

71368-27

10/02/2001

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U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (H7505C)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg. Number:

Date of Issuance:

71368-27

OCT 2 2001

Term of Issuance: Conditional

Name of Pesticide Product: Nufarm Koril  
+ Atrazine

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Mr. Theodore D. Head  
Product Registration Manager  
NUFARM AMERICAS INC  
500 Lower Lake Road  
St. Joseph, MO 64504

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration, reregistration of your product under FIFRA sec. 3(c)(5), 3(g), or 4 when the Agency requires all registrants of similar products to submit such data.
2. Make the following label changes:
  - a. Revise the EPA Registration Number to read, "EPA Reg. No. 71368-27"
  - b. Revise the "Physical and Chemical Hazard" statement to read:  
"Combustible. Do not use or store near heat or open flame."
  - c. Under the "Agricultural Use Requirements" box change the REI to 24 hours".

Signature of Approving Official:

Jim Tompkins  
Product Manager (25)  
Herbicide Branch  
Registration Division, (7505C)

Date:

OCT 2 2001

d. Revise the "Storage and Disposal" as follows:

**"STORAGE AND DISPOSAL**

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

Storage:

Pesticide Disposal:

Container Disposal:

3. Submit one (1) copy of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

# RESTRICTED USE PESTICIDE

(GROUND AND SURFACE WATER CONCERNS)

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



## Koril™ + Atrazine Herbicide

ACCEPTED  
With COMMENTS  
in EPA Letter Dated

OCT 2 2001

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
21368-25

POSTEMERGENT HERBICIDE FOR CONTROL OF CERTAIN BROADLEAF WEEDS IN CORN AND SORGHUM.

**ACTIVE INGREDIENT:**

Octanoic acid ester of bromoxynil (3,5-dibromo-4-hydroxybenzonitrile) .....	15.74%*
Atrazine (2-chloro-4-ethylamino-6-isopropylamino-S-triazine) .....	21.62%**
<b>INERT INGREDIENTS:</b> .....	<u>62.64%</u>
	100.00%

\*Product contains bromoxynil octanoate equivalent to 10.81% of bromoxynil or 1.0 pound of bromoxynil per gallon.  
\*\*Product contains 2.0 pounds of atrazine per gallon.

E.P.A. Reg. No. 71368-ET

E.P.A. Est. No. 228-IL-1

### KEEP OUT OF REACH OF CHILDREN CAUTION - CAUCION

**SHAKE WELL BEFORE USING**

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 for Additional Precautionary Statements.

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300.  
For Medical Emergencies Only, Call 877-325-1840.

Manufactured For:  
Nufarm, Inc.  
St. Joseph, MO  
06/01 Proposed

NET CONTENTS \*2.5 Gallons (9.46L)

<b>FIRST AID</b>	
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor for treatment advice.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not give anything by mouth to an unconscious person.</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>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>
<p>For MEDICAL Emergencies Call 1-877-325-1840. Have the product container or label with you when calling a poison control center or doctor or going for treatment.</p>	

NOTE TO PHYSICIAN: This product may pose an aspiration pneumonia hazard. Contains petroleum distillate.

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
- CAUTION**

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

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

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

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

If you will handle a total of 120 gallons or more of this product per day, you must use a mechanical transfer system for all mixing and loading operations. If this product is packaged in a 30 gallon drum, you must use a mechanical transfer system which terminates in a drip-free hard coupling which may be used only with a spray or mix tank which has been fitted with a compatible coupling. If you do not presently own or have access to a mechanical transfer system with this type of coupling, contact your dealer for information on how to obtain such a system or to modify your present system. When using a mechanical transfer system, do not remove or disconnect the pump or probe from the container until the container has been emptied and rinsed. The pump or probe system must be used to rinse the empty container and to transfer the rinsate directly to the mixing or spray tank.

