

7969-136

9/11/2008

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Dave G. Bolin  
Product Registration Manager  
BASF Corporation  
26 Davis Drive  
P.O. Box 13528  
Research Triangle Park, NC 27709

SEP 11 2008

Subject: Label Notification(s) for Pesticide Registration Notice 2007-4

Dear Mr. Bolin:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 dated August 15, 2008 for:

**EPA Registration 7969-136**

**Marksman Herbicide**

The Registration Division (RD) has conducted a review of this request for applicability under PR Notice 2007-4 and finds that the label changes requested falls within the scope of PR Notice 2007-4. The label has been date-stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on nonrefillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please contact me directly at 703-305-6249 or Nicole Williams of my staff at 703-308-5551.

Sincerely,

A handwritten signature in cursive script, appearing to read "Linda".

Linda Arrington  
Notifications & Minor Formulations Team Leader  
Registration Division (7505P)  
Office of Pesticide Programs

Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0080. Approval expires 2-28-95



United States  
Environmental Protection Agency  
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

### Application for Pesticide - Section I

1. Company/Product Number BASF Corporation / 7969-136	2. EPA Product Manager Jim Tompkins	3. Proposed Classification <input type="checkbox"/> None <input checked="" type="checkbox"/> Restricted
4. Company/Product (Name) BASF Corporation / Marksman herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) BASF Corporation 26 Davis Drive / P.O. Box 13528 Research Triangle Park, NC 27709 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: <b>NOTIFICATION</b> EPA Reg. No. _____ Product Name <b>SEP 11 2008</b>	

### Section - II

<input type="checkbox"/> Amendment - Explain below.	<input checked="" type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

**Explanation:** Use additional page(s) if necessary. (For section I and Section II.)

Clarification of Final Printed labeling submitted to EPA in BASF letter dated February 26, 2008 for Marksman herbicide (7969-136). Response to EPA letter dated Nov 5, 2007. Final Print label included Container Disposal language per PRN 2007-4 and a bulk container statement. This clarification highlights that text.

No PRIA fee is associated with this action.

### Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Metal	
				<input type="checkbox"/> Plastic	
				<input type="checkbox"/> Glass	
				<input type="checkbox"/> Paper	
				<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container including, but not limited to 2.5 gallons		5. Location of Label Directions <input checked="" type="checkbox"/> on label	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

### Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)					
Name Dave G. Bolin		Title Product Registration Manager		Telephone No. (Include Area Code) 919-547-2108	
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.					6. Date Application Received (Stamped)
2. Signature 		3. Title Product Registration Manager			
4. Typed Name Dave G. Bolin		5. Date August 15, 2008			

### 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 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 for use in order to minimize potential for atrazine to reach ground and surface water.



The Chemical Company

# Marksman<sup>®</sup>

herbicide

#### For use in corn, fallow systems, and sorghum

**Active Ingredient:**

potassium salt of dicamba (3,6-dichloro- <i>o</i> -anisic acid)* .....	13.42%
atrazine** (2-chloro-ethylamino-6-isopropyl/amino- <i>s</i> -triazine .....	22.23%

**Other Ingredients:** ..... 64.35%

**Total:** ..... 100.00%

\*contains 11.45% 3,6-dichloro-*o*-anisic acid (dicamba) which equals 1.1 pounds per gallon (132 grams per liter), or 0.14 pounds per pint.

\*\*contains 22.23% atrazine which equals 2.1 pounds per gallon (252 grams per liter), or 0.26 pounds per pint.

EPA Reg. No.: 7969-136

EPA Est. No.:

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION/PRECAUCIÓN**

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

See inside for complete **Precautionary Statements, First Aid, Directions For Use,** and **Conditions of Sale and Warranty,** and state-specific crop and/or use site restrictions.

**In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).**

**Net Contents:**

**Shake before using.**

Product of U. S. A.

BASF Corporation, Crop Protection  
26 Davis Drive, Research Triangle Park, NC 27709

FIRST AID	
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).	

### Precautionary Statements

#### Hazards to Humans and Domestic Animals

**Caution.** Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist.

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. For more options, refer to **Category C** on an EPA chemical resistance category selection chart.

#### Mixers, loaders, applicators, flaggers, and other handlers must wear:

- Long-sleeved shirt and long pants,
- Chemical-resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, or viton  $\geq 14$  mils,
- Shoes plus socks, and
- Chemical-resistant apron, when mixing/loading, cleaning up spills, or cleaning equipment, or otherwise exposed to the concentrate.

See **Engineering Controls Statement** for additional requirements.

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### Engineering Controls Statement

Mixers and loaders supporting aerial applications **at a rate greater than 3 lbs ai/A** must use a closed system that meets the requirements for dermal protection listed in the Worker Protection Standard (WPS) for Agricultural Pesticides [40 CFR 170.240(d)(4)] and must:

- wear the personal protective equipment required for mixers and loaders,
- wear protective eyewear if the system operates under pressure, and
- be provided and have immediately available for use in an emergency, such as a spill or equipment breakdown: chemical-resistant footwear.

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)]. Pilots must wear the PPE required on this labeling for applicators; however, they need not wear chemical-resistant gloves when using an enclosed cockpit.

Flaggers supporting aerial applications must use an enclosed cab that meets the definition of the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection.

When applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(5)], 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/PPE 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 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 atrazine 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. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

Product must not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. Product must not be applied within 66 feet of points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet of natural or impounded lakes and reservoirs. If this product is applied

to highly erodible land, the 66-foot buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.

