

51036-415

11-8-2002

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RESTRICTED USE PESTICIDE
DUE TO GROUND AND SURFACE WATER CONCERNS

For retail sale to and use only by certified applicators or persons under their direct supervision and only for those uses covered by the certified certification. This product is a restricted use herbicide due to ground and surface water concerns. Users must read and follow all precautionary statements and instructions for use in order to minimize potential for atrazine to reach ground and surface water.

Laddok® S-12
Herbicide

For selective postemergence broadleaf weed control in corn (field, pop, seed, silage, and sweet) and sorghum (grain and forage)

Active Ingredient:

Sodium salt of bentazon* [3-(isopropyl)-1H-2,1,3-benzothiadiazin-4(3H)-one,2,2-diaxidel 6.....	27.0%
Atrazine* (2-chloro-4-ethylamino-6-isopropylamino-s-triazine).....	24.4%
Related triazines	0.6%
Inert Ingredients:.....	48.0%
Total.....	100.0%

*Equivalent to 2.5 pounds of bentazon and 2.5 pounds of total triazines per gallon

KEEP OUT OF REACH OF CHILDREN.
DANGER/PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside booklet for complete Precautionary Statements, Statement of Practical Treatment, Directions For Use, and Conditions of Sale and Warranty.

Mix Well before using.

FIRST AID

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.

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 do so by the poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING:

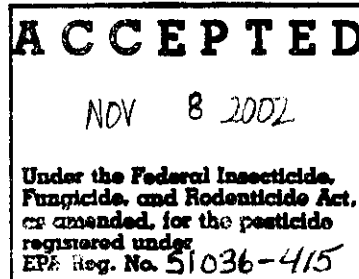
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

Note to physician: Probable mucosal damage may contraindicate gastric lavage

Net contents: 2.5 gallons (9.46 liters)

MANUFACTURED FOR:
MICRO FLO COMPANY LLC
P.O. Box 772099
MEMPHIS, TENNESSEE 38117-2099

Est. No. 11773-14-01



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Statement of Practical Treatment

~~If in eyes: Hold eyelids open and flush with a gentle steady stream of water for 15 minutes. Get medical attention.~~

~~If swallowed: Call a doctor or get medical attention. Do not induce vomiting or give anything by mouth to an unconscious person. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.~~

~~If on skin: Wash with plenty of soap and water. Get medical attention.~~

Precautionary Statements

Hazards to Humans and Domestic Animals

DANGER

Corrosive. Causes irreversible eye damage, Harmful if swallowed or absorbed through the skin. Do not get in eyes or on clothing. Avoid contact with skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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) 900-4044 Poison Control Center (human health)
- (800) 345-4735 ASPCA (animal health)

Personal Protective Equipment (PPE)

Applicators and other handlers must wear.

- Long-sleeved shirt and long pants
- ~~Waterproof gloves~~ **Chemical-resistant gloves made of a waterproof material.**
- Chemical-resistant footwear plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not re-use them. Follow the 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)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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

Atrazine, which is present in this product, can travel (seep or leach) through soil and can enter groundwater which may be used as drinking water. Atrazine has been found in groundwater.

Users are advised not to apply Laddok® S-12 herbicide to sand and loamy sand soils where the water table (groundwater) is close to the surface and where these soils are very permeable (i.e., well-drained).

Bentazon, which is present in this product is known to leach through soil into groundwater 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 groundwater contamination.

Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

Groundwater contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material. This product may not be mixed, loaded, or used within 50 feet of all wells including abandoned wells, drainage wells, and sinkholes. This product may not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product

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

Tile-terraced fields containing standpipes: To ensure protection of surface water from runoff through standpipes and tile outlets in terraced fields, one of the following options may be used: (1) Do not apply this product within 66 feet of standpipes in tile-outletted terraced fields; (2) 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.

This pesticide is toxic to aquatic invertebrates. For terrestrial uses, 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 apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

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.

All applicable directions, restrictions, precautions and Conditions of Sale and Warranty are to be followed. This labeling must be in the user's possession during application.

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

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 (RED of 48 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
- ~~Waterproof gloves~~ **Chemical-resistant gloves made of a waterproof material**
- Chemical-resistant footwear plus socks
- Protective eyewear

Storage and Disposal

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

Pesticide Storage: Do not store below 10° F or above 100° F.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal:

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

• **Bulk/Mini-bulk Containers-** Reuseable containers should be returned to the point of purchase for cleaning and refilling because the container must be thoroughly cleaned before refilling.

