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# **RESTRICTED USE PESTICIDE** (GROUND AND SURFACE WATER CONTROL)

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS DIRECTLY UNDER THEIR SUPERVISION AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE USERS MUST READ AND FOLLOW ALL PRECAUTIONARY WATER CONCERNS. STATEMENTS AND INSTRUCTIONS IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

# **BROX-At Herbicide**

#### Postemergent herbicide for control of certain broadleaf weeds in corn and sorghum

#### **ACTIVE INGREDIENTS:**

Octanoic acid ester of bromoxynil* (3,5-dibromo-4-hydroxybenzonitrile)	15.74%
Atrazine** (2-chloro-4-ethylamino-6-isopropylamino-s-triazine)	21.62%
OTHER INGREDIENTS***:	<u>62.64</u> %
TOTAL	100.0%
	<b>.</b> .

\*Product contains bromoxynil octanoate equivalent to 10.81% of bromoxynil or 1.0 pound of bromoxynil per gallon.

\*\*Product contains 2.0 pounds of atrazine per gallon.

\*\*\* Contains petroleum distillates.

EPA Reg. No. 42750-

# **KEEP OUT OF REACH OF CHILDREN**

# CAUTION

#### SHAKE WELL BEFORE USING

#### **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.

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

Note to Physician: This product contains petroleum distillates.

See additional precautionary statements and directions for use below.

Manufactured by: Albaugh, Inc.

# **Net Contents** Gals.

DCT 1 9 1999 Under the Federal Insecticide, Fundicade, and Rodentioide Act. as amended, for the pesticide



EPA Est. No. 42750-MO-1

10/19/99

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Ankeny, Iowa 50021

\_\_\_\_Liters.

#### FOR CHEMICAL SPILL, LEAK, FIRE OR EXPOSURE, CALL CHEMTREC (800) 424-9300. PRECAUTIONARY STATEMENTS CAUTION-RESTRICTED USE

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for category F on an EPA chemical resistant category selection chart.

Applicators and other handlers must wear long sleeved shirt and long pants, chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber or viton gloves for cleaning equipment, mixing and loading, a chemical resistant apron for cleaning equipment, and mixing and loading, and shoes plus socks.

#### ENGINEERING CONTROL STATEMENT

When handlers use closed systems and 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.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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.

Aerial application is prohibited within 300 feet of residential areas (e.g., homes, schools, hospitals, shopping areas, etc.).

#### 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 thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### ENVIRONMENTAL HAZARDS

This pesticide is toxic to wildlife, invertebrates and fish. For terrestrial uses, do not apply to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment washwaters. Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

This product may not be mixed/loaded, or used within 50 ft. of all wells including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 ft. of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spill or equipment leaks, container or equipment rinse or wash-water, and rain-water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading sites.

States may have in effect additional requirements regarding well-head setbacks and operational area containment.

This product may not be mixed or loaded within 50 ft. of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 ft of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66-ft. buffer or setback from runoff entry points must be planted to crop, seeded with grass, or other suitable crop.

To ensure protection of surface water from runoff through standpipes and tile-outlets in terraced fields, one of the following options may be used:

Do not apply this product within 66 feet of standpipes in tile-outletted terraced fields.

- Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2-3 inches in the entire tile-outletted terraced field.
- Apply this product to the entire tile-outletted terraced field under a no-till practice only when high crop residue management practices are used. High crop residue management practice is described as a crop management practice where little or no crop residue is removed from the field during or after crop harvest.

#### 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.

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

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your State or Tribe, consult the agency responsible for pesticide regulation.

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#### AGRICULTURAL USE REQUIREMENTS

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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) and restricted entry intervals. 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 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involved contact with anything that has been treated, such as plants, soil or water, is coveralls chemical resistant gloves such as nitrile, viton or barrier laminate, shoes plus socks and protective eyewear.

#### 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 exposed to freezing temperatures, store at temperatures above 55° F for 24 hours or until completely thawed. Shake well before using.

#### DISPOSAL

#### **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

#### Plastic:

Triple rinse (or equivalent). Then 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. **Metal:** 

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.

#### **Returnable-Refillable Containers:**

This material may be repackaged in 15 or 30 gallon returnable-refillable containers by a registered establishment. After use, return the container to the point of purchase or designated locations. This container must only be refilled with BROX-At. Do not reuse the container for any other purpose. Prior to refilling, inspect thoroughly for damage such as cracks, punctures, abrasions and damaged or worn out threads on closure devices. Do not refill or transport damaged or leaking containers. Check for leaks after refilling and before transportation. If the container is not being refilled, return it to the point of purchase.