Product must not be mixed or loaded, or used within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product that spills or equipment leaks, container or equipment rinse or wash water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specific minimum containment capacities do not apply to vehicles when delivering pesticide to the mixing/loading sites.

Additional state imposed requirements regarding well-head setbacks and operational area containment must be observed.

One of the following restrictions must be used in applying atrazine to tile-outletted fields containing standpipes:

- **DO NOT** apply within 66 feet of standpipes in tile-outletted fields.
- Apply this product to the entire tile-outletted field and immediately incorporate it to a depth of 2 to 3 inches in the entire field.
- Apply this product to the entire tile-outletted field under a no-till practice only when a high crop residue management practice is practiced. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

This pesticide is toxic to aquatic invertebrates. **DO NOT** apply directly to water, 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 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-water.

### Ground and Surface Water Advisory

**Marksman® herbicide** contains the active ingredient atrazine. Atrazine can leach through soil and has been found to result in contamination of water supplies by way of groundwater. Therefore, growers are advised to avoid use of **Marksman** in well-drained loamy sand to sand soils, particularly in areas having high groundwater tables. Consult with your state or county extension agent for alternative herbicide recommendations such as **Clarity®** or **Distinct®** alone or in combination with a non-triazine herbicide.

Check valves or anti-siphoning devices must be used on all mixing equipment to prevent back-siphoning into wells or

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bulk storage tanks. Refer to **Storage and Disposal** regarding proper disposal of excess pesticide, spray mixtures, and rinsates.

### Endangered Species Concerns

The use of any pesticide in a manner that may kill or otherwise harm an endangered species or adversely modify their habitat is a violation of federal law.

### 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 **24 hours**.

**Exception:** If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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 worn over short-sleeve shirt and short pants.
- Chemical-resistant footwear plus socks.
- Chemical-resistant gloves made of any waterproof material.
- Chemical-resistant headgear for overhead exposure.
- Protective eyewear.

### Storage and Disposal

**DO NOT** contaminate water, food, or feed by storage or disposal.

#### Pesticide Storage

Store in original container in a well-ventilated area separately from fertilizer, feed, and foodstuffs. Avoid cross-contamination with other pesticides.

#### Pesticide Disposal

Open dumping is prohibited.

Pesticide wastes are toxic. Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state or local procedures under Subtitle C of the Resource Conservation and Recovery Act.

## Container Disposal

**Nonrefillable Container. DO NOT reuse or refill this container.** Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**Triple rinse containers too large to shake (capacity > 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**Refillable Container.** Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**Triple rinse as follows:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. **DO NOT** reuse the container for any other purpose. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

## In Case of Spill

In case of large-scale spillage regarding this product, call:  
CHEMTREC 1-800-424-9300  
BASF Corporation 1-800-832-HELP (4357)

### 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 reuse. Keep the spill out of all sewers and open bodies of 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.

### ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW.

Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through [www.atrazine-watershed.info], or [1-866-365-3014]. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact BASF Corporation for a refund.

Unless otherwise directed in supplemental labeling, all applicable directions, restrictions and precautions are to be followed. This labeling must be in the user's possession during application.

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## General Information

**Marksman® herbicide** is a water-dispersible formulation for use in corn, sorghum, or fallow to control annual broadleaf weeds and to suppress perennial broadleaf weeds (refer to **Table 1**).

### Mode of Action

**Marksman** contains two active ingredients: dicamba and atrazine. Dicamba is readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth. Dicamba interferes with the plant's growth hormones (auxins) resulting in death of many broadleaf weeds. Atrazine is absorbed by roots and shoots and controls weeds by inhibiting photosynthesis.

### Resistance Management

Dicamba has a low probability of selecting for resistant biotypes. With repeated use, atrazine has selected for resistant biotypes of some weed species. Combining the two herbicides, which are each active in a similar broadleaf weed spectrum, reduces the risk of selecting for resistant biotypes.

### Cleaning Spray Equipment

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

**Table 1. General Weed List, Including ALS- and Triazine-Resistant Biotypes**

<b>ANNUALS</b>	<b>PERENNIALS</b>
Amaranth, Palmer, Powell	Alfalfa
Buckwheat, Wild	Artichoke, Jerusalem
Burcucumber	Bindweed, Field, Hedge
Chickweed, Common	Clover, Hop
Clovers	Dandelion
Cocklebur, Common	Dock, Broadleaf, Curly
Copperleaf, Hophornbeam	Dogbane, Hemp
Cucumber, Wild	Horsenettle, Carolina
Jimsonweed	Lespedeza
Kochia	Milkweed, Common
Ladysthumb	Ragweed, Western
Lambsquarters, Common	Smartweed, Swamp
Mallow, Common, Venice	Sowthistle, Perennial
Marestail (Horseweed)	Thistle, Canada, Scotch
Morningglory, Ivyleaf, Tall	Trumpetcreeper (Buckvine)
Mustard, Wild, Tansy, Yellowtops	Vetch
Nightshade, Black, Cutleaf	
Pigweed, Prostrate, Redroot (Carelessweed), Smooth, Spiny, Tumble	
Puncturevine	
Purslane, Common	
Ragweed, Common, Giant, Lance-Leaf	
Sicklepod	
Sida, Prickly (Teaweed)	
Smartweed, Green, Pennsylvania	
Spanish Needles	
Spurge, Prostrate	
Sunflower, Common (Wild), Volunteer	
Thistle, Russian	
Velvetleaf	
Waterhemp, Common, Tall	

**Application Instructions**

**Marksman® herbicide** can be applied preemergence or postemergence to actively growing weeds as aerial, broadcast, band, or spot spray applications using water or sprayable fertilizer as a carrier. Sprayable fluid fertilizer as a carrier is not recommended for use after crop emergence. For crop-specific application timing and other details, refer to section **VI. Crop-specific Information**.