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In Case of Emergency

~~In case of large scale spillage regarding this product, avoid contact, isolate area, and keep out animals and unprotected persons. Confine the spill and call:~~

~~CHEMTREC 800-424-9300~~

~~In case of medical emergency regarding this product, call:~~

~~• Your local doctor for immediate treatment.~~

~~• Your local poison control center (hospital).~~

~~Steps to be taken in case material is released or spilled:~~

~~Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing, and wash affected skin areas with soap and water. Wash clothing before re-use. Keep the spill out of all sewers and open bodies of water.~~

I. General Information

Laddok® S-12 herbicide is intended for the postemergence control of a broad spectrum of broadleaf weeds. Laddok S-12 does not control grasses.

Mode of Action

Laddok S-12 is a non-ALS product that inhibits photosynthesis in broadleaf weeds mainly through contact action.

Crop Tolerance

Corn (field, pop, seed, silage, and sweet) and sorghum (forage and grain) are tolerant to Laddok S-12 at all stages of growth. Leaf speckling may occur, but plants generally outgrow this condition within 10 days. New growth is normal and crop vigor is not reduced. Seed producers should consult the seed company regarding the tolerance of irbred lines of seed population to Laddok S-12.

Irrigation

In irrigated areas, it may be necessary to irrigate before treatment to ensure active weed growth.

Coverage

Weeds must be thoroughly covered with spray because dense leaf canopies shelter smaller weeds and can prevent adequate spray coverage.

Cultivation

Do not cultivate within 5 days before or 7 days after applying Laddok S-12. Cultivating 7 days after treatment may help provide season-long control.

Cleaning Spray Equipment

Clean spray equipment thoroughly using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions before and after applying this product.

II. Application Instructions

Apply Laddok S-12 at the rates recommended in Table 1 unless instructed differently by Section VII. Crop-Specific Information. Applications can be made to actively growing weeds as aerial, broadcast, band, or spot spray applications at the rates and growth stages listed in Table 1. The most effective control will result from making postemergence applications of Laddok S-12 early, when weeds are small. Delaying application permits weeds to exceed the maximum size stated and will prevent adequate control. Postemergence application to corn and sorghum must be made before corn and sorghum reach 12 inches in height.

Air Application

Water Volume: Use a minimum of 5 gallons of water per acre and increase water volume to at least 10 gallons of water per acre if grass foliage or crop canopy is dense. AMS can be used provided a minimum of 10 gallons of solution is applied per acre. AMS is not recommended because of the potential precipitation problems in reduced water volumes. Use AMS only if the source has been demonstrated to be successful in local experience.

Spray Pressure: Use up to 40 psi.

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Application Equipment: Use only diaphragm-type nozzles that produce cone or fan spray patterns.

Nozzle Height : Maximum of 10 feet above crop.

Nozzle Orientation: Nozzles must be oriented to discharge straight back with the air stream (opposite the direction of travel of the aircraft) or at some angle between straight back and straight down. Nozzles must be located no farther out than 3/4 the distance from the center of the aircraft to the end of the wing or rotor.

Special Directions for Aerial Application

To obtain uniform coverage and to avoid drift hazards, follow these guidelines:

- Do not apply Laddok S-12 by aircraft when wind is blowing more than 10 mph. Use coarse sprays (larger droplets) as they are less likely to drift.
- Do not apply Laddok S-12 by air if ornamental or sensitive nontarget crops such as soybeans, peanuts, cotton, sugar beets, sunflowers, or okra are within 200 feet downwind.

The applicator must follow the most restrictive use cautions to avoid drift hazards, including those found in this labeling as well as applicable state and local regulations and ordinances.

Ground Application (Banding)

Follow Ground Application (Broadcast) instructions for band applications. When applying Laddok S-12 by banding, determine the amount of herbicide and water volume needed using the following formula:

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per acre} = \text{Banding herbicide rate per acre}$$

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast volume per acre} = \text{Banding water volume per acre}$$

Ground Application (Broadcast)

Water Volume: Use 10-20 gallons of spray solution per broadcast acre for optimal performance. Increase water volume up to 50 gallons if crop or weed foliage is dense.

