

# TOPEKA™ PLUS

## HERBICIDE

GROUP 4 Herbicide

For Use on Conservation Reserve Program Land, Fallow Systems (Between Crop Applications), General Farmstead, Sorghum, Grass (Hay or Silage), Pastures, Rangeland, Sugarcane, Wheat, Corn (Preplant and Pre-Emergence), Soybeans (Preplant) and Cotton (Preplant). Also for Control of Brush and Broadleaf Weeds on Rights-Of-Way, Forest Brush, Industrial Sites, Non-Irrigation Ditch Banks, Fence Rows, and Other Non-Crop Areas.

### ACTIVE INGREDIENT

Dimethylamine salt of dicamba (3,6-dichloro-o-anisic acid)\* ..... 12.4%

Dimethylamine salt of 2,4-dichlorophenoxyacetic acid\*\* ..... 35.7%

**OTHER INGREDIENTS** ..... **51.9%**

**Total** ..... **100.0%**

\*This product contains 10.3% dicamba or 1 lb. per gallon (120 grams per liter) and 29.6% 2,4-D or 2.87 lbs. per gallon (344 grams per liter).

\*\*Isomer specific by AOAC method 978.05, 15th Edition.

### SHAKE WELL BEFORE USING

## KEEP OUT OF REACH OF CHILDREN DANGER / PELIGRO

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

### FIRST AID

<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 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>• Do not induce vomiting unless told to by the poison control center or doctor.</li><li>• Do not give anything to an unconscious person.</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>
<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 by 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. For 24-Hour Medical Emergency Assistance (Human or Animal) call: **1-800-222-1222**. For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident) call CHEMTREC: **1-800-424-9300**.

### NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

See inside booklet for additional Precautionary Statements and Directions For Use.

EPA Reg. No. 83100-45-83979

EPA Est. No. 69821-CHN-005

## Net Contents: 2.5 Gallons

Manufactured for:

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**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS & DOMESTIC ANIMALS**  
**DANGER / PELIGRO**

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

All mixers, loaders, applicators, flaggers, and other handlers must wear:

- long-sleeved shirt and long pants
- shoes and socks
- protective eyewear
- chemical-resistant gloves (except for applicators using ground boom equipment, pilots, and flaggers)
- chemical-resistant apron when applying postharvest dips or sprays to citrus, mixing or loading, cleaning up spills or equipment, or otherwise exposed to the concentrate

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

**Engineering Control Statements**

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (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.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

**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. If pesticide gets on skin, wash immediately with soap and water.
- 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 non-target plants, fish and aquatic invertebrates. Do not apply to water to areas where surface water is present or to intertidal areas below the mean high water mark. Drift or runoff may be hazardous to non-target plants and aquatic organisms in neighboring areas, if not used in accordance to the label directions. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

**Ground Water Advisory**

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

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

**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 48 hours.

The following PPE is required for early entry into 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.

- coveralls worn over short-sleeved 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

## **NON-AGRICULTURAL USE REQUIREMENTS**

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

Do not enter or allow people (or pets) to enter treated areas until sprays have dried.

## **PRODUCT INFORMATION**

This product is a selective post-emergence herbicide for controlling a wide spectrum of annual, biennial, and perennial broadleaf weeds and brush in grass forages and selected row crops.

### **Mode of Action**

This product contains two active ingredients: dicamba and 2,4-D. This herbicide is readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth. This product interferes with the plant's growth hormones (auxins) resulting in death of many broadleaf weeds.

### **Cleaning Spray Equipment**

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

## **APPLICATION PROCEDURES**

Apply this product at the rates and growth stages listed in Tables 1 and 2 as follows, unless instructed differently in the FOOD/FEED CROP - SPECIFIC INFORMATION or NON-FOOD/FEED USE - SPECIFIC INFORMATION sections. Make applications to actively growing weeds as aerial, broadcast, band, or spot spray applications. Apply this product using water or sprayable fluid fertilizer as a carrier. Use sprayable fluid fertilizer as the carrier in preplant or pre-emergence uses for all crops listed on this label. Make post-emergence applications with sprayable fluid fertilizer on pasture, hayland, or wheat crops only.