To avoid uneven spray coverage, **Marksman** should not be applied during periods of gusty wind or when wind is in excess of 15 mph.

Avoid off-target movement. Use extreme care when applying **Marksman** to prevent injury to desirable plants and shrubs.

**Sensitive Crop Precautions**

**Marksman** may cause injury to desirable trees and plants, particularly beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potatoes, soybeans, sunflowers, tobacco, tomatoes, and other broadleaf plants when contacting their roots, stems, or foliage. These plants are most sensitive to **Marksman** during their development or growing stage.

- Use coarse sprays (volume median diameter of 400 microns or more) to avoid potential herbicide drift. Select nozzles that are designed to produce minimal amounts of fine spray particles (less than 200 microns). Examples of nozzles designed to produce coarse sprays via ground applications are **Delavan® Raindrop®**, Spraying Systems XR (excluding 110° tips) flat fans, **Turbo Floodjet®**,

**Turbo Teejet®**, or large capacity flood nozzles such as D10, TK10, or greater capacity tips. Keep the spray pressure at or below 20 psi and the spray volume at or above 20 gallons per acre, unless otherwise required by the manufacturer of drift-reducing nozzles. Consult your spray nozzle supplier concerning the choice of drift-reducing nozzles.

- Agriculturally approved drift-reducing additives may be used.

**Aerial Application**

**Water Volume:** Use 2 to 10 gallons of water per acre. Use the higher spray volume when treating dense or tall vegetation.

**Application Equipment:** Select nozzles designed to produce minimal amounts of fine spray particles. Make applications at the lowest safe height to reduce the exposure of spray droplets to evaporation and wind.

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.

**DO NOT** use aerial equipment if spray particles can be carried by the wind into areas where sensitive crops or plants are growing or when temperature inversions exist.

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 management from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the airstream and never be pointed downward 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](#).

**Importance of 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 Inversion** sections of this label).

**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:** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy protection. 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 backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the 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 larger droplets than other nozzle types.

**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:** 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 downwind. 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 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 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 connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards 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, nontarget crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

**Ground Application (Banding)**

When applying **Marksman® herbicide** 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 to 50 gallons of spray solution per broadcast acre for optimal performance. Use the higher spray volume when treating dense or tall vegetation.

**Application Equipment:** Select nozzles designed to produce minimal amounts of fine spray particles. Spray with nozzles as close to the weeds as is practical for good weed coverage.

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**Additives**

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To improve postemergence weed control, agriculturally approved surfactants, sprayable fertilizers (urea ammonium nitrate, or ammonium sulfate), or crop oil concentrate may be added, particularly in dry growing conditions. (Refer to **Table 2. Additive Rate.**)

**Nitrogen Source**

• **Urea ammonium nitrate (UAN):** Use 2 to 4 quarts of UAN (commonly referred to as 28%, 30%, or 32% nitrogen solution) per acre. **DO NOT** use brass or aluminum nozzles when spraying UAN.

• **Ammonium sulfate (AMS):** AMS at 2.5 pounds per acre may be substituted for UAN. Use high-quality AMS (spray grade) to avoid plugging of nozzles. Other sources of nitrogen are not as effective as those mentioned. BASF 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.

**Nonionic Surfactant**

The standard label recommendation is 1 pint of an 80% active nonionic spray surfactant per 100 gallons of water. For certain weeds, a higher spray surfactant rate is recommended.

**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
- 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.

For additional information, see **Compatibility Test for Mix Components.**



Adjuvants containing crop oil concentrates may be used in preplant, preemergence, and all fallow system applications. **DO NOT** use crop oil concentrate for postemergence in-crop applications unless specifically allowed in section VI. **Crop-specific Information** of this label.

**Table 2. Additive Rate Per Acre**

Additive	Rate Per Acre
Nonionic Surfactant	1 to 2 pints per 100 gallons
AMS	2.5 pounds
UAN Solution	2 to 4 quarts
Crop Oil Concentrate	1 quart*

\*see manufacturer's label for specific rate recommendations

### Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.

Add components in the sequence indicated in the **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of recommended label rate per acre.

Always cap the jar and invert 10 cycles between component additions.

When the components have all been added to the jar, let the solution stand for 15 minutes. 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 (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

### Mixing Order

- Water.** Begin by agitating a thoroughly clean sprayer tank three-quarters full of clean water.
- Agitation.** Maintain constant agitation throughout mixing and application.
- Inductor.** If an inductor is used, rinse it thoroughly after each component has been added.
- Products in PVA bags.** Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- Water-dispersible products** (such as **Marksman® herbicide**, dry flowables, wettable powders, suspension concentrates, or suspo-emulsions).
- Water-soluble products.**
- Emulsifiable concentrates** (such as oil concentrate when applicable).
- Water-soluble additives** (such as AMS or UAN when applicable).
- Remaining quantity of water.**

Maintain constant agitation during application.