Spray Pressure: Use a minimum of 40 psi (measured at the boom, not at the pump or in the line).

Note: When using the lower water volume (i.e., 10 gallons per acre) or when crop and weed foliage is dense, use a minimum of 60 psi for best results.

Application Equipment: Use standard high-pressure pesticide flat fan or hollow cone nozzles spaced up to 20 inches apart. Do not use flood, whirl chamber, or controlled droplet applicator (CDA) nozzles as erratic coverage can cause inconsistent weed control. Do not use selective application equipment such as recirculating sprayers or wiper applicators.

Table 1. Application Rates for Corn and Sorghum

Weeds Controlled (including triazine – and ALS-resistant biotypes)	1.33 Pints Per Acre		1.67 Pints Per Acre		2.33 Pints Per Acre	
	Leaf Stage	Maximum Height	Leaf Stage	Maximum Height	Leaf Stage	Maximum Height
Anoda, Spurred	-	-	-	-	Up to 6	3"
Beggfarticks	-	-	-	-	Up to 6	6"
Buckwheat, Wild	-	-	Up to 4	3"	4-6	5"
Burcucumber	-	-	-	-	3	3"
Cocklebur ^a	2-4 ^a	3"	2-10 ^a	8"	2-10 ^a	8"
Dayflower	-	-	-	-	Up to 6	4"
Devilsclaw	-	-	-	-	Up to 6	3"
Groundsel ^b , Common	-	-	Up to 4	2"	Up to 6	4"
Jimsonweed	2-4	3"	Up to 6	6"	6-10	8"
Kochia	-	-	-	4"	-	4"
Ladysthumb	2-6	4"	Up to 10	10"	10-14	12"
Lambsquarters ^b , Common	2-6	2"	Up to 8	5"	8-12	8"
Mallow, Venice	-	-	Up to 8	4"	Up to 8	4"
Mornigglory, Annual	-	-	Up to 4	4"	4-6	6"
Smallflower	-	-	Up to 4	4"	4-6	6"

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Mustard, Wild	-	-	Up to 6	4"	6-10	8"
Nightshade, Black	-	-	2-4	1"	2-4	1"
, Eastern Black	-	-	2-4	1"	2-4	1"
Pigweed, Redroot ^b	2-4	2"	Up to 10	6"	Up to 10	6"
, Smooth ^b	2-4	2"	Up to 10	6"	Up to 10	6"
Ragwee, Common	-	-	Up to 4	4"	4-7	5"
, Giant	-	-	Up to 4	4"	4-6	6"
Sida, Prickly (Teaweed)	-	-	Up to 4	2"	Up to 6	3"
Smartweed, Pennsylvania	2-6	4"	Up to 10	10"	10-14	12"
Starbur, Bristly	-	-	-	-	Up to 4	2"
Sunflower, Wild	-	-	Up to 5	6"	4-6	8"
Velvetleaf ^c	2-4	3"	Up to 6 ^c	6"	Up to 8 ^c	8"
Waterhemp, Common	-	-	Up to 8	2"	6-9	4"
, Tall	-	-	Up to 8	2"	6-9	4"

Bindweed, Field ^b Nutsedge, Yellow ^{d,e} Thistle, Canada ^{d,e}					8-10" long 6-8" tall 8" tall to bud stage
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- a Do not treat earlier than leaf stage shown, and do not count cotyledon leaves.
- b Tdazine-resistant biotypes of Amaranthus (pigweeds), common lambsquarters, and common groundsel can be controlled with Laddok® S-12 herbicide.
- c Adding UAN or AMS will control velvetleaf at the 8-leaf stage or 8 inch maximum height using 1.67 pints per acre, or at the 10-leaf stage or 10-inch maximum height using 2.33 pints per acre.
- d Add oil concentrate or Dash® HC spray adjuvant according to Additive Information. For best results in corn for Canada thistle and yellow nutsedge, follow with a second application of Basagran® herbicide 7-10 days later, or cultivate 7-14 days after application in corn and sorghum.
- e For suppression only.

Table 2. Laddok S-12 Application Rate Conversion Chart

Use the chart below to calculate the amount of Laddok S-12 herbicide required to treat the acreage listed. Select the rate of Laddok S-12 required to control weeds according to the Application Rate Table (Table 1). To calculate the number of gallons required to treat a specified acreage, multiply the number of acres by the multiplier listed below. The multiplier is equivalent to the number of gallons required to treat 1 acre.