#### **GENERAL INFORMATION**

BROX-At contains the equivalent of 1 pound per gallon of octanoic acid ester of bromoxynil and 2 lbs. per gal. of atrazine.

BROX-At is a selective postemergence herbicide for control of important broadleaf weeds infesting field corn, popcorn, and sorghum. Optimum weed control is obtained when BROX-At is applied to actively growing weed seedlings. BROX-At is primarily a contact herbicide, therefore thorough coverage of the weed seedlings is essential for optimum control. BROX-At has limited residual activity. However, dependent on weather conditions following application, subsequent flushes of weeds may not be controlled by the initial treatment.

Occasional transitory leaf burn may occur. The temporary leaf burn is similar to that seen with liquid fertilizer. Because the activity of BROX-At is not systemic, recovery of the crop is generally rapid with no lasting effect.

#### 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 120 gallons or more of this product per day, you should use a mechanical transfer system for all mixing and loading operations. If this product is packaged in a 30 gallon drum, you should 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 should be used to rinse the empty container and to transfer the rinsate directly to the mixing or spray tank.

#### BROX-At Alone:

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

#### **Tank Mixtures:**

BROX-At 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 BROX-At in mixture with another product, fill the spray tank 1/2 to 3/4 full with clean water and begin agitation. Add the BROX-At first and mix thoroughly. Add the other product to the tank while maintaining agitation and add water to the spray tank to the desired level. 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.

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If tank mixing with products other than those listed 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 BROX-At.

#### SPRAYABLE LIQUID FERTILIZERS AND SPRAY ADDITIVES

BROX-At can be applied in combination with sprayable liquid fertilizer or spray additives such as surfactants or crop oil concentrate. When tank mixing with liquid fertilizer, always add the fertilizer to the spray tank first and agitate thoroughly before adding BROX-At.

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 BROX-At is evenly mixed with the fertilizer.

Caution: Fertilizers and spray additives can increase foliage leaf burn when applied with BROX-At. Do not apply fertilizers or spray additives with BROX-At if leaf burn is a major concern due to environmental conditions, crop or variety sensitivity to BROX-At.

#### **APPLICATION PROCEDURES**

BROX-At can be applied to registered use areas by ground, and aerial application equipment. Do not apply this product through any type of irrigation system.

#### **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 spray pressure of 40-60 psi are recommended. Other nozzle types and lower spray pressures that produce coarse spray droplets may not provide adequate coverage of the weeds to ensure optimum control. Raindrop® nozzles and flood nozzles are not recommended as weed control with BROX-At may be reduced.

In general, a spray volume of 10 to 20 gallons per acre (GPA) is recommended for optimum spray coverage. A minimum of 5 GPA with a minimum spray pressure of 50 psi and a maximum ground speed of 10 mph 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 ground speed of 10 mph is suggested if field conditions cause excessive boom movement during application which results in poor spray coverage. Ground applications made when dry, dusty field conditions exist may provide reduced weed control in wheel track areas. Applications using less than 10 gallons per acre may result in reduced weed control.

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. If you are unsure of the infestation level or size of crop, consult your local extension service.

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

#### **AERIAL APPLICATION**

Aerial application is prohibited within 300 feet of residential areas (e.g., homes, schools, playgrounds, shopping areas, hospitals, etc.).

Apply to non-residential turf only. Do not apply to residential, playground or schoolyard turf.

Do not apply with backpack or hand-held application equipment.

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.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- The distance of the outer most nozzles on the boom must not exceed <sup>3</sup>/<sub>4</sub> the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the <u>Aerial</u> <u>Drift Reduction Advisory Information</u>.

#### Aerial Drift Reduction Advisory Information

#### Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

#### **Controlling Droplet Size**

Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of nozzles - Use the minimum number of nozzles that provide uniform coverage.

- Nozzle orientation ~ Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### **Boom Length**

For some use patterns, reducing the effective boom length to less than <sup>3</sup>/<sub>4</sub> of the wingspan or rotor length may further reduce drift without reducing swath width.

#### **Application Height**

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### Swath Adjustment

When applications are made with a crosswind, the swath will be placed downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.)

#### Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided at wind speeds below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### **Temperature and Humidity**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### **Temperature Inversions**

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light

variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by observing the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

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#### **Sensitive Areas**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

#### CULTIVATION

When properly utilized, timely cultivations may aid overall weed control efforts as well as crop growth. However, cultivation before or during BROX-At applications may place target weeds under stress, resulting in erratic weed control. Whenever BROX-At 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.

#### **GENERAL WEED LIST**

Postemergence application of BROX-At Herbicide will control the following weeds when sprayed in the seedling stage.

#### MOST SUSCEPTIBLE BROADLEAF WEED SPECIES

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

#### SUSCEPTIBLE BROADLEAF WEED SPECIES

Buffalobur (Solanum rostratum)	Pitted Morningglory (Ipomaea lacunosa)
Burcucumber (Sicyos angulatus)	Pokeweed (Phytolacca americana)
Common Groundsel (Senecio vulgaris)	Prostrate Knotweed (Polygonum aviculare)

Common Ragweed (Ambrosia artemisiifolia)	Puncture Vine (tribulus terrestris)
Corn Chamomile (Anthemis arvensis)	Redroot Pigweed (Amaranthus retroflexus)
Corn Gromwell (Lithospermum arvense)	Russian Thistle (Salsola kali)
Cow Cockle (Saponaria vaccaria)	Spiny Pigweed (Amaranthus spinosus)
Giant Ragweed (Ambrosia trifida)	Tall Morningglory (Ipomoea purpurea)
Hemp Sesbania (Sesbania exaltata)	Tall Waterhemp (Amaranthus tuberculatus)
Ivyleaf Moringglory (Ipomoea hederacea)	Tumble Mustard (Sisymbrium altissimum)
Knawel (Scleranthus annus)	Velvetleaf (Abutilon theophrasti)
Kochia (Kochia scoparia)	Venice Mallow (Hibiscus trionum)
London Rocket (Sisymbrium irio)	Wild Mustard (Sinapsis arvensis)
Marestail (Conza canadensis)	Wild Radish (Raphanus raphanistrum)
Mayweed (Anthemis cotula)	

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#### WEED SUPPRESSION

Bromoxynil +Atrazine suppresses the growth of Canada thistle (Cirsium arvense) by burning down top growth. Regrowth may occur.

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

## BROX-At RECOMMENDATIONS

Postemergence application to corn and sorghum must be made before corn and sorghum reaches 12 inches in height.

		APPLICATION TIMING AND SPECIFIC COMMENTS		
PRODUCT	RATE	CROP	WEEDS	
Bromoxynil +Atrazine	Preemergence 1 1/2-3 pints/A	Apply to corn or sorghum before planting until just prior to crop emergence.	See Application Rate Table for list weeds and corresponding maximum stage of growth that are controlled by BROX-At Herbicide at 1 1/2, 2 or 3 pts. per acre.	
	1 1/2-2 pints/A	Apply to corn after emergence but before corn is 12 inches tall. Apply to sorghum after the 3 leaf stage but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first.		

3 pints/A	Apply to corn between the 4 leaf stage but before corn is 12 inches tall.
	Apply to sorghum after the 4 leaf stage but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first.

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# APPLICATION RATE TABLE FOR CORN AND SORGHUM

WEED SPECIES	BROX-At RATE					
	1 1/2 pints/A 2 pints/A		3 pints/A			
When determining leaf	Maximum	Maximum	Maximum	Maximum	Maximum	Maximum
stage, count all leaves	Leaf Stage	Weed	Leaf Stage	Weed	Leaf Stage	Weed
except cotyledonary	(Inches)	Height	(Inches)	Height	(Inches)	Height
leaves.		(Inches)		(Inches)		(Inches)
Black Nightshade	4	4	6	6	6	6
(Solanum nigrum)	[				(	1
Buffalobur	4	4	6	4	6	4
(Solanum rostratum)	)				}	
Burcucumber	-	-	4	4	4	4
(Sicyos angulatus)		}				
Canada Thistle <sup>1</sup>		-	8 inch to	bud stage	8 inch to	bud stage
(Cirsium arvense)						-
Common Cocklebur	6	8	8	10	10	12
(Xanthium	{	}	1	5	4	(
pensylvanicum)			1		{	ļ
Common	-	6	-	10	-	12
Lambsquarter		}	[	}	ļ	)
(Chenopodium album)						
Common Ragweed	6	4	8	6	8	6
(Ambrosia			-	1		
artemisiifolia)					}	
Eastern Black	4	4	6	6	6	6
Nightshade	}		ł	l	-	1
(Solanum ptycanthum)	l		<u> </u>	<u> </u>		<u> </u>
Entireleaf morningglory	-	-	4	3	4	3
(Ipomoea hedevacea)	[ 	[	<b>[</b>	Ĺ	ļ	
Giant Ragweed	4	6	6	8	6	8
(Ambrosia trifida)			<u> </u>	<b></b>	 *	
Hemp Sesbania	4	4	4	4	} 4	4
(Sesbania exaltata)				<b> </b>		
Ivyleaf Morningglory	3	3	4	4	4	4
(Ipomoea hederacea)	· · · · · · · · · · · · · · · · · · ·	<u> </u>	L			<u></u>
Jimsonweed	4	4	6	6	6	6
(Datura stramonium)	 					
Kochia	( -	2	-	2	-	4
(Kochia scoparia)	<u> </u>	<b></b>	<u> </u>	ļ	·	<u> </u>
Ladysthumb	4	4	6	6	8	8
(Polygonum persicaria)	ļ. <u> </u>	<b>↓</b>	<u> </u>		ļ	<u> </u>
Marestail	} -	-	-	5	-	5
(Conza canadensis)	}				<b></b>	 
Palmleat Morningglory	} -	-	4	3	4	3
(Ipomoea wrightii)	l	<u> </u>	L	]	L	<u> </u>