Application from a tractor with a completely enclosed cab or aerial application is required whenever this product is applied to 360 or more acres in a day. The closed systems and enclosed cabs must be used 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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to wildlife and fish. Use with care when applying to areas frequented by wildlife or adjacent to any body of water. For terrestrial uses, do not apply to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Atrazine is a Restricted Use Herbicide due to ground water concerns. Users must read and follow all precautionary statements and instructions on this label in order to minimize the potential for atrazine to reach ground and surface water. Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with impermeable material. This product may not be mixed/loaded, or used within 50 feet of all wells including abandoned wells, drainage wells, and sink holes. 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 a crop or seeded with grass or other suitable crop.

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

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

### PHYSICAL AND CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame.

### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read entire label before using this product.

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.

### 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 over long-sleeved shirt and long pants, chemical resistant gloves such as nitrile, viton or barrier laminate, shoes plus socks, and protective eyewear.

### STORAGE AND DISPOSAL

**STORAGE:** Do not contaminate water, food, or feed by storage or disposal. Do not store near fertilizers or seeds. Store at temperatures above 3°F. If exposed to freezing temperatures, store at temperatures above 55° F for 24 hours or until completely thawed. Shake well before using.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Plastic-Triple rinse (or equivalent). Then puncture and dispose of in a sanitary landfill, or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke. Metal-Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by State and Local authorities.

**RETURNABLE - REFILLABLE CONTAINERS:** This material may be repackaged in 15 or 30 gallon returnable-refillable containers by Nufarm or a registered establishment under contract to Nufarm. After use, return the container to the point of purchase or designated locations. This container must only be refilled with KORIL + Atrazine 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 INFORMATION

KORIL + Atrazine Herbicide contains the equivalent of 1 pound per gallon of bromoxynil and 2 pounds per gallon of atrazine.

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

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

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## MIXING, LOADING AND HANDLING INSTRUCTIONS

### 2.5 Gallon Containers

It is strongly recommended that special care be taken in mixing and loading this product. Hands should be placed on the container in such a way as to avoid possible drip or splash.

### 30 Gallon and Bulk Containers

If you will handle a total of 120 gallons or more of this product per day, you must use a mechanical transfer system for all mixing and loading operations. If this product is packaged in a 30 gallon drum, you must use a mechanical transfer system which terminates in a drip-free hard coupling which may be used only with a spray or mix tank which has been fitted with a compatible coupling. If you do not presently own or have access to a mechanical transfer system with this type of coupling, contact your dealer for information on how to obtain such a system or to modify your present system. When using a mechanical transfer system, do not remove or disconnect the pump or probe from the container until the container has been emptied and rinsed. The pump or probe system must be used to rinse the empty container and to transfer the rinsate directly to the mixing or spray tank.

**KORIL + ATRAZINE ALONE:** Fill the spray tank 1/2 to 3/4 full with clean water. Begin agitation and add the recommended amount of KORIL + Atrazine Herbicide. Add water to the spray tank to the desired level. Maintain sufficient agitation to ensure a uniform spray mixture during application.

**TANK MIXTURES:** KORIL + Atrazine Herbicide can be tank-mixed with other pesticide products provided that these other products are registered for use on the crop/use site to be treated. The tank mix must be used in accordance with the more restrictive pesticide label limitations and precautions. No label dosage rates may be exceeded. KORIL + Atrazine Herbicide cannot be mixed with any product containing a label prohibition against such mixing. Refer to the specific crop section for rate recommendations and other restrictions. To apply KORIL + atrazine in mixture with another product, fill the spray tank 1/2 to 3/4 full with clean water and begin agitation. Add the KORIL + atrazine first and mix thoroughly. Add the other product to the tank while maintaining agitation and add water to the spray tank to the desired level. Always mix one product in water thoroughly before adding another product or compatibility problems may occur. Never mix two products together without first mixing in water.

Maintain sufficient agitation while mixing and during application to ensure a uniform spray mixture. If spray mixture is allowed to remain without agitation for short periods of time, be sure to agitate until uniformly mixed before application.

If tank mixing with products other than those listed within each crop section, a compatibility test is recommended to ensure satisfactory spray preparation. To test for compatibility, use a small container and mix a small amount (0.5 to 1 quart) of spray, combining all ingredients in the same ratio as the anticipated use. If any indications of physical incompatibility develop, do not use this mixture for spraying. Indications of incompatibility usually will appear within 5 to 15 minutes after mixing. To ensure maximum crop safety and weed control, follow all cautions and limitations on this label and the labels of products used in the tank mixture with KORIL + atrazine.

