

# Asulox<sup>®</sup>

## Herbicide

**FOR AGRICULTURAL OR COMMERCIAL USE ONLY**

**NOT FOR USE BY HOMEOWNERS**

For Postemergent Weed Control in Sugarcane, Turf, Ornamentals, Christmas Tree Plantings and Non-Cropland

**ACTIVE INGREDIENT:** Sodium salt of asulam (methyl sulfanylcabamate)\* ..... 36.2%

**OTHER INGREDIENTS:** ..... 63.8%

**TOTAL:** ..... 100.0%

\*Equivalent to 33.1% asulam or not less than 3.34 lbs. per gallon.

## KEEP OUT OF REACH OF CHILDREN CAUTION

FOR ADDITIONAL PRECAUTIONARY STATEMENTS: See Inside Booklet.

FIRST AID	
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact the Rocky Mountain Poison Center at 1-866-673-6671 for emergency medical treatment information.</b>	

**FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident,  
call CHEMTREC 1-800-424-9300**



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EPA Reg. No. 70506-139  
EPA Est. No. \_\_\_\_\_

**PRECAUTIONARY STATEMENTS  
HAZARD TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers must wear long-sleeved shirt and long pants, chemical-resistant gloves (such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate), and shoes plus socks. 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.

**ENGINEERING CONTROL STATEMENTS**

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

**User Safety Recommendations**

Users should leave the treated area, remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should 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 chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination. Surface water contamination may occur in areas with poorly draining soils and little or no buffers or in areas where drainage systems flow directly to surface water.

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not clean equipment or dispose of equipment washwater in a manner that will contaminate resources. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

**DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read entire label before using this product.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) 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 12 hours.

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

## STORAGE AND DISPOSAL

**PESTICIDE STORAGE:** Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. Store at temperatures above 20° F.

**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. Puncture and dispose of in a sanitary landfill, by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**RETURNABLE/REFILLABLE CONTAINERS:** After use, return the container to the point of purchase or designated locations. This container must only be refilled with ASULOX Herbicide. **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 INSTRUCTIONS AND INFORMATION

### APPLICATION INSTRUCTIONS

Do not apply ASULOX® Herbicide through any type of irrigation systems.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

### SPRAY DRIFT

**SENSITIVE AREAS:** This herbicide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitats for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

**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 is responsible for considering all these factors when making decisions.

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

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. 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 [Aerial Drift Reduction Advisory Information](#).

**INFORMATION ON DROPLET SIZE:** (This section is advisory in nature and does not supersede the mandatory label requirements)

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 below).

**CONTROLLING DROPLET SIZE:** (This section is advisory in nature and does not supersede the mandatory label requirements)

- 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:** (This section is advisory in nature and does not supersede the mandatory label requirements)

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

**APPLICATION HEIGHT:** (This section is advisory in nature and does not supersede the mandatory label requirements) Applications should not be made at a height greater than 10 feet above the top of the target 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:** (This section is advisory in nature and does not supersede the mandatory label requirements) When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator should 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:** (This section is advisory in nature and does not supersede the mandatory label requirements) Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided 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:** (This section is advisory in nature and does not supersede the mandatory label requirements)

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:** (This section is advisory in nature and does not supersede the mandatory label requirements)

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 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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## SUGARCANE

ASULOX Herbicide can be applied to either plant cane or cane grown from stubble. Apply ASULOX as a water mix spray for ground applications. Use 15 to 100 gallons of water per acre, depending on local practice. For aerial application, ASULOX Herbicide should be mixed in 3 to 5 gallons of water per acre, except in Hawaii, where 5 to 10 gallons of water per acre should be used.

Addition of an adjuvant cleared for use on growing crops to the ASULOX Herbicide water mix spray will improve weed control when environmental conditions are not optimal. Use either a non-ionic surfactant containing a minimum of 80% active ingredient at the rate of 1 to 2 quarts per 100 gallons (0.25 to 0.5% V/V) of water mix spray or a crop oil concentrate containing 80 to 85% paraffin based petroleum oil and 15 to 20% non-ionic surfactant at the rate of 4 quarts per 100 gallons (1% V/V) of water mix spray.