WEED SPECIES	BROX-At RATE					
	1 1/2 pints/A 2 pints/A 3 pints/A			its/A		
When determining leaf	Maximum	Maximum	Maximum	Maximum	Maximum	Maximum
stage, count all leaves	Leaf Stage	Weed	Leaf Stage	Weed	Leaf Stage	Weed
except cotyledonary	(Inches)	Height	(Inches)	Height	(Inches)	Height
leaves.		(Inches)		(Inches)		(Inches)
Pennsylvania	4	4	6	6	8	8
Smartweed					{	
(Polygonum			1			
pensylvanicum)						
Pitted Morningglory	3	3	4	4	4	4
(Ipomoea lacunosa)						·
Pokeweed	4	4	6	6	6	6
(Phytolacca	1		]			
americana)						
Prickly Sida	-	-	4	1	6	2
(Sida spinosa)			<u> </u>			
Puncturevine	-	-	-	-	6	
(Tibulus terrestris)						
Purple Morningglory	-	-	2	3	2	3
(Ipomoea muricata)				í		
Redroot Pigweed <sup>2</sup>	4	2	6	4	8	6
(Amaranthus			}	ļ	]	]
retroflexus)						
Small Flower		-	4	3	4	3
Morningglory			ł			ł
(Jacquemontia				]		
tamnifolia)						
Smooth Pigweed <sup>2</sup>	4	2	4	2	6	4
(Amaranthus hybridus)	<u> </u>		<u> </u>		<u></u>	<u> </u>
Spiny Pigweed <sup>2</sup>	4	2	6	4	8	-6
(Amaranthus spinosus)						· · · · · · · · · · · · · · · · · · ·
Sunflower	6	8	8	10	10	12
(Helianthus annus)		<u> </u>				
Tall morningglory	3	3	4	4	4	4
(lpomoea purpurea)						
Tall Waterhemp <sup>2</sup>	4	2	6	4	8	6
(Amaranthus	1			Ì	l l	1
tuberculatus)	·	L				
Toothed spurge	-	-	4	4	4	4
(Euphorbia dentata)						
Velvetleaf	4	3	6	5	8	6
(Abutilon theophrasti)	]	1	1	ļ	· ·	1

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WEED SPECIES	BROX-At RATE					
	1 1/2 p	oints/A	2 pir	nts/A	3 pin	its/A
When determining leaf stage, count all leaves except cotyledonary leaves.	Maximum Leaf Stage (Inches)	Maximum Weed Height (Inches)	Maximum Leaf Stage (Inches)	Maximum Weed Height (Inches)	Maximum Leaf Stage (Inches)	Maximum Weed Height (Inches)
Venice mallow (Hibiscus trionum)	4	2	4	2	4	2
Wild Buckwheat (Polygonum convolvulus)	6	8	8	10	10	12
Wild Mustard (Sinapis arvensis)	4	4	4	4	4	4

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<sup>1</sup>BROX-At suppresses the growth by burning down of top growth. Regrowth may occur. <sup>2</sup>If pigweeds (Amaranthus spp.) present in the field to be treated have been identified as triazine resistant biotypes, use BROX-At Herbicide only at 3 pints/A. Control of pigweeds in the high plains areas of Texas and Oklahoma may not be satisfactory with BROX-At Herbicide. Repeat applications may be necessary to achieve satisfactory control in these areas. Applications should be made when pigweeds do not exceed the 4 leaf stage and 2 inches in height.