The most effective application rate and timing varies based on the target weed species (refer to Table 1). In mixed populations of weeds the correct rate is determined by the weed species requiring the highest rate within the specified rate range. Delaying application permits weeds to exceed the maximum size stated and will prevent adequate control.

## **IRRIGATION**

Irrigate treatment areas before application to ensure active weed growth.

## **SPRAY COVERAGE**

Weeds must be thoroughly covered with spray. Dense leaf canopies shelter smaller weeds and will prevent adequate spray coverage.

## **SPRAY DRIFT MANAGEMENT**

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

### **Importance of Droplet Size**

The most effective way to reduce drift when applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a Coarse or coarser spray, apply only as a Coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

When applying sprays that contain 2,4-D mixed with other active ingredients that require a Medium or more fine spray, apply only as a Medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

### **Wind Speed**

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for non-target species, non-target crops) within 250 feet downwind. If applying a Medium spray, leave one swath unsprayed at the downwind edge of the treated field.

### **Temperature Inversions**

If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

## **Susceptible Plants**

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

## **Sensitive Crop Precautions**

This product 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 this product during their development or growing stage.

Do not treat areas where either possible downward movement into the soil or surface washing may cause contact of this product herbicide with the roots of desirable plants such as trees and shrubs.

Avoid making applications when spray particles may be carried by air currents to areas where sensitive crops and plants are growing. Do not spray near sensitive plants if wind is gusty or in excess of 5 mph and moving in the direction of nearby sensitive crops or if temperature inversion exists. However, always make applications when there is some air movement to determine the direction and distance of possible spray drift. Leave adequate buffer zone between area to be treated and sensitive plants. Coarse sprays are less likely to drift out of the target area than fine sprays. Agriculturally-approved drift-reducing additives may be used.

Do not use aerial equipment or apply this product when sensitive crops and plants are growing in the vicinity of area to be treated.

## **Other State and Local Requirements**

Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

## **Equipment**

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.

When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

## **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.

## **Sprayer Clean-Out**

To avoid injury to desirable plants, equipment used to apply this product should be thoroughly cleaned before re-using to apply any other chemicals.

1. Rinse and flush application equipment thoroughly at least 3 times with water after use. Dispose of rinse water by application to treatment area or in non-cropland area away from water supplies.
2. During the second rinse, add 1 quart of household ammonia for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15 to 20 minutes). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Rinse the system twice with clean water, recirculating and draining each time.
5. Remove nozzles and screens and clean separately.

## **Mixing and Loading**

Most cases of groundwater contamination involving phenoxy herbicides, such as 2,4-dichlorophenoxyacetic acid, have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-dichlorophenoxyacetic acid pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