### SPRAYABLE LIQUID FERTILIZERS AND SPRAY ADDITIVES

KORIL + Atrazine Herbicide can be applied in combination with sprayable liquid fertilizer or spray additives such as surfactants or crop oil concentrate. When tankmixing with liquid fertilizer always add the fertilizer to the spray tank first and agitate thoroughly before adding KORIL + atrazine. Always predetermine the compatibility with liquid fertilizer by mixing small proportional quantities in advance. Agitation must be maintained during filling and application operations to ensure that KORIL + atrazine is evenly mixed with the fertilizer.

**CAUTION:** Fertilizers and spray additives can increase foliage leaf burn when applied with KORIL + Atrazine Herbicide. Do not apply fertilizers or spray additives with KORIL + atrazine if leaf burn is a major concern due to environmental conditions, crop or variety sensitivity to KORIL + atrazine.

### APPLICATION PROCEDURES

KORIL + Atrazine Herbicide can be applied to registered use areas by ground, and aerial application equipment. Do not apply this product through any type of irrigation system.

#### GROUND APPLICATION

Use a standard herbicide boom sprayer that provides uniform and accurate application. Sprayer should be equipped with screens no finer than 50 mesh in the nozzle tips and in-line strainers.

Select a spray volume and delivery system that will ensure thorough and uniform spray coverage. For optimum spray distribution and thorough coverage use of flat fan nozzles (maximum tip size 8008) with a spray pressure of 40 to 60 psi are recommended. Other nozzle types and lower spray pressures that produce coarse spray droplets may not provide adequate coverage of the weeds to ensure optimum control. Raindrop® nozzles and flood nozzles are not recommended as weed control with KORIL + atrazine may be reduced.

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

When weed infestations are heavy, use of higher spray volumes and spray pressure will be helpful in obtaining uniform weed coverage. When corn or grain sorghum are large enough to interfere with the spray pattern, drop nozzles should be used to obtain uniform weed coverage. If you are unsure of the infestation level or size of crop, consult your local extension service.

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

### AERIAL APPLICATION

Use orifice discs, cores and nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage. In general a minimum spray volume of 5 GPA and a maximum pressure of 40 psi are recommended.

Do not apply during inversion conditions, when winds are gusty or when other conditions favor poor spray coverage and/or off target spray movement. Off target spray movement can be minimized by increasing the spray volume per acre and not applying when winds exceed 10 mph.

### CULTIVATION

When properly utilized, timely cultivations may aid overall weed control efforts as well as crop growth. However, cultivation BEFORE or DURING KORIL + Atrazine Herbicide applications may place target weeds under stress, resulting in erratic weed control. Whenever KORIL + atrazine is being utilized in an overall weed control program, plan to postpone any anticipated cultivations until 5 to 7 days after application to ensure best performance.

### SPRAY DRIFT

**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 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 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 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 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:** (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 downward. Therefore, on the up and down wind 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:** (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.

**GENERAL WEED LIST**

Postemergence application of KORIL + Atrazine Herbicide will control the following weeds when sprayed in the seedling stage.

**MOST SUSCEPTIBLE BROADLEAF WEED SPECIES**

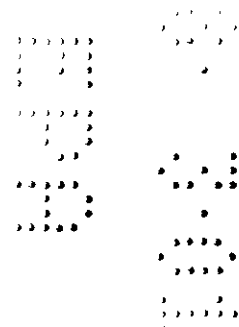
- Annual Sowthistle (*Sonchus oleraceus*)
- Black Nightshade (*Solanum nigrum*)
- Blue Mustard (*Chorispora tenella*)
- Bristly Starbur (*Acanthospermum hispidum*)
- Coast Fiddleneck (*Amsinckia intermedia*)
- Common Cocklebur (*Xanthium strumarium*)
- Common Lambsquarters (*Chenopodium album*)
- Common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