Laddok S-12 Rate Per Acre	Gallons of Laddock S-12					Your Acreage
	Multiplier	5 Acres	10 Acres	50 Acres	100 Acres	
1.33 Pints	0.166	0.83	1.66	8.3	16.6	
1.67 Pints	0.208	1.04	2.08	10.40	20.8	
2.33 Pints	0.291	1.45	2.91	14.55	29.1	

III. Additives

To achieve consistent weed control, one of the following additives are needed: ammonium sulfate, Dash® HC spray adjuvant, crop oil concentrate, or urea ammonium nitrate. AMS (or UAN) should be used when velvetleaf is the primary target weed. Additives may cause some leaf burn, but new growth is normal and crop vigor is not reduced. The potential for leaf burn is increased when relative humidity and temperature are high. See Table 3. Additive Rate Per Acre for additive rates.

Ammonium Sulfate (AMS)

AMS is a dry, granular nitrogen-source fertilizer. Use only fine feed-grade or spray-grade AMS because inferior grades of AMS do not dissolve adequately and can plug spray nozzles. Micro Flo Company does not recommend applying AMS if applied in less than 10 gallons per acre because of potential problems with precipitation in reduced volumes. Use AMS only if it has been demonstrated to be successful in local experience. Refer to Air Application Instructions for AMS use recommendations.

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Dash HC or Oil Concentrate

A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all of the following criteria:

- be nonphytotoxic,
- contain only EPA-exempt ingredients,
- provide good mixing quality in the jar test, and
- be successful in local experience.

The exact composition of suitable products will vary; however, vegetable and petroleum oil concentrates should contain emulsifiers to provide good mixing quality. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils.

Dash HC may be substituted as an oil concentrate, however, for some crops and tank mixes, Dash HC is not recommended. For additional information, see Compatibility Test for Mix Components.

Some oil concentrates cause excessive leaf burn. Refer to your supplier for information concerning successful local experience before purchasing any oil concentrate.

Urea Ammonium Nitrate (UAN)

Commonly referred to as 28%, 30% or 32% nitrogen solution, UAN may be added in place of other spray additives to improve weed control. Because most nitrogen solutions are mildly corrosive to galvanized, mild steel, and brass spray equipment, rinse the entire spray system with water soon after use. Do not use brass or aluminum nozzles when spraying UAN.

Oil Concentrate + Nitrogen Solution

A nonphytotoxic oil concentrate (as referred to above) plus a nitrogen solution (UAN or AMS) can be added to the spray tank with Laddok® S-12 herbicide.

Table 3. Additive Rate Per Acre

Additive	Ground Application	Air Application
AMS	2.5 pounds	2.5 pounds
Dash HC	1 pint	0.5 pint
Oil Concentrate	2 pints	1 pint
UAN Solution	4-8 pints	4 pints
Oil Concentrate + Nitrogen	0.5-1pint + 2-4 pints of UAN or 1-2 Pounds of AMS	—

Compatibility Test for Mix Components

Add components to a jar in the following sequence using 2 teaspoons for each pound or 1 teaspoon for each pint of recommended label rate per acre.

- 1) Water - For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes, adjust rates accordingly. Use only water from the intended source at the source temperature.
- 2) Products in PVA bags (if applicable): - Cut an opening in the water-soluble PVA bag just large enough to use a teaspoon for measuring purposes. Use the opened water-soluble PVA bag first when preparing spray solution. Cap the jar and invert 10 cycles.
- 3) Water-dispersible products: - such as Laddok S-12, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions. Cap the jar and invert 10 cycles.
- 4) Water-soluble products: - Cap the jar and invert 10 cycles.
- 5) Emulsifiable concentrates: - (Dash HC or oil concentrate when applicable) Cap the jar and invert 10 cycles.
- 6) Water-soluble additives: - (AMS or UAN when applicable) Cap the jar and invert 10 cycles.
- 7) Let the solution stand for 15 minutes.
- 8) Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor thick (clobbered) texture. Do not use any spray solution that could clog spray nozzles.