## General Tank Mixing Information

### Tank Mix Partners/Components

**Marksman** may be tank mixed or applied sequentially with one or more of the following herbicide products according to the specific tank mixing instructions in this label and respective product labels.

- **Accent®** (nicosulfuron)
- **Ally®** (metsulfuron-methyl)
- atrazine
- **Axiom™** (flufenacet + metribuzin)
- **Banvel®** (dicamba)
- **Basagran®** (bentazon)
- **Beacon®** (primisulfuron-methyl)
- **Bicep II Magnum®** (metolachlor + atrazine)
- **Bladex®** (cyanazine)
- **Buctril®** (bromoxynil)
- **Bullet®** (alachlor + atrazine)
- **Clarity®** (dicamba)
- **Command®** (clomazone)
- **Curtail®** (clopyralid + 2,4-D)
- **Cyclone®** (paraquat)
- **DoublePlay®** (acetochlor + EPTC)
- **Degree™** (acetochlor)
- **Degree Xtra™** (acetochlor + atrazine)
- **Dual II Magnum®** (s-metolachlor)
- **Dual Magnum®** (s-metolachlor)
- **Eradicane®** (EPTC)
- **Exceed®** (primisulfuron + prosulfuron)
- **Express®** (thifensulfuron + tribenuron-methyl)
- **Extrazine® II** (cyanazine + atrazine)
- **Fallow Master®** (glyphosate + dicamba)
- **Field Master®** (acetochlor + atrazine + glyphosate)
- **Frontier®** (dimethenamid)
- **FulTime®** (acetochlor + atrazine)
- **Glean®** (chlorsulfuron)
- **Gramoxone® Extra** (paraquat)
- **Guardsman®** (dimethenamid + atrazine)
- **Harness®** (acetochlor)
- **Harness® Xtra** (acetochlor)
- **Hornet®** (flumetsalam + clopyralid)
- **Laddok® S-12** (bentazon + atrazine)
- **Landmaster® BW** (glyphosate + 2,4-D)
- **Lasso®** (alachlor)
- **Liberty®** (glufosinate)
- **Lightning®** (imazethapyr + imazapyr)
- **Outlook®** (dimethenamid-P)
- **Paramount®** (quinclorac)
- **Peak®** (prosulfuron)
- **Permit®** (halosulfuron)
- **Princep®** (simazine)
- **Prowl®** (pendimethalin)
- **Python™** (flumetsulam)
- **Ramrod®** (propachlor)
- **Roundup Ultra®** (glyphosate)
- **Roundup Ultra RT** (glyphosate)
- **Spirit™** (primisulfuron + prosulfuron)
- **Stinger®** (clopyralid)
- **Surpass®** (acetochlor)
- **Sutan®** + (butylate)
- **TopNotch®** (acetochlor)
- **Touchdown®** (sulfosate)
- **Tough®** (pyridate)
- 2,4-D

See section VI. **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.

**Marksman** may also be used in tank mixtures with foliar applied insecticides including synthetic pyrethroids such as **Ambush®, Asana®, Pounce®** and **Warrior®** insecticides or with the carbamate insecticide **Furadan®**. **DO NOT** apply **Marksman** in tank mixtures with **Lorsban® insecticide**.

Physical incompatibility, reduced weed control, or crop injury may result from mixing **Marksman** with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers. BASF does not recommend using tank mixes other than those listed on BASF labeling. Local agricultural

authorities may be a source of information when using other than BASF recommended tank mixes.

### Restrictions and Limitations – All Crops

- **Maximum seasonal use rate:** See **Table 3.** for crop-specific maximum seasonal use rates for **Marksman® herbicide.**
- **Marksman** contains atrazine (0.26 pounds of active ingredient per pint). When tank mixing or making sequential applications with products that contain atrazine, **DO NOT** exceed the following total combined rates of atrazine.  
Postemergence applications to corn and sorghum must be made before crop reaches 12 inches in height.  
Maximum broadcast application rates for corn and sorghum must be as follows:
  - If no atrazine was applied prior to corn/sorghum emergence, apply a maximum of 2.0 lbs ai/A broadcast. If postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 lbs ai/A per calendar year.
  - Apply a maximum of 2.0 lbs ai/A as a single preemergence application on soils that are not highly erodible or on highly erodible soils (as defined by the Natural Resource Conservation Service) if at least 30% of the surface is covered with plant residues; or
  - Apply a maximum of 1.6 lbs ai/A as a single preemergence application on highly erodible soils (as defined by the Natural Resource Conservation Service) if < 30% of the surface is covered with plant residues; or 2.0 lbs ai/A if only applied postemergence.
- **Preharvest Interval (PHI): Refer to section VI. Crop-specific Information for preharvest intervals.**
- **Restricted Entry Interval (REI): 24 hours**
- **Crop Rotation Restriction:**
  - In cases of treated crop failure, the area may be replanted to either corn or sorghum during the same cropping season. If corn is replanted, **DO NOT** apply **Marksman, Clarity®**, or **Banvel® herbicides** until after emergence. If sorghum is the replanted crop, either **Banvel, Clarity, or Marksman** can be used as a postemergence application.
  - If applied after June 10, rotation with crops other than corn or sorghum the following spring may result in crop injury.
  - In the High Plains and intermountain areas of the West, where rainfall is sparse and erratic or where irrigation is required, use only when corn or sorghum is to follow corn or sorghum, or when a crop of untreated corn or sorghum is to precede other rotational crops.
  - For soils containing a calcareous surface layer, such as those found in eastern parts of the Dakotas, Kansas, western Minnesota, and Nebraska, injury may occur to soybeans or small grains planted the year following application.
  - Small grains may be planted 10 months following treatment. **DO NOT** plant sugarbeets, tobacco, vegetables (including dry beans), or small-seeded legumes and grasses in the spring of the year following application, or injury may occur.
- **Rainfast period:** Rainfall or irrigation occurring within **4 hours** after postemergence applications may reduce the effectiveness of **Marksman.**

- **Stress: DO NOT** apply to weeds under stress due to lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, or widely fluctuating temperatures, as 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** apply through any type of **irrigation** system. **DO NOT** contaminate irrigation ditches or water used for domestic purposes.