**Table 1. APPLICATION RATE AND TIMING - ANNUAL WEEDS**

Weeds Controlled (including ALS - and triazine-resistant)	Topeka Plus Rate Per Acre (according to weed growth stage)					
	0.5 pint	1.0 pint	1.5 pints	2 pints	3 pints	4 pints
Amaranth, Palmer	-	< 3"	3" to 10"	-	-	-
Beebalm, Spotted	-	-	-	pre-bloom	post-bloom	-
Broomweed	1" to 3"	3" branching	-	branching	-	after branching
Buckwheat, Wild	-	1" to 6"	-	-	-	-
Buffalobur	-	-	-	1" to 6"	-	flowering
Burdock	-	pre-flower	-	-	-	-
Buttercup	-	pre-flower	-	early bloom	late bloom	-
Chickweed, Common	-	seedling	1" to 3"	-	-	-
Cockle, Cow	-	< 3"	-	-	-	-
Cocklebur, Common	-	1" to 6"	6" to 12"	12" to 18"	-	-
Coreopsis, Plains	-	1" to 6"	-	-	-	-
Croton, Woolly	1" to 4"	4" to 12"	12" to 30"	-	-	-
Devil's Claw	-	-	-	< 8"	-	-
Dog Fennel	-	-	-	10" to 15"	-	-
Evening Primrose	-	< 2"	-	2" to 6"	-	-
Flax	-	< 2"	-	-	-	-
Fleabane, Annual	-	1" to 4"	4" to 8"	8"	-	-
Flixweed	-	< 3"	-	-	-	-
Henbit	-	-	pre-flower	-	flower	-
Knotweed Spp.	-	< 3" runners	-	> 3" runners	-	actively growing
Kochia	-	1" to 6"	6" to 10"	10" to 20"	-	actively growing
Lambsquarters, Common	-	1" to 6"	6" to 10"	10" to 20"	-	actively growing
Mallow, Common	-	< 3"	-	-	-	-
Marestail (Horseweed)	-	-	rosette to 3"	3" to 6"	-	-
Morningglory, Ivyleaf	-	pre-flower	-	-	-	-
, Tall	-	pre-flower	-	post-flower	-	-
Mustards, Annual	-	rosette	-	early bolt	-	-
, Tansy	-	< 3"	-	-	-	-
Pennycress, Field	-	-	-	rosette	-	-
Pepperweed, Virginia	-	-	1" to 3"	3" to 6"	after branching	-
Pigweed, Prostrate	-	< 3"	-	-	-	-
, Redroot	-	< 3"	3" to 10"	-	-	-
, Smooth	-	< 3"	-	-	-	-
, Tumble	-	< 3"	-	mature	-	-
Poorjoe	-	prior to flower	-	-	-	actively growing
Purslane, Common	-	< 3"	3" to 8"	-	-	-
Ragweed, Common	1" to 3"	3" to 6"	6" to 10"	> 10"	-	-
Western, Lanceleaf	1" to 3"	3" to 6"	6" to 10"	> 10"	-	-
Sedge <sup>1</sup>	-	-	-	actively growing	-	-
Shepherd's Purse	-	rosette	-	-	-	-
Smartweed, Pennsylvania	-	< 4"	-	-	4" to 12"	-
Sneezeweed, Bitter	-	1" to 4"	prior to flower	flower	-	-
Sowthistle	-	rosette	-	bolting	-	-
Sunflower	-	1" to 3"	3" to 6"	6" to 24"	-	-
Thistle, Russian	-	-	-	rosette	-	-

**Table 1. APPLICATION RATE AND TIMING - ANNUAL WEEDS** *Cont.*

Weeds Controlled (including ALS - and triazine-resistant)	Topeka Plus Rate Per Acre (according to weed growth stage)					
	0.5 pint	1.0 pint	1.5 pints	2 pints	3 pints	4 pints
Velvetleaf	-	< 6"	6" to 20"	> 20"	-	-
Waterhemp, Common	-	< 3"	3" to 10"	-	-	-

<sup>1</sup>For use in non-food/feed crop only. Adding crop oil concentrate has shown to improve performance on actively growing annual sedge.

**Table 2. APPLICATION RATE AND TIMING - BIENNIAL AND PERENNIAL WEEDS**

Weeds Controlled	Topeka Plus Rate Per Acre (according to weed growth stage)					
	0.5 pint	1.0 pint	1.5 pints	2 pints	3 pints	4 pints
Bindweed, Field	-	-	-	-	-	actively growing
Bittercress	-	2" to 3"	-	-	-	-
Buckeye species <sup>1</sup>	-	-	-	-	full leaf	-
Bull Nettle <sup>2</sup>	-	-	-	flower	-	-
Chicory	-	-	-	-	early bolting	-
Clover, Bur	-	-	pre-flower	-	-	-
Dandelion, Common	-	rosette	-	bolting	-	-
Dewberry, Southern <sup>1</sup>	-	-	-	-	-	spring or fall
Dock, Curly	-	-	prior to bolting	-	after bolting	-
Elderberry <sup>2</sup>	-	-	-	-	-	actively growing
Goldenrod, Missouri	-	-	-	3" to 15"	flower	-
Goldenweed, Common	-	-	-	-	-	actively growing
Groundsel, Texas	-	rosette	post-bolting	-	-	-
Honeysuckle, Hairy	-	-	-	-	spring or fall	-
Horsenettle, Carolina <sup>1</sup>	-	-	-	-	-	flower or berry
Ivy, Poison	-	-	-	after bloom	-	-
Knapweed, Black <sup>2</sup>	-	-	-	-	-	actively growing
, Russian <sup>2</sup>	-	-	-	-	-	actively growing
, Spotted	-	-	-	-	-	actively growing
Marshelder	-	-	-	< 12"	12"/pre-bloom	-
Mesquite	-	-	-	-	-	45 to 90 days after bud-break
Milkweed, Antelope Horn <sup>1</sup>	-	-	-	pre-flower	-	flower
Nightshade, Silverleaf <sup>1</sup>	-	-	-	full flower	-	-
, Black <sup>1</sup>	-	-	-	full flower	-	actively growing
Persimmon, Eastern <sup>3</sup>	-	-	-	-	-	actively growing
Prickly Lettuce	-	-	-	rosette	-	actively growing
Rabbitbrush <sup>2</sup>	-	-	-	-	-	actively growing
Ragwort, Tansy	-	-	-	rosette	-	actively growing
Redvine <sup>2</sup>	-	-	-	-	-	actively growing
Sagebrush, Fringed <sup>2</sup>	-	-	-	-	-	actively growing
Smartweed	-	-	-	-	-	actively growing
Sorrel, Red	-	-	rosette	bolting	flower	actively growing