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IV. Mixing Order

- 1) **Water:** Begin by agitating a thoroughly clean sprayer tank three-quarters full of clean water.
- 2) **Agitation:** Maintain constant agitation throughout mixing and application.
- 3) **Products in PVA bags:** Rinse the tank before adding any material in PVA bags. Wait until all water-soluble PVA bags have fully dissolved and the herbicide is evenly mixed in the spray tank before continuing. If an inductor is used, rinse it thoroughly after the component has been added.
- 4) **Water-dispersible products:** (Laddok S-12 herbicide, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions). If an inductor is used, rinse it thoroughly after the component has been added.
- 5) **Water-soluble products:** If an inductor is used, rinse it thoroughly after the component has been added.
- 6) **Emulsifiable concentrates:** (Dash® HC spray adjuvant or oil concentrate when applicable) If an inductor is used, rinse it thoroughly after the component has been added.
- 7) **Water-soluble additives:** (AMS or UAN when applicable). If an inductor is used, rinse it thoroughly after the component has been added.
- 8) **Remaining quantity water**

For more information, refer to Section V. General Tank Mixing Information.

V. General Tank Mix

See Section VII. Crop-Specific Information for more details. Read and follow the applicable Restrictions and Limitations and Directions For Use on all products involved in tank mixing. The most restrictive labeling applies to tank mixes.

Tank Mix Partners/Components

The following products may be tank mixed with Laddok S-12 according to the specific tank mixing instructions in this label and respective product labels.

- | | | |
|--------------|----------------|-----------------|
| 1. Asana® XL | 6. Dimethoate | 11. Poast HC |
| 2. Atrazine | 7. Furadan® 4F | 12. Poast Plus® |
| 3. Banvel® | 8. Lorsban® 4E | 13. Pounce® |
| 4. Blade® 90 | 9. Malathion | 14. Stinger® |
| 5. Clarity® | 10. Poast® | 15. 2,4-D LVE |

Mixing with Insecticides

It is permissible to tank mix an insecticide with Laddok S-12 if the proper application timing of the insecticide coincides with the application timing for Laddok S-12. Adding an insecticide as a tank mix to Laddok S-12 may increase the potential for crop injury.

Micro Flo Company does not recommend using tank mixes other than those listed on Micro Flo's labeling. Physical incompatibility, reduced weed control, or crop injury may result from mixing Laddok S-12 with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers. Local agricultural authorities may be a source of information when using other than Micro Flo Company recommended tank mixes.

VI. General Restrictions and Limitations - All Crops

• **Maximum seasonal use rate:** Do not apply more than a total of 2 pounds of bentazon a.i. from all sources per acre, per calendar year. For postemergence applications, if there has been no previous soil application to that crop, the maximum rate of atrazine from all sources is 2 pounds of active ingredient per acre. If there has been a previous soil application to that crop, do not apply more than a total of 2.5 pounds of atrazine a.i. from all sources per acre, per calendar year.

- Do not make more than one application of Laddok® S-12 herbicide per season.
- **Restricted Entry Interval (REI):** 48 hours.
- **Crop Rotation Restriction:** Do not plant sugar beets or sunflowers the season following application. Do not plant oats the season following application of Laddok S-12 in soil with a calcareous surface layer. In the intermountain region of the United States, do not plant any other crop the year following the application of Laddok S-12 except corn or sorghum.
- **Rainfast period:** Rainfall or overhead irrigation soon after application may reduce the effectiveness of Laddok S-12.

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- Stress: Do not apply to weeds or crops under stress such as stress due to lack of moisture, unseasonable cold weather, hail damage, flooding, herbicide injury, mechanical injury, or widely fluctuating temperatures, or when crop is wet and succulent from recent rainfall as crop injury or unsatisfactory control may result.
- Do not apply to crops that show injury (leaf phytotoxicity or plant stunting) produced by any other prior herbicide applications, because this injury may be enhanced or prolonged.
- Do not mix or apply Laddok S-12 with any other fertilizer except as specifically recommended on this label.
- Do not use selective application equipment such as recirculating sprayers, wiper applicators, or shielded applicators.
- Do not apply this product through any type of irrigation system.

Table 4. Crop-Specific Restrictions and Limitations

Crop	Maximum Rate Per Acre Per Application	Maximum Rate Per Acre Per Season	Livestock Grazing	Aircraft Application
Corn	2.33 pints	2.33 pints	Yes*	Yes
Sorghum	2.33 pints	2.33 pints	Yes*	Yes

* -Do not graze treated area or feed treated forage to livestock for 21 days after application.