#### **BROX-At TANK MIXTURE RECOMMENDATIONS**

		APPLICATION TIMING AND SPECIFIC COMMENTS				
PRODUCT	RATE	CROP	WEEDS			
BROX-At + Banvel® <sup>1</sup>	1 1/2-2 pints per acre +	Apply to field corn after emergence but before corn is 12" tall.	All weeds controlled by BROX-At at recommended rates of			
	1/8-1/4 per acre	Apply to sorghum between the 3 leaf stage but prior to the preboot stage (growth stage 4) or 12" in height, whichever comes first. Use drop nozzles if crop is taller than 8".	application plus improved control of pigweed. For field bindweed suppression, use 1/4 pint /A of Banvel® with BROX- At.			
	3 pints per acre + 1/8-1/4 pint per acre	Apply to field corn between the 4 leaf stage and before corn is 12" tall.				
		Apply to sorghum between the 4 leaf stage but prior to the pre-boot stage (growth stage 4) or 12" in height, whichever comes 1st. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8".				

<sup>1</sup>Clarity® may be used at the same rates as Banvel® in a tank mixture on corn. These mixtures must be applied before corn exceeds 8 inches in height. Do not use Clarity® in a tank mixture with BROX-At on sorghum.

APPLICATION TIMING AND SPECIFIC COMMENTS PRODUCT RATE CROP WEEDS **BROX-At** All weeds controlled by BROX-1 1/2-2 pints per Apply to field corn after emergence but before corn is 12" At at recommended rates of acre 2.4-D tall. Use drop nozzles if crop is application plus improved + 1/16-1/4 lb ai per taller than 8". control of devils claw, kochia, field bindweed suppression, acre and Canada thistle burndown. Apply to sorghum between the 3 leaf stage but prior to the preboot stage (growth stage 4) or 12" in height, whichever comes first. Use drop nozzles if crop is taller than 8". Apply to field corn between the 3 pints per acre 4 leaf stage but before the corn + 1/16-1/4 lb ai per is 12" tall. Use drop nozzles if crop is taller than 8". acre Apply to sorghum after the 4 leaf stage but prior to the preboot stage (growth stage 4) or 12" in height, whichever comes first. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8". BROX-At 1 1/2-2 pints per Apply to field corn after emer-All weeds controlled by BROXgence but before corn is 12" At at recommended rates of acre + Stinger® tall. application plus improved 1/3-2/3 pints per Canada thistle burndown. For optimum performance, apply to acre Canada thistle at least 4" in diameter or height but before bud stage. 3 pints per acre Apply to field corn between the 4 leaf stage and before corn is 1/3-2/3 pint/acre 12" tall.

		APPLICATION TIMING AND SPECIFIC COMMENTS		
PRODUCT	RATE	CROP	WEEDS	
BROX-At	1 1/2-2 pints per	Apply to field corn after pree-	All broadleaf weeds controlled	
+	acre	mergence or postemergence	by BROX-At plus grasses and	
Accent®	+	but before corn is 12" tall. Do	broadleaves controlled by	
+	2/3 oz per acre	not apply this tank mix to	Accent. For optimum weed	
Non-ionic	+	sorghum.	control, treat when broadleaves	
surfactant	1 qt. per 100 gals.		and grasses are in the	
	of water		recommended growth stage or	
	(0.25% v/v)		size. Follow the weed size	
		4	guideline on the BROX-At or	
		•	Accent labels that are least	
			restrictive.	
	3 pints per acre	Apply to field corn between the		
	+	4 leaf stage of crop growth but		
	2/3 oz. per acre	before corn is 12" tall. Do not		
}	+	apply this tank mix to sorghum.		
	1 qt/100 gal. of			
	water			
]	(0.25% v/v)	l,	ļ	

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#### Restrictions and Precautions: Corn (Field and Pop) and Sorghum (Grain and Forage)

Postemergence applications of BROX-At will not adequately 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 leaf burn. Do not use BROX-At on sorghum grown in sandy or loamy sand soils as excessive crop injury may occur.

Seed corn producers should consult the respective seed corn company regarding tolerance of seed production inbred lines to BROX-At.

Do not cut crop for feed or graze within 45 days after application.