**SUSCEPTIBLE BROADLEAF WEED SPECIES**

- Buffalobur (*Solanum rostratum*)
- Burcucumber (*Sicyos angulatus*)
- Common Groundsel (*Senecio vulgaris*)
- Common ragweed (*Ambrosia artemisiifolia*)
- Corn Chamomile (*Anthemis arvensis*)
- Corn Gromwell (*Lithospermum arvense*)
- Cow Cockle (*Saponaria vaccaria*)
- Giant Ragweed (*Ambrosia trifida*)
- Hemp Sesbania (*Sesbania exaltata*)
- Hyaleaf Morningglory (*Ipomoea hederacea*)
- Knawel (*Scleranthus annus*)
- Kochia (*Kochia scoparia*)
- London Rocket (*Sisymbrium lrio*)
- Marestail (*Conza canadensis*)
- Mayweed (*Anthemis cotula*)
- Pitted Morningglory\* (*Ipomoea lacunosa*)
- Pokeweed (*Phytolacca americana*)
- Prostrate Knotweed (*Polygonum aviculare*)
- Puncture Vine (*Tribulus terrestris*)
- Redroot Pigweed (*Amaranthus retroflexus*)
- Russian Thistle (*Salsola kali*)
- Spiny Pigweed (*Amaranthus spinosus*)
- Tail Morningglory (*Ipomoea purpurea*)
- Tail Waterhemp (*Amaranthus tuberculatus*)
- Tumble Mustard (*Sisymbrium altissimum*)
- Velvetleaf (*Abutilon theophrasti*)
- Venice Mallow (*Hibiscus trionum*)
- Wild Mustard (*Sinapis arvensis*)
- Wild Radish (*Raphanus raphanistrum*)

**WEED SUPPRESSION**

KORIL + atrazine suppresses the growth of Canada thistle (*Cirsium arvense*) by burning down top growth. Regrowth may occur.





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

**KORIL + ATRAZINE RECOMMENDATIONS**

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

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

**APPLICATION RATE TABLE FOR CORN AND SORGHUM**

WEED SPECIES		KORIL + ATRAZINE RATE					
		1-1/2 Pints/A		2 Pints/A		3 Pints/A	
		Max. Leaf Stage (inches)	Max. Weed Height (inches)	Max. Leaf Stage (inches)	Max. Weed Height (inches)	Max. Leaf Stage (inches)	Max. Weed Height (inches)
When determining leaf stage, count all leaves except cotyledonary leaves							
Black Nightshade	( <i>Solanum nigrum</i> )	4	4	6	6	6	6
Burkolobur	( <i>Solanum rostratum</i> )	4	4	6	4	6	4
Burcucumber	( <i>Sicyos angulatus</i> )	-	-	4	4	4	4
Common Cocklebur	( <i>Xanthium pensylvanicum</i> )	6	8	8	10	10	12
Common Lambsquarters	( <i>Chenopodium album</i> )	-	6	-	10	-	12
Common Ragweed	( <i>Ambrosia artemisiifolia</i> )	6	4	8	6	8	6
Eastern Black Nightshade	( <i>Solanum ptycanthum</i> )	4	4	6	6	6	6
Entireleaf Morningglory	( <i>Ipomoea hederacea</i> )	-	-	4	3	4	3
Giant Ragweed	( <i>Ambrosia trifida</i> )	4	8	6	8	6	8
Hemp Sesbania	( <i>Sesbania exaltata</i> )	4	4	4	4	4	4
Hyleaf Morningglory	( <i>Ipomoea hederacea</i> )	3	3	4	4	4	4
Jimsonweed	( <i>Datura stramonium</i> )	4	4	6	6	6	6
Kochia	( <i>Kochia scoparia</i> )	-	2	-	2	-	4
Ladysthumb	( <i>Polygonum persicaria</i> )	4	4	6	6	8	8
Marestail	( <i>Conza canadensis</i> )	-	-	-	5	-	5
Palmleaf Morningglory	( <i>Ipomoea wrightii</i> )	-	-	4	3	4	3
Pennsylvania Smartweed	( <i>Polygonum pensylvanicum</i> )	4	4	6	6	8	8
Pitted Morningglory	( <i>Ipomoea lacunosa</i> )	3	3	4	4	4	4
Poltweed	( <i>Phytolacca americana</i> )	4	4	6	6	6	6
Prickly sida	( <i>Sida spinosa</i> )	-	-	4	4	6	2
Puncturevine	( <i>Tribulus terrestris</i> )	-	-	-	-	6	-
Purple Morningglory	( <i>Ipomoea muricata</i> )	-	-	2	2	2	3
Redroot Pigweed*	( <i>Amaranthus retroflexus</i> )	4	2	6	4	8	6
Small Flower Morningglory	( <i>Jacquemontia tamnifolia</i> )	-	-	4	3	4	3
Smooth Pigweed*	( <i>Amaranthus hybridus</i> )	4	2	4	4	6	4
Spiny Pigweed*	( <i>Amaranthus spinosus</i> )	4	2	6	4	8	6
Sunflower	( <i>Helianthus annus</i> )	6	8	8	10	10	12
Tall Morningglory	( <i>Ipomoea purpurea</i> )	3	3	4	4	4	4
Tall Waterhemp	( <i>Amaranthus tuberculatus</i> )	4	2	6	4	8	6
Toothed Spurge	( <i>Euphorbia dentata</i> )	-	-	4	4	4	4
Velvetleaf	( <i>Abutilon theophrasti</i> )	4	3	6	5	6	6
Vernice Mallow	( <i>Hibiscus trionum</i> )	4	2	4	2	4	2
Wild Buckwheat	( <i>Polygonum convolvulus</i> )	6	8	8	10	10	12
Wild Mustard	( <i>Sinaps arvensis</i> )	4	4	4	4	4	4