VII. Crop-Specific information

CORN
CORN Tank Mixes

Laddok S-12 + Atrazine
Laddok S-12: 1.33-2.33 pints per acre
Atrazine- 0.75-1 pound per acre
Oil Concentrate: 1 pint per acre

Adding atrazine will provide residual weed control and suppress giant, green and yellow foxtail. Atrazine products compatible with Laddok S-12 include AAtrex® 4L and AAtrex® Nine-0 herbicides as well as other similar generic formulations containing atrazine.

Table 5. Tank Mix Rates for Laddok S-12 + Atrazine

Laddok S-12	Atrazine ¹
1.33 pints per acre	1 pound per acre
1.67 pints per acre	1 pound per acre
2.33 pints per acre	0.75 pound per acre

¹ See Section VI. General Restrictions and Limitations for maximum amounts of atrazine allowable per season.

SWEET CORN:

Consult your local agricultural extension specialist for information on sweet corn varieties that are tolerant to this tank mix.

Laddok S-12 + Banvel®
Laddok S-12: 1.33-2.33 pints per acre
Banvel: up to 16 ounces (0.5 pound a.i.) per acre
UAN Solution: 4 pints per acre
or AMS: 2.5 pounds per acre

For use on field corn only. This tank mix may be applied for additional or improved control of bindweed (field and hedge), Canada thistle, honeyvine milkweed, common lambsquarters, morningglodes, pigweed (redroot and smooth), ragweed (common and giant), waterhemp (common and tall), and wild sunflower.

Tank Mix Specific Restrictions and Limitations Do not add other additives to this tank mix. Follow the application procedures on the Banvel herbicide label if applying new sensitive crops. Do not apply this tank mix at more than 40 psi.

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Laddok S-12 + Bladex® 90 DF
Laddok S-12: 1.33-2.33 pints per acre
Bladex: 1.67 pounds per acre

For use on field and silage corn only to control major troublesome broadleaf weeds and small annual grasses and to reduce the potential triazine carryover into rotational crops. Annual grasses controlled by a Laddok S-12 + Bladex 90 DF herbicide tank mix include: crabgrass, fall panicum, giant foxtail, goosegrass, green foxtail, stinkgrass (Indian lovegrass), witchgrass, and yellow foxtail. Refer to Table 1 for rate and timing for broadleaf weed control. Refer to the Bladex® 90 DF herbicide label to determine the best conditions for annual grass control.

Yellowing of the corn may result from this treatment, particularly if cold or adverse growing conditions occur after application. Extended or extreme cold and wet conditions may reduce stands.

Application Rate and Timing

A tank mix of Laddok® S-12 herbicide plus Bladex 90 DF should be applied after corn has fully emerged but before the fifth leaf is visible. For adequate control, annual grasses must not exceed 1.5 inches in height. Refer to Table 1 for rate and timing for broadleaf weed control. Add Bladex 90 DF to the mix before Laddok S-12.

Spray Additives

In dry, arid conditions with low humidity and the absence of dew formation at night, add a nonionic surfactant (NIS) or an emulsifiable vegetable oil suitable for use on growing corn. Do not use petroleum-based crop oils. Adding an NIS or EV oil is not recommended in moist, rainy conditions or when dew forms at night as injury may occur.

Tank Mix Specific Restrictions and Limitations

Do not use this tank mix on sand, loamy sand, or sandy loam soils that have 1 % or less organic matter. Do not apply to corn if the fifth leaf is visible.

Plant only corn, peanuts, sorghum, or soybeans the year following application of this tank mix. Small grains may be planted 15 months after application, and all other crops may be planted after 18 months. Do not apply on sorghum, popcorn, sweet corn, or corn grown for seed. Do not use liquid fertilizer as a carrier for this tank mix; use only water. Do not apply this tank mix by aerial equipment.

Laddok S-12 + Clarity®

Laddok S-12: 1.33-2.33 pints per acre
Clarity- up to 16 ounces (0.5 pound a.i.) per acre
UAN Solution: 4 pints per acre
or AMS: 2.5 pounds per acre

For use on field corn only. This tank mix may be applied for additional or improved control of bindweed (field and hedge), Canada thistle, honeyvine milkweed, common lambsquarters, niorningglo6es, pigweed (redroot and smooth), ragweed (common and giant), waterhemp (common and tall), and wild sunflower.

