

9779-342

PM-23

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# Riverside® Asulam 3.3 Herbicide

ACTIVE INGREDIENT	
Sodium salt of asulam (methyl sulfanylylcarbamate)* .....	36.2%
INERT INGREDIENTS.....	63.8%
Total	100.00%

\* Equivalent to 33.0% asulam acid or 3.30 lb asulam per gallon (or 397 g/L).

For Agricultural Or Commercial Use Only, Not For Use By Homeowners.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**STOP -- READ LABEL BEFORE USING**

**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.

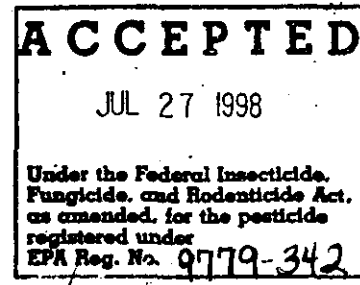
The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outermost 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.

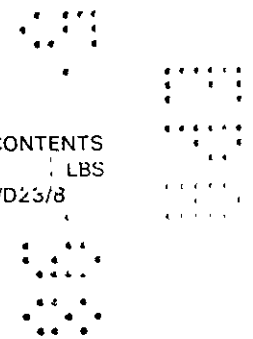
EPA Reg. No. 9779-342



EPA Est. No.

Manufactured For  
TERRA INTERNATIONAL, INC.  
P.O. Box 6000, Sioux City, Iowa 51102-6000  
*Riverside Serves Agriculture. Agriculture Serves Everyone.*

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LBS  
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**STATEMENT OF PRACTICAL TREATMENT**

**IF IN EYES:** Flush with plenty of clean running water for 15 minutes. Get medical attention if irritation persists.  
**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention if irritation persists.  
**IF SWALLOWED:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching the back of the throat with a finger. If a person is unconscious do not give anything by mouth and do not induce vomiting.  
**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Harmful if swallowed, inhaled or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and laundry before reuse. Heavily contaminated clothing should be removed immediately and incinerated or burned if allowed by State Authorities, or disposed of in a sanitary landfill, and should not be laundered.

**Personal Protective Equipment:**

Applicators and other handlers must wear the following Personal Protective Equipment: coveralls, chemical resistant gloves, shoes and 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 Controls Statement:**

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) (4-5)), the handler PPE requirements may be reduced or modified as specified in the WPS. However, full PPE must be available in the event that the handler exits the aircraft, enclosed cab, etc., prior to the REL.

**USER SAFETY STATEMENTS**

Users must wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users must leave the treated area, and remove clothing immediately if pesticide gets inside. Users must remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing. Wash the outside of gloves before removing.

**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 contaminate water by cleaning of equipment or disposal of equipment washwaters. Do not apply when weather conditions favor drift from target area. Do not contaminate water when disposing of equipment washwaters and rinsate.

**GROUND WATER ADVISORY**

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 ADVISORY**

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

Read entire label before using this product.

Do not use this product through any type of irrigation system.



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**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 interval. 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. 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, wear: coveralls, chemical resistant gloves, shoes and socks.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow others to enter the treated area until sprays have dried.

**STORAGE AND DISPOSAL**

**DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE OR DISPOSAL.**

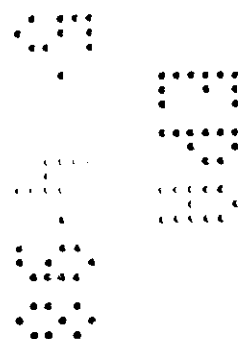
**STORAGE**

Store in a dry location away from children, animals, foods, feeds, seeds, or other agricultural chemicals. Store at temperatures greater than 20°F. Keep container closed when not using. Keep storage area locked when not in use. In the event of spillage or leakage, soak up material with absorbent clay, sand, sawdust, or other absorbent material. Scrape up and dispose of in accordance with information given under PESTICIDE DISPOSAL. Repackage and relabel useable product in a sound container. In case of fire or other emergency, report at once by toll-free telephone to (800)424-9300.

**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:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities, such as burning. If burned, stay out of smoke.



**SPRAY DRIFT ADVISORY**

**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 3/4 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 crosswind, 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).

**SUGARCANE:**

**RESTRICTIONS AND PRECAUTIONS:** Cover crops may be planted if they are plowed under and not grazed. Do not treat sugarcane within 90 days of harvest. Do not graze or feed sugarcane fodder and forage to livestock.

Riverside Asulam 3.3 Herbicide may be applied to plant cane or to cane grown from stubble when weeds are actively growing.

**RATES:**

The rates in the tables below are for broadcast application.

**Ground Application:** Apply as a water mix spray in 15 - 100 gallons of water per acre according to local requirements.

**Aerial Application:** Apply as a water mix spray in 3 - 5 gallons of water per acre; in Hawaii, use 5 - 10 gallons per acre.

**Banded Application:** Reduce rates according to the following formula:

$$\text{band width (inches)/row width (inches)} \times \text{broadcast rate per acre} = \text{banded rate per acre.}$$

**Spot Treatment:** Apply 6 - 12 pints in 100 gallons water at a rate of 50 gallons of spray mixture per acre, not exceeding a rate of 8 pints of the concentrated herbicide per acre.