A second application of BROX-At may be applied if a new flush of weeds occurs following the first application. The total cumulative rate should not exceed 4 pints/A per season.

Do not use BROX-At on any crop other than stated on this label.

Application to grain sorghum growing under stress caused by minor element deficiency or to grain sorghum growing on highly calcareous soil may result in crop injury.

- Special care should be taken when using BROX-At and Banvel®, Clarity®, or 2,4-D tank mixtures to avoid off-target drift to sensitive crops.
- Tank mixtures with 2,4-D, Banvel®, or Clarity® can cause stalk brittleness to field corn. Tank mixtures with 2,4-D and Banvel® can cause stalk brittleness to sorghum. Winds or cultivation may cause breakage while crop is brittle.
- Do not apply BROX-At at any rate to sorghum which has reached the boot stage of growth as severe crop injury, including loss of crop yield, may result.
- Postemergence application prior to the 3 leaf stage of corn may result in increased crop leaf burn.

- Do not apply BROX-At prior to the 3 leaf stage to seed corn inbreds or popcorn as excessive crop leaf burn may occur.
- Tank mixtures with Accent® + nonionic surfactant may result in increased crop leaf burn. Use of crop oil concentrate, nitrogen solution or other adjuvants with BROX-At + Accent® tank mixtures may result in a further increase in crop leaf burn.

#### **CROP ROTATION**

BROX-At contains bromoxynil at 3/16 active per pint of product. The plantback interval for bromoxynil on corn and sorghum is 30 days. BROX-At contains atrazine at 1/4 lb active per pint of product. Due to the residual activity of the atrazine, injury to crops planted in treated fields the following season may occur. Consult your local extension service on the potential for atrazine carryover injury to rotational crops for your soil types and weather conditions encountered following application. If in doubt about your specific situation, a soil test prior to planting rotation crops is recommended after the 30-day plantback to determine the amount of atrazine remaining and its potential to cause injury to the intended crop.

#### ATRAZINE RATE RESTRICTIONS

Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or higher set-backs) which are different from the label, the more restrictive/protective requirements apply.

#### PRE-PLANT/PREEMERGENCE USE

This product contains atrazine at 0.25 lb ai per pint. If BROX-At is applied preplant or preemergence with appropriately registered products containing atrazine, the following restrictions apply: On highly erodible soils where conservation tillage is utilized ( $\geq$  30% plant residue), the maximum allowable atrazine rate per growing season is 2.0 lb ai/A. On highly erodible soils where plant residue is less than 30%, the maximum allowable atrazine rate is 1.6 lb. ai/A. On soils not highly erodible, the maximum allowable soil-applied atrazine rate is 2.0 lb ai/A.

#### POSTEMERGENCE USE

This product contains atrazine at 0.25 lb ai per pint. Where there has been no previous atrazine soil application to the crop, if BROX-At is applied postemergence with appropriately registered products containing atrazine, the total amount of atrazine applied cannot exceed 2.0 lbs ai/A. Where a previous soil application of atrazine has been made to the crop, if BROX-At is applied postemergence with appropriately registered products containing atrazine, the total amount of atrazine atrazine, the total amount of atrazine has been made to the crop, if BROX-At is applied postemergence with appropriately registered products containing atrazine, the total amount of atrazine applied cannot exceed 2.5 lb ai/A per calendar year.

#### WARRANTY LIMITATIONS AND DISCLAIMER

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the Directions for Use when used under normal conditions. This is the only warranty made on this product. No other express and no implied warranty of merchantability or fitness for a particular purpose is made outside of this label. Therefore, neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions (including conditions noted on the label, such as

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unfavorable temperatures, soil conditions, etc.), under abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes, etc.) or under conditions not reasonably foreseeable to or beyond the control of seller.

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When buyer or user suffers losses or damages resulting from the use or handling of this product (including claims based on contract, negligence, strict liability, or other legal theories), buyer or user must promptly notify seller, in writing, of any claims to be eligible to receive either remedy given below. The exclusive remedy of the buyer or user and the limit of liability of seller will be one of the following, at the election of the seller:

- 1. Refund of purchase price paid by buyer or user for product bought or
- 2. Replacement of amount of product used.

The seller will not be liable for consequential or incidental damages or losses.

The terms of this Warranty Limitations and Disclaimer cannot be varied by any written or verbal statements or agreements. Any employee or sales agent of the seller is not authorized to vary or exceed the terms of this Warranty Limitations and Disclaimer in any manner.