Tank Mix Specific Restrictions and Limitations

Do not add other additives to this tank mix. Follow the application procedures on the Clarity herbicide label if applying near sensitive crops. Do not apply this tank mix at more than 40 psi.

Laddok S-12 + Poast®

Laddok S-12: 1.33-2.33 pints per acre
Poast 1-1.5 pints per acre
Oil concentrate: 1-2 pints per acre
UAN Solution: 2-4 pints per acre
or AMS: 1 -2 pounds per acre

Laddok S-12 may be tank mixed with Poast herbicide for postemergence applications in Poast Protected™ field corn and corn grown for Poast Protected seed. This tank mix may be applied postemergence for control of annual and perennial grass weeds in Poast Protected field corn. Refer to the Poast label for complete labeling instructions. Use only Poast Protected field corn hybrids with a

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Poast Protected (or SR® sethoxydim-resistant field corn) designation on the seed label. Severe crop injury will occur to corn hybrids not designated as Poast Protected field corn.

Tank Mix Specific Restrictions and Limitations

Do not apply this tank mix to corn hybrids not designated as Poast Protected field corn (or SR® sethoxydim-resistant field corn) because severe crop injury will occur.

Do not apply this tank mix within 60 days of harvest of corn grain or fodder. Do not apply this tank mix within 45 days of harvest of corn forage/silage.

Laddok S-12 + Poast® HC

Laddok S-12: 1.33-2.33 pints per acre
Poast HC: 7-10.5 fluid ounces per acre
Oil concentrate: 1-2 pints per acre
UAN Solution: 2-4 pints per acre
or AMS: 1-2 pounds per acre

Laddok® S-12 herbicide may be tank mixed with Poast® HC herbicide for postemergence applications in Poast Protected field corn and corn grown for Poast Protected seed. This tank mix may be applied postemergence for control of annual and perennial grass weeds in Poast Protected field corn. Refer to the Poast HC label for complete labeling instructions. Use only Poast Protected field corn hybrids with a Poast Protected (or SR sethoxydim-resistant field corn) designation on the seed label. Severe crop injury will occur to corn hybrids not designated as Poast Protected field corn.

Tank Mix Specific Restrictions and Limitations

Do not apply this tank mix to corn hybrids not designated as Poast Protected field corn (or SR sethoxydim-resistant field corn) because severe crop injury will occur.

Do not apply this tank mix within 60 days of harvest of corn grain or fodder. Do not apply this tank mix within 45 days of harvest of corn forage/silage.

Laddok S-12 + Poast Plus®

Laddok S-12: 1.33-7.33 pints per acre
Poast Plus: 1.5-2.25 pints per acre
Oil concentrate: 1 pint per acre
UAN Solution: 2-4 pints per acre
or AMS: 1-2 pounds per acre

Laddok S-12 herbicide may be tank mixed with Poast Plus herbicide for postemergence applications in Poast Protected field corn and corn grown for SR seed.

This tank mix may be applied postemergence for additional control of annual and perennial grass weeds in Poast Protected field corn. Refer to the Poast Plus supplemental label for complete labeling instructions. Use only Poast Protected field corn hybrids with a Poast Protected (or SR sethoxydim-resistant field corn) designation on the seed label. Severe crop injury will occur to corn hybrids not designated as Poast Protected field corn.

Tank Mix Specific Restrictions and Limitations

Do not apply this tank mix to corn hybrids not designated as Poast Protected field corn (or SR sethoxydim-resistant field corn) because severe crop injury will occur.

Do not apply this tank mix within 60 days of harvest of corn grain or fodder. Do not apply this tank mix within 45 days of harvest of corn forage/silage.

Laddok S-12 + Stinger®

Laddok S-12: 1.67-2.33 pints per acre
Stinger: up to 0.33 pint per acre

Apply this tank mix when Canada thistle is at least 4 inches in diameter or height (when the majority of the basal leaves have emerged but before the bud stage).

Do not cultivate before application. Wait 14-20 days after application before cultivating.