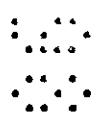
Addition of an adjuvant approved for use on growing crops to the water mix spray will improve weed control when environmental conditions are not optimal. A nonionic surfactant of at least 80% active ingredient (e.g., RIVERSIDE ACTIVATE PLUS) can be added at a rate of 1 - 2 quarts per 100 gallons of spray mix (0.25% - 0.5% by volume). Alternatively, a crop oil concentrate (e.g. RIVERSIDE prime oil, RIVERSIDE COC) containing 80 - 85% paraffinic oil and 15 - 20% nonionic surfactant can be added at a rate of 4 quarts per 100 gallons (1% by vol.) of spray mix.

SINGLE APPLICATION PER SEASON		
WEED SPECIES	RATE (PINTS/ACRE)	SPECIAL INSTRUCTIONS
Raoulgrass or itchgrass ( <i>Rottboellia exaltata</i> )	8	Apply with a surfactant when the grass is not more than 8 inches tall
Johnsongrass ( <i>Sorghum halepense</i> )		Apply when the grass is 12 - 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 no more than 6 - 8 inches tall.
Crabgrass ( <i>Digitaria spp.</i> )	6 - 8	Use the lower rate prior to seed head formation and the higher rate after heading.
Alexandergrass ( <i>Brachiaria plantaginea</i> )		Use the lower rate if the grass is no more than 6 - 8 inches tall and the higher rate if more than 8 inches tall.
Barnyardgrass ( <i>Echinochloa crusgalli</i> )		
Broadleaf panicum ( <i>Panicum adspersum</i> )		
Foxtail ( <i>Setaria spp.</i> )		
Goosegrass ( <i>Eleusine indica</i> )		

TWO APPLICATIONS PER SEASON. (USE IN HEAVY WEED INFESTATIONS OF RE-INFESTATION OR WHERE WEED SPECIES GERMINATE AT DIFFERENT TIMES IN THE SAME GROWING SEASON)		
WEED SPECIES	RATE FOR EACH APPLICATION (PINTS/ACRE)	SPECIAL INSTRUCTIONS
Crabgrass ( <i>Digitaria spp.</i> )	6 - 8	Apply before seed head formation. Use the lower rate when crabgrass is less than 6 inches high, and the higher rate from 6 inches to the start of head formation.
Raoulgrass or itchgrass ( <i>Rottboellia exaltata</i> )	8	Apply with a surfactant when the grass is no more than 12 inches tall.
Johnsongrass ( <i>Sorghum halepense</i> )		Apply when the grass is 18 - 24 inches tall.

**NON-CROPLAND USES**

For use in areas such as: boundary fences and fence rows; ditch banks; highway, pipeline and roadside rights-of-way; lumberyards; railroad and utility rights-of-way and yards; industrial plant sites; storage areas; and warehouse lots.



Leaf Co

Aerial application is prohibited.

Apply by ground spray using 20 - 100 gallons of solution per acre with a nonionic surfactant at a rate of 0.25% by volume.

MAXIMUM RATE: 1 gal/acre limited to one application per year.

WEED SPECIES	RATE (PINTS/ACRE)	SPECIAL INSTRUCTIONS
Crabgrass ( <i>Digitaria spp.</i> )	8	Apply before the grass reaches seed head formation.
Johnsongrass ( <i>Sorghum halepense</i> )	8	Apply when the grass is at least 18 inches tall. As a spot treatment in Hawaii, apply in 50 gallons of spray mixture per acre.
Paragrass or Californiagrass ( <i>Brachiaria mutica</i> or <i>Panicum purpurascens</i> )	8	Apply before seed head formation. As a spot treatment in Hawaii, apply in 50 gallons of spray mixture per acre.
Western bracken ( <i>Pteridium aquilinum</i> var. <i>pubescens</i> )	7 - 8	Apply when the fern is in full frond. Use the higher rate in heavy infestations.

**CHRISTMAS TREES**

For use on Douglas fir, Grand fir, Nobel fir, or scotch pine plantings for Christmas trees. Do not graze or feed forage from treated areas to livestock.

MAXIMUM RATE: 1 gal/acre limited to one application per year.

Apply a minimum 20 gallons of solution per acre for ground application. Aerial application is prohibited.

Spray at a rate of 1 gallon of solution per acre (without a surfactant) after bud-break and hardening of new tree growth to control western bracken (*Pteridium aquilinum* var. *pubescens*), which should be in full frond.

**ORNAMENTAL SHRUBS**

MAXIMUM RATE: 1 gal/acre in 20 gal/acre of water per acre limited to one application per year, during post-emergence.

*Juniperus andorra*  
*J. chinensis*  
*J. conferta*  
*J. horizontalis*  
*J. litoralis*

*J. sabina*  
*Taxus cuspidata*  
*T. media*  
*Pondocarpus macrophyllus*

To control:

Barnyardgrass (*Echinochloa crusgalli*)  
Crabgrass (*Digitaria spp.*)  
Fall Panicum (*Panicum dichotomiflorum*)  
Foxtail (*Setaria spp.*)  
Goosegrass (*Eleusine indica*)  
Horseweed or Mare's tail (*Conyza canadensis*)

**TURF (FOR SOD FARM USE ONLY)**

Apply without a surfactant at a rate of 5 pints in 20 - 50 gallons of water per acre (1 pint in 4 - 10 gallons per 8700 square feet) to St. Augustinegrass or Tifway 419 Bermudagrass. Do not apply to turf under stress or freshly mowed.

To control:

Bullgrass (*Paspalum supinum*)  
Crabgrass (*Digitaria spp.*)  
Goosegrass (*Eleusine indica*)  
Sandbur (*Cenchrus spp.*)

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, or after. 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, or under abnormal conditions, or under conditions not reasonably foreseeable to Seller, and Buyer assumes the risk of any such use.

