

ASULAM Liquid 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
sulfanilylcarbamate) 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

See [Side] [Back] Panel For Additional Precautions

FIRST AID	
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
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 eye. Call a poison control center or doctor for treatment advice.
EMERGENCY TELEPHONE NUMBERS: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact: (800) 424-9300 CHEMTREC (transportation and spills) (800) 832-HELP (4357) (human health) (800) 345-4735 ASPCA (animal health)	

EPA Reg. No. 51036-267
AD 081799

EPA Est. No. 51036-GA-001

ACCEPTED

DEC 15 2005

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

REGISTRATIONS/AMENDMENTS/ASULAM (267) First Aid Clean

51036-267

Manufactured For:
MICRO FLO COMPANY LLC
P.O. BOX 772099
MEMPHIS, TN 38117

PRECAUTIONARY STATEMENTS

CAUTION

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if absorbed through skin. Avoid contact with skin, eyes, 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

Applicators and other handlers must wear:

- 1. Long-sleeved shirt and long pants
- 2. Chemical resistant gloves (such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate)
- 3. Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining personal protective equipment. If no such instructions for washables, use detergent and hot water. Keep and wash personal protective equipment 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 for agricultural pesticides [40 CFR 170.24 (d) (4-6)], the handler personal protective equipment requirements may be reduced or modified as specified in the Worker Protection Standard.

USER SAFETY RECOMMENDATIONS

Users should leave the 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

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.

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.

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 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.

Personal Protective equipment 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 are:

1. Coveralls.
2. Chemical resistant gloves.
3. Shoes plus socks.

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STORAGE AND DISPOSAL

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 Asulam 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. For information on the disposal of unused, unwanted product, contact Micro Flo Company at 1-800-451-8461. If the container is not being refilled, return it to the point of purchase.

GENERAL INSTRUCTIONS AND INFORMATION

APPLICATION INSTRUCTIONS

Do not apply ASULAM Liquid Herbicide through any type of irrigation system.

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

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.

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.

AERIAL DRIFT REDUCTION ADVISORY

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops

Where states have more stringent regulations, they should be observed

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 1/4 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 cross-wind, the swath will be displaced 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 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 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.

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).

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.

SUGARCANE

ASULAM Liquid Herbicide can be applied to either plant cane or cane grown from stubble. Apply as a water mix spray for ground applications. Use 15 to 100 gallons of water per acre, depending on local practice. For aerial application, ASULAM Liquid 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 ASULAM Liquid 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 the rate of 4 quarts per 100 gallons (1% V/V) of water mix spray.

The rates of ASULAM Liquid 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:

Band width (inches)
Row width (inches) X Broadcast rate = Band Rate/Acre

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

SUGARCANE
Single Application Per Growing Season

WEED SPECIES	SPECIAL INSTRUCTIONS	RATE
Itchgrass or Raoulgrass (Rottboellia exaltata)	Apply when the grass is 8 inches tall or less addition of surfactant is necessary)	8 pints/acre
Johnsongrass (Sorghum halepense)	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 (Brachiaria mutica or Panicum purpurascens)	Apply when the grass is between 6 to 8 inches tall or less.	
Crabgrass (Digitaria spp.)	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 rater should be used.	6 to 8 pints/acre
Alexandergrass (Brachiaria plantaginea), Foxtail (Setaria spp.), Goosegrass (Eleusine indica), Broadleaf Panicum (Panicum adspersum), Barnyardgrass (Echinochloa crusgalli)	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.	

SUGARCANE
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

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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 (Digitaria spp.)	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 (Rottboellia exaltata)	At each application the grass should be 8 inches tall or less (addition of surfactant is necessary).	8 pints/acre	8 pints/acre
Johnsongrass (Sorghum halepense)	At each application the grass should be between 12 and 18 inches tall.	8 pints/acre	8 pints/acre

RESTRICTIONS AND PRECAUTIONS: SUGARCANE

- ASULAM Liquid Herbicide should be used when the weeds are actively growing.
- Cover crops may be planted if plowed under and not grazed.
- Do not treat sugarcane within:
 1. 140 days (Mainland USA, except Louisiana)
 2. 100 days (Louisiana only)
 3. 400 days (Hawaii only)
- 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 ASULAM Liquid Herbicide. These practices are not recommended within 7 day prior to or within 7 days after applications of ASULAM Liquid Herbicide.
- Differences in crop tolerance to ASULAM Liquid Herbicide among sugarcane varieties has been reported in Louisiana. Contact you Local County Agent or University Extension Specialist for further information.

NON-CROPLAND

AERIAL APPLICATION IS PROHIBITED

ASULAM Liquid Herbicide may be used as a post-emergent treatment to control weeds on non-cropland areas such as:

Boundary fences Railroad rights-of-way and yards

treated areas to livestock.

ASULAM Liquid Herbicide should be applied as a water mix spray. For ground application, use a minimum of 20 gallons of solution per acre; and for aerial application, use a minimum of 10 gallons of solution per acre. Do not use a wetting agent with ASULAM Liquid Herbicide.

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

TURF

FOR SOD FARM USE ONLY

ASULAM Liquid Herbicide can be applied on St. Augustine grass and Tifway 419 Bermuda grass turf. Apply one application per season post-emergence to the weeds listed below. Use 20 to 50 gallons of water per acre in the spray solution.

TURF SPECIES	WEED SPECIES	RATE
St. Augustine grass	Bullgrass (Paspalum supinum), Crabgrass (Digitaria spp.), Goosegrass (Eleusine indica)	5 pints/acre
Tifway 419 Bermudagrass	Sandbur (Cenchrus spp.)	

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

ORNAMENTALS

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

JUNIPERS	YEWS
Juniperus andorra Juniperus chinensis Juniperus conferta Juniperus horizontalis Juniperus litoralis Juniperus sabina	Taxus cuspidata Taxus media 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 (Echinochloa crusgali), Crabgrass (Digitaria spp.), Fall Panicum (Panicum dichotomiflorum), Foxtails (Setaria spp.), Goosegrass (Eleusine indica), Horseweed (marestalk) (Conyza canadensis)	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.

CONDITIONS OF SALE AND LIMITED WARRANTY

The Directions For Use of this product reflects the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of MICRO FLO COMPANY (MICRO FLO) or the SELLER. All such risks shall be assumed by the Buyer.

MICRO FLO warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions For Use, subject to the inherent risks, referred to above.

MICRO FLO MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT PERMITTED BY LAW, MICRO FLO AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. MICRO FLO and the SELLER offer this product, and the Buyer and User accept it, subject to the foregoing Conditions of Sale and Warranty which may be varied only by agreement in writing signed by a duly authorized representative of MICRO FLO.