**Table 2. APPLICATION RATE AND TIMING - BIENNIAL AND PERENNIAL WEEDS** *Cont.*

Weeds Controlled (	Topeka Plus Rate Per Acre (according to weed growth stage)					
	0.5 pint	1.0 pint	1.5 pints	2 pints	3 pints	4 pints
Sowthistle <sup>2</sup>	-	-	-	-	-	actively growing
Spurge, Leafy <sup>2</sup>	-	-	-	-	flower	full leaf
Tallow Tree, Chinese <sup>4</sup>	-	-	-	-	-	full leaf
Thistle, Bull	-	-	rosette	bolting	-	actively growing
, Canada <sup>2</sup>	-	-	-	-	-	actively growing
, Musk	-	-	-	rosette/bolting	-	-
, Plumelless	-	-	rosette	bolting	-	-
Vetch, Hairy	-	1" to 4"	4" to 8"	8" full flower	-	-
Yankeeeweed	-	-	-	10" to 18"	-	rosette
Yellow Star Thistle	-	-	-	-	-	rosette

<sup>1</sup>May require repeat applications.  
<sup>2</sup>Rate will provide top growth suppression only.  
<sup>3</sup>For improved root kill or weedy species such as mesquite and eastern persimmon, spray 4 pints of this product per acre each year for 3 consecutive years. For increased control of weeds such as blackberry and dewberry, this product may be tank mixed with Purestand® or Ally® herbicide, if labeled for the use site.  
<sup>4</sup>Under dense populations, a second application may be needed the following growing season.

### AERIAL APPLICATION METHODS AND EQUIPMENT

Water Volume: Use 3 to 10 gallons of water per acre. Use the higher spray volume when treating dense or tall vegetation.

### GROUND APPLICATION (BANDING)

When applying this product 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 5 to 40 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.

### SPOT OR SMALL AREA APPLICATION

Apply this product to individual clumps or small areas of undesirable vegetation using handgun or similar types of application equipment. Apply diluted sprays to allow complete wetting (up to runoff) of foliage and stems. For knapsack or other small capacity sprayers, prepare a solution of this product in water according to Table 3 (assuming that the spot treatment rate equates to 60 gallons per acre on the broadcast basis.) Add a surfactant (0.5% by volume) to improve control. For example, 5 gallons (40 pints or 640 fluid ounces) of herbicide solution would require 0.2 pints (3.2 fluid ounces) of surfactant.

Do not make spot treatments in addition to broadcast or band treatments.

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.