**Table 3. Crop-specific Restrictions and Limitations**

Crop	Maximum Rate Per Acre Per Application	Maximum Rate Per Acre Per Season	Livestock Grazing or Feeding	Aircraft Application
Corn	3.5 pints	5.25 pints	Yes <sup>1</sup>	Yes
Fallow Ground	8.6 pints	8.6 pints	No	Yes
Sorghum	2 pints	3.5 pints	Yes <sup>2</sup>	Yes

<sup>1</sup>Crop may be harvested or grazed for feeding after ensilage stage (milking stage or later in maturity).  
<sup>2</sup>Crop may be grazed or fed to livestock at mature grain stage.

### Crop-specific Information

#### Corn (Field, Pop, Seed, and Silage)

Corn may be harvested or grazed for feed after it has reached the ensilage (milk) stage or later in maturity.

Direct contact of **Marksman** with corn seed must be avoided in preplant or preemergence applications. If corn seeds are less than 1.5" below the soil surface, delay application until corn has emerged.

A maximum of 2 applications of **Marksman** may be made per season.

**DO NOT** apply **Marksman** to seed corn or popcorn without first verifying with your local seed corn company (supplier) the selectivity of **Marksman** on your inbred line or variety of popcorn. This precaution will help avoid potential injury of sensitive varieties.

**Marksman** is not registered for use on sweet corn.

Avoid using crop oil concentrates after crop emergence as crop injury may result. Use crop oil concentrates only in dry conditions when corn is less than 5" tall and when applying **Marksman** alone or tank mixed with atrazine.

For field corn forage uses, a 60-day PHI is required.

Postemergence applications to corn must be made before crop reaches 12 inches in height.

Maximum broadcast application rates for corn must be as follows:

- If no atrazine was applied prior to corn emergence, apply a maximum of 2.0 lbs of atrazine ai/A broadcast. If postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 lbs ai/A per calendar year.

- Apply a maximum of 2.0 lbs of atrazine ai/A as a single preemergence application on soils that are not highly erodible or on highly erodible soils (as defined by the Natural Resource Conservation Service) if at least 30% of the surface is covered with plant residues; or
- Apply a maximum of 1.6 lbs of atrazine ai/A as a single preemergence application on highly erodible soils (as defined by the Natural Resource Conservation Service) if < 30% of the surface is covered with plant residues; or 2.0 lbs of atrazine ai/A if only applied postemergence.

**PREPLANT AND PREEMERGENCE APPLICATION IN NO TILLAGE CORN:**

Apply 3.5 pints of **Marksman® herbicide** per acre on medium- or fine-textured soils containing 2.5% or greater organic matter. Use 2 pints per acre on coarse soils (sand, loamy sand, and sandy loam) or medium and fine textured soils with less than 2.5% organic matter. Avoid use of **Marksman** in well-drained loamy sand to sand soils, particularly in areas having high groundwater tables.

**Marksman** may be applied for burndown of emerged weeds before, during, or after corn planting. When planting into a legume sod (e.g. alfalfa or clover), apply **Marksman** after 4" to 6" of regrowth has occurred.

**PREEMERGENCE APPLICATION IN CONVENTIONAL OR REDUCED TILLAGE CORN:**

**Marksman** may be applied after planting and prior to corn emergence.

Apply 3.5 pints per treated acre to medium- or fine-textured soils that contain 2.5% organic matter or more. **DO NOT** apply to coarse-textured soils (sand, loamy sand, or sandy loam) or any soil with less than 2.5% organic matter until after corn emergence (see **Early Postemergence** uses below).

Preemergence application of **Marksman** does not require mechanical incorporation to become active. A shallow mechanical incorporation is recommended if application is not followed by adequate rainfall or sprinkler irrigation. Avoid tillage equipment (e.g., drags, harrows) which concentrate treated soil over seed furrow, as seed damage could result.

**EARLY POSTEMERGENCE APPLICATION IN ALL TILLAGE SYSTEMS:**

Apply 3.5 pints of **Marksman** per treated acre to medium- or fine-textured soils. Reduce the rate to 2 pints per treated acre for corn grown on coarse-textured soils (sand, loamy sand, and sandy loam).

Apply between corn emergence and the 5-leaf stage or 8" tall, whichever occurs first.

**POSTEMERGENCE APPLICATION IN ALL TILLAGE SYSTEMS:**

Apply 2 pints of **Marksman** per acre on all soils when corn is 8" to 12" tall.

For best performance, apply **Marksman** when weeds are less than 3" tall. Apply **Marksman** with directed spray when corn leaves prevent proper spray coverage of the target weeds.

**Corn Tank Mixes or Sequential Uses**

When tank mixing or sequentially applying atrazine to corn, the total pounds of atrazine applied (lbs ai/A) must not exceed 2.5 pounds active ingredient per year.