The rates of ASULOX Herbicide given below are for broadcast applications. For banded application, reduce the rate proportionally to the width of the band according to the following formula:

$$\frac{\text{BAND WIDTH (inches)}}{\text{ROW WIDTH (inches)}} \times \text{Broadcast Rate} = \text{Band Rate/Acre}$$

For spot treatments, use a 5% v/v ASULOX spray (1 gallon per 20 gallons of water). Do not exceed 8 pints of ASULOX per acre per treatment.

## Single Application Per Growing Season

WEED SPECIES	SPECIAL INSTRUCTIONS	RATE
Itchgrass or Raoulgrass ( <i>Rottboellia exaltata</i> )	Apply when the grass is 8 inches tall or less (addition of surfactant is necessary).	8 pints/acre
Johnsongrass ( <i>Sorghum halepense</i> )	Apply when the grass is between 12 to 18 inches tall. Johnsongrass should be actively growing and the average air temperature should be at least 60°F or higher.	
Paragrass or Californiagrass ( <i>Brachiaria mutica</i> or <i>Panicum purpurascens</i> )	Apply when the grass is 6 to 8 inches tall or less.	
Crabgrass ( <i>Digitaria spp.</i> )	If treatment is made before the grass reaches seed head formation then the lower rate should be used. If the grass is in early seed head formation then the higher rate should be used.	6 to 8 pints/acre
Alexandergrass ( <i>Brachiaria plantaginea</i> ) Foxtail ( <i>Setaria spp.</i> ) Goosegrass ( <i>Eleusine indica</i> ) Broadleaf Panicum ( <i>Panicum adspersum</i> ) Barnyardgrass ( <i>Echinochloa crusgalli</i> )	If treatment is made when the grass is 6 to 8 inches tall or less, then the lower rate should be used. If the grass is greater than 8 inches tall, then the higher rate should be used.	

## Two Applications Per Growing Season

This may be required when initial weed infestations are heavy and/or when rhizome Johnsongrass is present. Two applications may also be used when treating weed species which germinate at different times during one growing season.

WEED SPECIES	SPECIAL INSTRUCTIONS	1ST APPLICATION	2ND APPLICATION
Crabgrass ( <i>Digitaria spp.</i> )	At each application the grass should be treated before seed head formation.	6 to 8 pints/acre	6 to 8 pints/acre
Itchgrass or Raoulgrass ( <i>Rottboellia exaltata</i> )	At each application the grass should be 8 inches tall or less (Addition of surfactant is necessary).	8 pints/acre	8 pints/acre
Johnsongrass ( <i>Sorghum halepense</i> )	At each application the grass should be between 12 and 18 inches tall.	8 pints/acre	8 pints/acre

## RESTRICTIONS AND PRECAUTIONS: Sugarcane

- ASULOX Herbicide should be used when the weeds are actively growing.
- Cover crops may be planted if plowed under and not grazed.
- The following pre-harvest intervals for ASULOX Herbicide applications to sugarcane must be observed: 1) Mainland U.S.A. (except Louisiana) – 140 days; 2) Louisiana only – 100 days; 3) Hawaii – 400 days.
- Do not graze or feed sugarcane fodder and forage to livestock.
- Cultivation and/or fertilizer applications or any other cultural practice that disturbs the root system of targeted weed species may result in less than optimum control when applying ASULOX Herbicide. These practices are not recommended within 7 days prior to or within 7 days after applications of ASULOX Herbicide.
- Differences in crop tolerance to ASULOX among Sugarcane varieties has been reported in Louisiana. Contact your local County Agent or University Extension Specialist for further information.

## NON-CROPLAND

ASULOX Herbicide may be used as a postemergent treatment to control weeds on non-cropland areas such as:

Boundary fences	Railroad rights-of-way and yards
Fence rows	Storage areas and industrial plant sites
Highway and roadside rights-of-way	Utility rights-of-way and yards
Lumberyards	Warehouse lots
Pipeline rights-of-way	

A surfactant may be added to the spray solution at 0.25% by volume. (Use an approved non-ionic surfactant.)