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**WEED SUPPRESSED**

Canada Thistle  KORIL + Atrazine Herbicide suppresses the growth by burning down of top growth. Regrowth may occur.	( <i>Cirsium arvense</i> )	Not Recommended	8 inch To Bud Stage	8 Inch To Bud Stage
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<sup>1</sup> If pigweeds (*Amaranthus* spp.) present in the field to be treated have been identified at triazine resistant biotypes, use KORIL + Atrazine Herbicide only at 3 pints/A. Control of pigweeds in the high plains areas of Texas and Oklahoma may not be satisfactory with KORIL + Atrazine Herbicide. Repeat applications may be necessary to achieve satisfactory control in these areas. Applications should be made when pigweeds do not exceed the 4 leaf stage and 2 inches in height.

**KORIL + ATRAZINE TANK MIXTURE RECOMMENDATIONS**

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

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

KORIL + atrazine + 2,4-D (such as Weedone <sup>®</sup> or Weedar <sup>®</sup> )	1-1/2 to 2 pints/A + 1/16 to 1/4 lb ai/A	Apply to field corn after emergence but before corn is 12 inches tall. Use drop nozzles if crop is taller than 8 inches.  Apply to sorghum between the 3 leaf stage but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by KORIL + atrazine at recommended rates of application plus improved control of devils claw, kochia, field bindweed suppression, and Canada thistle burndown.
	3 pints/A + 1/16 to 1/4 lb ai/A	Apply to field corn between the 4 leaf stage but before the corn is 12 inches tall. Use drop nozzles if crop is taller than 8 inches.  Apply to sorghum after the 4 leaf stage but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	

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KORIL + ATRAZINE TANK MIXTURE RECOMMENDATIONS (continued)

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
KORIL + atrazine + Stinger®	1-1/2 to 2 pints/A + 1/3 to 2/3 pints/A	Apply to field corn after emergence but before corn is 12 inches tall.	All weeds controlled by KORIL + atrazine at recommended rates of application plus improved Canada thistle burndown. For optimum performance apply to Canada thistle at least 4 inches in diameter or height but before bud stage.
	3 pints/A + 1/3 to 2/3 pint/A	Apply to field corn between the 4 leaf stage and before corn is 12 inches tall.	
KORIL + atrazine + Accent® + Non-ionic surfactant	1-1/2 to 2 pints/A + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn preemergence or postemergence but before corn is 12 inches tall. Do not apply this tank mix to sorghum.	All broadleaf weeds controlled by KORIL + atrazine plus grasses and broadleaves controlled by Accent. For optimum weed control, treat when broadleaves and grasses are in the recommended growth stage or size. Follow the weed size guideline on the KORIL + atrazine or Accent labels that are least restrictive.
	3 pints/A + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn between the 4 leaf stage of crop growth but before the corn is 12 inches tall. Do not apply this tank mix to sorghum.	