When using tank mix or sequential applications with **Marksman**, always follow the companion product label to determine specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow precautions and restrictions including state and local use restrictions that may apply to specific products.

Apply **Marksman** prior to, in tank mix with, or after one or more of the following herbicides:

- |                                  |                                     |
|----------------------------------|-------------------------------------|
| • <b>Accent®<sup>1</sup></b>     | • <b>Harness® Xtra</b>              |
| • atrazine                       | • <b>Hornet®<sup>1</sup></b>        |
| • <b>Axiom™</b>                  | • <b>Laddok® S-12</b>               |
| • <b>Banvel®<sup>1</sup></b>     | • <b>Lasso®</b>                     |
| • <b>Beacon®<sup>1</sup></b>     | • <b>Liberty®<sup>3</sup></b>       |
| • <b>Bicep II Magnum®</b>        | • <b>Lightning®<sup>6</sup></b>     |
| • <b>Bladex®</b>                 | • <b>Marksman®<sup>1</sup></b>      |
| • <b>Bullet®</b>                 | • <b>Outlook®</b>                   |
| • <b>Clarity®<sup>1</sup></b>    | • <b>Permit®<sup>1</sup></b>        |
| • <b>Degree™</b>                 | • <b>Princep®</b>                   |
| • <b>Degree Xtra™</b>            | • <b>Prowl®</b>                     |
| • <b>DoublePlay®<sup>2</sup></b> | • <b>Python™</b>                    |
| • <b>Dual II Magnum®</b>         | • <b>Roundup® Ultra<sup>4</sup></b> |
| • <b>Dual Magnum®</b>            | • <b>Roundup® Ultra RT</b>          |
| • <b>Eradicane®<sup>2</sup></b>  | • <b>Spirit™<sup>1</sup></b>        |
| • <b>Exceed®<sup>1</sup></b>     | • <b>Stinger®<sup>1</sup></b>       |
| • <b>Extrazine® II</b>           | • <b>Surpass®</b>                   |
| • <b>Field Master®</b>           | • <b>Sutan™</b>                     |
| • <b>Frontier®</b>               | • <b>TopNotch®</b>                  |
| • <b>FulTime®</b>                | • <b>Touchdown®</b>                 |
| • <b>Gramoxone® Extra</b>        | • <b>Tough®</b>                     |
| • <b>Guardsman®</b>              | • 2,4-D <sup>5</sup>                |
| • <b>Harness®</b>                |                                     |

<sup>1</sup>See **Table 4** for additional limitations or restrictions that apply for tank mix or sequential use programs with these products.

<sup>2</sup>Sequential use only

<sup>3</sup>Use only on **Liberty Link®** (glufosinate tolerant) corn hybrids.

<sup>4</sup>Includes postemergence use on **Roundup Ready®** (glyphosate tolerant) corn hybrids.

<sup>5</sup>When using as a tank mixture, application must be made prior to corn emergence.

<sup>6</sup>Use only **CLEARFIELD®** (imidazolinone tolerant) corn hybrids.

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**Table 4. Specific Guidelines for Tank Mixes or Sequential Use Programs**

Tank Mix Partner	Rate Per Acre
<b>Accent®</b> or <b>Beacon®</b> herbicide	When tank mixing, applications immediately following extreme day or night temperature fluctuations or applications when daytime temperatures do not exceed 50° F may result in decreased weed control or crop injury. Delay application until the temperatures warm and both weeds and crop resume normal growth.
<b>Clarity®</b> , <b>Banvel®</b> or <b>Marksman®</b> herbicide	Tank mixes with these products that contain dicamba must not exceed a total combined rate of 0.50 pounds of dicamba acid equivalent per acre (0.25 pound on coarse-textured soils or on any soil when corn is greater than 8" tall). Sequential applications of these products must be separated by a minimum of 2 weeks (unless the combined rate is less than 0.5 pounds of dicamba acid equivalent and corn is 8" tall or less) and must not exceed a combined total of 0.75 pounds dicamba acid equivalent per acre for in-crop use.
<b>Exceed®</b> , <b>Spirit™</b> , <b>Stinger®</b> , <b>Hornet®</b> , or <b>Permit®</b> herbicide	For improved control of velvetleaf, tank mix 0.25 to 0.5 ounce of <b>Exceed</b> , 0.5 ounce of <b>Spirit</b> , or 0.17 to 0.33 ounce <b>Permit</b> per acre with <b>Marksman</b> . For improved control of Canada thistle, <b>Stinger</b> at 1.5 to 3 fluid ounces per acre or <b>Hornet</b> at 0.6 to 1.2 ounces per acre may be tank mixed with <b>Marksman</b> . Use the higher rate in the range for heavier infestations of these weeds.

**Fallow Systems**

**Marksman** may be applied to fallow ground through the summer and fall after wheat harvest in wheat/ fallow/wheat or wheat/corn or sorghum/fallow (Eco-fallow) rotations. For Eco-fallow systems, plant corn or sorghum in the spring after treatment with minimum soil disturbance. Use a surface planter or a planter leaving a shallow furrow. If weeds are present at planting, remove them with a sweep plow or other suitable implement before planting.

**When tank mixing or sequentially applying atrazine or products containing atrazine to fallow, the total pounds of atrazine applied (lbs ai/A) must not exceed the limits as noted in the following Chemical Fallow application restrictions:**

**For soils in North And South Dakota with a pH of 7.5 or greater:**

- **DO NOT** apply more than 1.5 pounds active ingredient per acre for any application.
- **DO NOT** apply more than one application per cycle.