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Laddok® S-12 + 2,4-D LVE

Laddok S-12: 1.33-2.33 pints per acre

2,4-D LVE: 4 ounces (4 pounds a.i per gallon formulation) per acre

or

2.7 ounces (6 pounds a.i per gallon formulation) per acre

UAN Solution: 4 pints per acre

or AMS: 2.5 pounds per acre

For use on field and silage corn only. A tank mix of Laddok S-12 and 2,4-D LVE (low volatile ester) may be applied for postemergence control of the following troublesome broadleaf weeds: velvetleaf, waterhemp (common and tall), sunflower, and perennial weeds (Canada thistle, swamp smartweed, and field bindweed). The amine formulation of 2,4-D may be substituted for the LVE formulation. Refer to Table I and the 2,4-D LVE label to determine which weeds can be controlled and the best conditions for control.

Crop varieties vary in response to 2,4-D LVE and some can be injured. Apply this tank mix only to varieties known to be tolerant to 2,4-D LVE. Contact your seed supplier for information on 2,4-D LVE susceptibility. Yellowing of the corn may result from this treatment, particularly if cold or adverse growing conditions occur after application. Extended or extreme cold and wet conditions may reduce stands.

Application Timing

A tank mix of Laddok S-12 + 2,4-D LVE should be applied after corn has fully emerged through the four-leaf stage of corn growth but before the fifth leaf is visible.

Tank Mix Specific Restrictions and Limitations

Do not apply on sorghum, popcorn, sweet corn, or corn grown for seed.

Do not add other additives to this tank mix.

Do not apply this tank mix at more than 40 psi.

Sorghum

Do not apply to sorghum that is heading out or blooming.

Sorghum Tank Mixes

Laddok S-12 + Atrazine

Laddok S-12: 1.33-2.33 pints per acre

Atrazine: 0.75-1 pound per acre

Oil Concentrate: 1 pint per acre

Adding atrazine will provide residual weed control and suppress giant, green, and yellow foxtail. Atrazine products compatible with Laddok S-12 herbicide include AAtrex® 4L and AAtrex® Nine-0 herbicides as well as other similar generic formulations containing atrazine.

Table 6. Tank Mix Rates for Laddok S-12 + Atrazine

Laddok S-12	Atrazine ¹
1.33 pints per acre	1 pound per acre
1.67 pints per acre	1 pound per acre
2.33 pints per acre	0.75 pound per acre

¹ See Section VI. General Restrictions and Limitations for maximum amounts of atrazine allowable per season.

Crops:

This product can be used on the following crops:

- Corn
- Sorghum

Look inside for complete Restrictions and Limitations and Application Instructions.

Weeds listed

Common Name	Scientific Name
Anoda, Spurred	<i>Anoda cristata</i>
Beggarticks	<i>Bidens frondosa</i>
Bindweed, Field	<i>Convolvulus atvensis</i>
Buckwheat, Wild	<i>Polygonum convoivulus</i>
Burcucumber	<i>Sicyos angulatus</i>
Cocklebur	<i>Xanthium strumarium</i>
Dayflower	<i>Commelina spp.</i>
Devilsclaw	<i>Probiscidea louisianica</i>
Jimsonweed	<i>Datura stramonium</i>
Kochia	<i>Kochia scoparia</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, Common	<i>Chenopodium album</i>
Mallow, Venice	<i>Hibiscus trionum</i>
Morningglory, Annual	<i>Ipomea spp.</i>
, Smallflower	<i>Jacquemontia tamnifolia</i>
Mustard, Wild	<i>Sinapis arvensis</i>
Nightshade, Black	<i>Solanum nigrum</i>
, Eastern Black	<i>Solanum ptycanthum</i>
Nutsedge, Yellow	<i>Cyperus esculentus</i>
Pigweed, Redroot	<i>Amaranthus retroflexus</i>
, Smooth	<i>Amaranthus hybndis</i>
Ragweed, Common	<i>Ambrosia artemisi#bia</i>
, Giant	<i>Ambrosia trifida</i>
Sida, Prickly (Teaweed)	<i>Sida spinosa</i>
Starbur, Bristly	<i>Acanthosperum hispidum</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Sunflower, Wild	<i>Helianthus annuus</i>
Thistle, Canada	<i>Cirsium arvense</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Waterhemp, Common	<i>Amaranthus rudis</i>
, Tall	<i>Amaranthus tuberculatus</i>

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Conditions of Sale and Warranty

The Directions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed 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 LLC or the Seller. All such risks shall be assumed by the Buyer. MICRO FLO COMPANY LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to it in the Directions For Use, subject to the inherent risks, referred to above.

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