**GENERAL PRECAUTIONS AND RESTRICTIONS: Corn (Field and Pop) and Sorghum (Grain and Forage)**

- Postemergence applications of KORIL + Atrazine Herbicide will not adequately control grasses. Therefore, it is recommended that a suitable grass control program be used to provide any required grass control.
- Addition of a spray additive or mixture with liquid fertilizers may cause excessive crop leaf burn.
- Do not use KORIL + Atrazine on sorghum grown in sandy or loamy sand soils as excessive crop injury may occur.
- Seed corn producers should consult the respective seed corn company regarding tolerance of seed production inbred lines to KORIL + Atrazine Herbicide.
- Do not cut crop for feed or graze within 45 days after application.
- A second application of KORIL + Atrazine Herbicide may be applied if a new flush of weeds occur following the first application. The total cumulative rate must not exceed 4 pints/A per season.
- Do not use KORIL + Atrazine Herbicide on any crop other than stated on this label.
- Application to grain sorghum growing under stress caused by minor element deficiency or to grain sorghum growing on highly calcareous soil may result in crop injury.
- Special care should be taken when using KORIL + atrazine and Banvel®, Clarity®, or 2,4-D tank mixtures to avoid off target drift to sensitive crops.
- Tank mixtures with 2,4-D, Banvel®, or Clarity® can cause stalk brittleness to field corn. Tank mixtures with 2,4-D and Banvel®, can cause stalk brittleness to sorghum. Winds or cultivation may cause breakage while crop is brittle.
- Do not apply KORIL + Atrazine Herbicide at any rate to sorghum which has reached the boot stage of growth as severe crop injury, loss of crop yield may result.
- Postemergence application prior to the 3 leaf stage of corn may result in increased crop leaf burn.
- Do not apply KORIL + Atrazine Herbicide prior to the 3 leaf stage to seed corn inbreds or popcorn as excessive crop leaf burn may occur.
- Tank mixtures with Accent® + nonionic surfactant may result in increased crop leaf burn. Use of crop oil concentrate, nitrogen solution or other adjuvants with KORIL + atrazine + Accent tank mixtures may result in a further increase in crop leaf burn.
- To reduce exposure to residues, wash the spray rig, tractor, and all other equipment used to handle or apply this product with water, daily or before using the equipment for any other purpose.
- **AERIAL APPLICATION:** Aerial application is prohibited within 300 feet of residential areas (e.g., homes, schools, playgrounds, shopping areas, hospitals, etc.) Do not apply with backpack or hand-held application equipment. Apply to non-residential turf only. Do not apply to residential, play ground, or schoolyard turf.

**CROP ROTATION**

KORIL + Atrazine Herbicide contains atrazine at 1/4 lb active per pint of product. Due to the residual activity of the atrazine, injury to crops planted in treated fields the following season may occur. Consult your local extension service on the potential for atrazine carryover injury to rotational crops for your soil types and weather conditions encountered following application. If in doubt about your specific situation, a soil test prior to planting rotation crops is recommended to determine the amount of atrazine remaining and its potential to cause crop injury to the intended crop.

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**ATRAZINE RATE RESTRICTIONS**

Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or higher set-backs) which are different from the label, the more restrictive/protective requirements apply. Where a previous soil application of atrazine has been made to the crop, if Koril + Atrazine Herbicide is applied postemergence with appropriately registered products containing atrazine, the total amount of atrazine applied cannot exceed 2.5 lb. ai/A per calendar year.

**PRE-PLANT/PREEMERGENCE USE**

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

**POSTEMERGENCE USE**

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

**IMPORTANT: READ BEFORE USE**

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and should be followed carefully. However, 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 weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Nufarm, Inc. All such risks shall be assumed by the user or buyer.

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