Apply ASULOX as a single water-mix spray for ground applications using 20 to 100 gallons of solution per acre, depending on local practice, to control the following weed species. Apply one application per season. Aerial application is prohibited.

WEED SPECIES	SPECIAL INSTRUCTIONS	RATE
Crabgrass ( <i>Digitaria spp.</i> )	Apply before the grass reaches seed head formation.	1 gal/acre
Johnsongrass ( <i>Sorghum halepense</i> )	Apply when the grass is 18 inches or taller. Use the higher rate in well established heavy infestations. For spot treatment in Hawaii, use the higher rate in 100 gallons of solution and apply an amount not to exceed 50 gallons of total solution per acre.	
Paragrass or Californiagrass ( <i>Brachiaria mutica</i> or <i>Panicum purpurascens</i> )	Apply before the grass reaches seed head formation. For spot treatment in Hawaii, use the same rate in 100 gallons of solution and apply an amount not to exceed 50 gallons of total solution per acre.	
Western Bracken ( <i>Pteridium aquilinum</i> var. <i>pubescens</i> )	Apply when the fern is in full frond.	7 to 8 pints/acre

### CHRISTMAS TREE PLANTINGS

ASULOX Herbicide may be used as a postemergent treatment in Christmas Tree Plantings where Douglas Fir, Grand Fir, Noble Fir or Scotch Pine are grown. Do not graze or feed foliage from treated areas to livestock.

ASULOX Herbicide should be applied as a water mix spray. For ground application, use a minimum of 20 gallons of solution per acre. Do not use a wetting agent with ASULOX Herbicide. Apply one application per season. Aerial application is prohibited.

WEED SPECIES	SPECIAL INSTRUCTIONS	RATE
Western Bracken ( <i>Pteridium aquilinum</i> var. <i>pubescens</i> )	Apply after bud break and hardening or firming of new tree growth. Bracken should be in full frond prior to treatment.	1 gal/acre

### TURF (Sod Farms Only)

ASULOX Herbicide can be applied on St. Augustinegrass and Tifway 419 Bermudagrass turf. Apply one application per season postemergence to the weeds listed below. Use 20 to 50 gallons of water per acre in the spray solution.

TURF SPECIES	WEED SPECIES	RATE
St. Augustinegrass	Bullgrass ( <i>Paspalum supinum</i> ), Crabgrass ( <i>Digitaria sp.</i> ), Goosegrass ( <i>Eleusine indica</i> )	5 pints/acre
Tifway 419 Bermudagrass	Sandbur ( <i>Cenchrus sp.</i> )	

Do not use a surfactant. Do not apply to turf which is under stress or freshly mowed.

### ORNAMENTALS

ASULOX Herbicide can be applied as a single, postemergent, broadcast application on the following ornamentals:

JUNIPERS		YEWS
Juniperus andorra	Juniperus horizontalis	Taxus cuspidata
Juniperus chinensis	Juniperus litoralis	Taxus media
Juniperus conferta	Juniperus sabina	Podocarpus macrophyllus

Treatment should be made with a minimum of 20 gallons of water per acre. Do not use a surfactant.

WEED SPECIES	SPECIAL INSTRUCTIONS	RATE
Barnyardgrass ( <i>Echinochloa crusgali</i> ) Crabgrass ( <i>Digitaria sp.</i> ) Fall Panicum ( <i>Panicum dichotomiflorum</i> ) Foxtails ( <i>Setaria sp.</i> ) Goosegrass ( <i>Eleusine indica</i> ) Horseweed (marestalk) ( <i>Conyza canadensis</i> )	Apply when the weeds are between the stages of early seedling and early seed head formation.	1 gal/acre



Local conditions may affect the use of this chemical. Consult State Agricultural Extension or Experiment Station weed specialists for specific recommendations for local weed problems and for information on possible lower dosages.

**IMPORTANT INFORMATION**  
**READ BEFORE USING PRODUCT**

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

To the extent consistent with applicable law, United Phosphorus, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or United Phosphorus, Inc., and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, UNITED PHOSPHORUS, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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