**For soils in North And South Dakota with a pH of less than 7.5:**

- **DO NOT** apply more than 2.0 pounds active ingredient per acre for any application.
- **DO NOT** apply more than one application per cycle.

**For all other locations:**

- **DO NOT** apply more than 2.25 pounds active ingredient per acre for any application.
- **DO NOT** apply more than one application per cycle.

**ROTATIONAL CROP PRECAUTIONS:**

The application rates and timings in this label pertain only to a cropping system of wheat/fallow/wheat (postharvest fallow) or wheat/corn or sorghum/fallow (Eco-fallow). If any other crop is to be substituted for wheat, corn, sorghum, or the fallow period, refer to the **Crop Rotation Restrictions** in section **V. Restrictions and Limitations**.

To avoid injury to crops planted after applying **Marksman**, specific restrictions for postharvest fallow or Eco-fallow application(s) are:

- Use only on silt loam or finer-textured soils.
- **DO NOT** treat erodible hillsides, caliche, and rocky outcroppings, or exposed calcareous subsoil.
- **DO NOT** treat soils of the Rosebud and Canyon series in western Nebraska and adjoining counties in Colorado and Wyoming.
- **DO NOT** treat soils with calcareous surface layers.
- Avoid overlapping spray swaths during treatment application.

**WHEAT/FALLOW/WHEAT:**

**For use in: Colorado, Kansas, Nebraska, Oklahoma, South Dakota, Texas, and Wyoming.**

For preemergence or postemergence control or suppression of the weeds listed in this label.

Apply 2 to 3.5 pints of **Marksman** per treated acre as a broadcast treatment.

For best performance, apply soon after wheat harvest, prior to or soon after weed emergence. A split application of **Marksman** may be used, but only in the summer to fall after wheat harvest, and may not exceed the maximum rate of 3.5 pints per treated acre.

**WHEAT/CORN OR SORGHUM/FALLOW (ECO-FALLOW):**

**For use in: Colorado, Kansas, Nebraska, Oklahoma, and Texas.**

To control annual broadleaf or grass weeds following wheat and into the following corn or sorghum crop (when grown under minimum tillage).

Apply 2 to 8.6 pints of **Marksman** per acre.

For best performance, apply **Marksman** within 10 days after harvesting the wheat. Use the higher rates listed for added grass control and longer residual weed control. A split application of **Marksman** may be used but only in summer to fall after wheat harvest and may not exceed the maximum labeled rate of 8.6 pints per acre (2.25 pounds of atrazine per acre).

**Crop-specific Restrictions and Limitations**

**DO NOT** graze or feed forage from treated areas to livestock.

**DO NOT** plant any crop other than those listed in this label within 18 months following treatment.

## Fallow Systems Tank Mixes or Sequential Uses

When using tank mix or sequential applications with **Marksman® herbicide**, always follow the companion product label to determine specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow precautions and restrictions including state and local use restrictions that may apply to specific products.

When tank mixing sequential applications with product containing atrazine **DO NOT** apply more than 2.25 lbs ai/A per cycle.

Apply **Marksman** prior to, in tank mix with, or after one or more of the following herbicides:

- **Ally®**
- atrazine
- **Banvel®**
- **Buctril®**
- **Clarity®**
- **Command®**
- **Curtail®**
- **Cyclone®**
- **Express®**
- **Fallow Master®**
- **Glean®**
- **Gramoxone® Extra**
- **Landmaster® BW or II**
- **Paramount®**
- **Roundup Ultra®**
- **Roundup Ultra RT**
- 2,4-D

## Sorghum

**Marksman** may be applied preplant or postemergence in sorghum to control many annual broadleaf weeds and to reduce competition from established perennial broadleaf weeds as well as control their seedlings.

**DO NOT** apply to furrow planted sorghum until level (plowed in).

**DO NOT** apply **Marksman** to sorghum grown for seed production.

**DO NOT** graze or feed forage from treated areas for 21 days or more following application.

**DO NOT** graze livestock in treated areas for 21 days or more following application.

**DO NOT** add crop oil if application is made after sorghum emergence. **DO NOT** add surfactant unless possible crop injury is acceptable.

For preemergent sorghum forage uses, a 60-day PHI is required.

For postemergent sorghum forage uses, a 45-day PHI is required.

Postemergence applications to sorghum must be made before crop reaches 12 inches in height.

Maximum broadcast application rates for sorghum must be as follows:

- If no atrazine was applied prior to corn emergence, apply a maximum of 2.0 lbs of atrazine ai/A broadcast. If postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 lbs ai/A per calendar year.
- Apply a maximum of 2.0 lbs of atrazine ai/A as a single preemergence application on soils that are not highly erodible or on highly erodible soils (as defined by the Natural Resource Conservation Service) if at least 30% of the surface is covered with plant residues; or

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- Apply a maximum of 1.6 lbs of atrazine ai/A as a single preemergence application on highly erodible soils (as defined by the Natural Resource Conservation Service) if < 30% of the surface is covered with plant residues; or 2.0 lbs of atrazine ai/A if only applied postemergence.

### Preplant Application:

Up to 2 pints of **Marksman** may be used and must be applied at least 15 days before sorghum planting.

