Do not apply BUCTRIL® 4EC to non-residential turf with backpack or hand-held application equipment.

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NON-CROPLAND

NON-CROPLAND AND INDUSTRIAL SITES

BUCTRIL® 4EC RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® 4EC	1/2 - 1 pint/A	Apply to non-cropland and industrial sites when weeds have emerged and are actively growing.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE broadleaf weeds that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

RESTRICTIONS AND PRECAUTIONS: Non-Cropland and Industrial Sites

- Do not allow livestock to graze or feed in treated areas.
- Addition of surfactant or crop oil concentrate may improve burndown of broadleaf weeds under cool, dry conditions.
- Do not apply BUCTRIL® 4EC to non-cropland and industrial sites through backpack or hand-held application equipment.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purpose set forth in the directions for use when it is used in accordance with such directions; and (c) that the directions, warnings and other statements on this label are based upon responsible experts evaluation of reasonable tests of effectiveness of toxicity to laboratory animals and to plants, and of residues on food crops and upon reports of field experience. Tests have not been made on all varieties or in all states or under all conditions. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE, ANY OTHER WARRANTIES EXPRESS OR IMPLIED AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANT-ABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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