### Postemergence Application:

Apply **Marksman** in sorghum between the 2 to 5 leaf stage (about 2" to 8" tall) of the sorghum. For best performance, apply when sorghum is in the 2 to 3 leaf stage. Applying **Marksman** to sorghum during periods of rapid growth may result in temporary leaning of plants or rolling of leaves. These effects are usually outgrown within 10 to 14 days. On coarse soils, injury to sorghum may occur if heavy rain immediately follows application.

Apply 1.5 pints of **Marksman** per acre to control actively growing redroot pigweed less than 3" tall. Apply 2 pints of **Marksman** per acre for all other listed broadleaf weeds.

### Split Applications:

**Marksman** may be applied in split applications: preplant followed by postemergence applications. **DO NOT** exceed a total of 3.5 pints of **Marksman** per acre, per season.

## Sorghum Tank Mixes or Sequential Uses

When tank mixing or sequentially applying atrazine or products containing atrazine, **DO NOT** exceed an application rate of 2.0 lbs ai/A for any single application and the total pounds of atrazine applied must not exceed 2.5 lbs ai/A per year.

When using tank mix or sequential applications with **Marksman**, always follow the companion product label to determine specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow precautions and restrictions including state and local use restrictions that may apply to specific products.

Apply **Marksman** prior to, in tank mix with, or after one or more of the following herbicides:

- atrazine
- **Basagran®**
- **Bicep II Magnum®**
- **Buctril®**
- **Cyclone®**
- **Dual II Magnum®**
- **Dual Magnum®**
- **Fallowmaster®**
- **Frontier®**
- **Gramoxone® Extra**
- **Guardsman®**
- **Laddok® S-12**
- **Landmaster®**
- **Lasso®**
- **Outlook®**
- **Paramount®**
- **Peak®**
- **Permit®**
- **Ramrod®**
- **Roundup® Ultra**

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Pests Listed in This Label	
Common Name	Scientific Name
Alfalfa	<i>Medicago sativa</i>
Amaranth, palmer	<i>Amaranthus palmeri</i>
Amaranth, powell	<i>Amaranthus powellii</i>
Artichoke, Jerusalem	<i>Helianthus tuberosus</i>
Bindweed, field	<i>Convolvulus arvensis</i>
Bindweed, hedge	<i>Calystegia sepium</i>
Buckwheat, wild	<i>Polygonum convulvulus</i>
Chickweed, common	<i>Stellaria media</i>
Clovers	<i>Trifolium</i> spp.
Clover, hop	<i>Trifolium aureum</i>
Cocklebur, common	<i>Xanthium strumarium</i>
Copperleaf, hophornbeam	<i>Acalypha ostryifolia</i>
Cucumber, wild	<i>Echinocystis lobata</i>
Dandelion	<i>Taraxacum officinale</i>
Dock, broadleaf (bitterdock)	<i>Rumex obtusifolius</i>
Dock, curly	<i>Rumex crispus</i>
Dogbane, hemp	<i>Apocynum cannabinum</i>
Horsenettle, Carolina	<i>Solanum carolinense</i>
Jimsonweed	<i>Datura stratum</i>
Kochia	<i>Kochia scoparia</i>
Ladysthumb	<i>Polygonum persicaria</i>
Lambsquarters, common	<i>Chenopodium album</i>
Lespedeza	<i>Lespedeza</i> spp.
Mallow, common	<i>Malva neglecta</i>
Mallow, Venice	<i>Hibiscus trionum</i>
Marestail (horseweed)	<i>Conyza canadensis</i>
Milkweed, common	<i>Asclepias syriaca</i>
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>
Morningglory, tall	<i>Ipomoea purpurea</i>
Mustard, wild	<i>Sinapis arvensis</i>
Mustard, yellowtops	
Nightshade, black	<i>Solanum nigrum</i>
Pigweed, prostrate	<i>Amaranthus blitoides</i>
Pigweed, redroot, (carelessweed)	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Pigweed, spiney	<i>Amaranthus spinosus</i>
Pigweed, tumble	<i>Amaranthus albus</i>
Puncturevine	<i>Portulaca oleracea</i>
Purslane, common	<i>Richardia scabra</i>
Ragweed, common	<i>Ambrosia artemisiifolia</i>
Ragweed, giant (buffaloweed)	<i>Ambrosia trifida</i>
Ragweed, lance-leaf	<i>Ambrosia bidentata</i>
Ragweed, western	<i>Ambrosia psilostachya</i>
Sida, prickly (teaweed)	<i>Sida spinosa</i>
Smartweed, green	<i>Polygonum scabrum</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Smartweed, swamp	<i>Polygonum coccineum</i>
Sowthistle, perennial	<i>Sonchus arvensis</i>
Spanish needles	<i>Bidens bipinnata</i>
Spurge, prostrate	<i>Euphorbia humistrata</i>
Sunflower, common (Wild)	<i>Helianthus annuus</i>
Thistle, Russian	<i>Salsola iberica</i>
Thistle, Canada	<i>Cirsium arvense</i>
Trumpet creeper	<i>Campsis radicans</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Vetch	<i>Vicia</i> spp.
Waterhemp, common	<i>Amaranthus rudis</i>
Waterhemp, tall	<i>Amaranthus tuberculatus</i>

Crops
This product can be used on the following crops:
<b>Corn</b> <b>Fallow Systems</b> <b>Sorghum</b>
Look inside for complete <b>Restrictions and Limitations</b> and <b>Application Instructions</b> .

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The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently 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 use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

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