**Table 3. KNAPSACK SPRAYER DILUTION INSTRUCTIONS**

Sprayer Capacity (gallons of water)	Amount of Topeka Plus to add to the spray tank
1 gallon	1 fluid ounce*
3 gallons	3 fluid ounces
5 gallons	5 fluid ounces

\*1 fluid ounce = 2 tablespoons



## ADDITIVES

To improve burndown of emerged weeds, use surfactants and/or low use rate of liquid fertilizers (28-0-0, 32-0-0), or crop oil concentrate with this product or use tank mixes with this product applied after the weeds have emerged. Crop oil concentrate is for non-food/feed crop uses only. Do not apply tank mixes that include Ammonium Sulfate or Crop Oil Concentrate post-emergence to any food/feed crop use listed on this label. For food/feed crop uses, do not use liquid fertilizers that contain Ammonium Sulfate (AMS) as a source of nitrogen as tolerances in commodities derived from the crop may contain residues that exceed established tolerances. Consult your local Rotam North America, Inc. representative for recommendations for your area. For additional information, see “**COMPATIBILITY TEST FOR MIX COMPONENTS**”.

## OIL CONCENTRATE

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

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

The exact composition of suitable products will vary; however, vegetable and petroleum oil concentrates must 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**”.

Use adjuvants containing crop oil concentrates for preplant, pre-emergence and between cropping applications. Do not use crop oil concentrate for post-emergence applications in food/feed crops (i.e., sorghum, grass (hay or silage), pastures, rangeland, sugarcane, and wheat).

### Nitrogen Source

Sprayable liquid fertilizers: Use one quart of sprayable liquid fertilizers (28-0-0, 32-0-0) per acre. Do not use brass or aluminum nozzles when spraying fertilizers.

### Non-Ionic Surfactant

Use 2 to 4 pints of an 80% active non-ionic spray surfactant per 100 gallons of water. For certain weeds, use a higher spray surfactant rate.

**Table 4. ADDITIVE RATE PER ACRE**

Additive	Rate Per Acre
Non-ionic Surfactant	2 to 4 pints per 100 gallons
Sprayable liquid fertilizers (28-0-0, 32-0-0)	2 to 4 quarts
Crop Oil Concentrate	1 quart*

\*See manufacturer's label for specified rates.

## TANK MIXING INFORMATION

### Tank Mix Partners/Components

Tank mix the following products with this product according to the specific tank mixing instructions in this label and respective product labels:

<ul style="list-style-type: none"> <li>• Aim™ (carfentrazone-ethyl)</li> <li>• Ally® or Purostand® (metsulfuron-methyl)</li> <li>• Amber® (triasulfuron)</li> <li>• Asulox® (asulam)</li> <li>• Atrazine</li> <li>• Banvel® or Diablo® (dicamba)</li> <li>• Basagran® (bentazon)</li> <li>• Bronate® or Maestro Advanced (bromoxynil + MCPA)</li> <li>• Buctril® or Maestro 2EC (bromoxynil)</li> <li>• Canvas® (thifensulfuron + tribenuron + metsulfuron)</li> <li>• Clarity® or Clash® (dicamba)</li> <li>• Cutback® or Curtail® (clorpyralid + 2,4-D)</li> <li>• Cyclone® (paraquat)</li> <li>• Dakota® (fenoxaprop-p-ethyl + MCPA)</li> <li>• Distinct® (diflufenopyr)</li> <li>• Evik® (ametryn)</li> <li>• Express® or Victory® (thifensulfuron + tribenuron methyl)</li> <li>• Fallowmaster® (glyphosate + dicamba)</li> <li>• Finesse® (chlorsulfuron + metsulfuron-methyl)</li> <li>• Glean® (chlorsulfuron)</li> </ul>	<ul style="list-style-type: none"> <li>• Gramoxone® Extra (paraquat)</li> <li>• Harmony® Extra or Treaty® Extra (thifensulfuron + tribenuron-methyl)</li> <li>• Karmex® (diuron)</li> <li>• Kerb® (pronamide)</li> <li>• Laddok® S-12 (bentazon + atrazine)</li> <li>• Landmaster® (glyphosate + 2,4-D)</li> <li>• Lexone® (metribuzin)</li> <li>• MCPA</li> <li>• Paramount® (quinclorac)</li> <li>• Peak® (prosulfuron)</li> <li>• Permit® (halosulfuron-methyl)</li> <li>• Rave™ (dicamba + triasulfuron)</li> <li>• Roundup Ultra® or Credit® (glyphosate)</li> <li>• Sencor® (metribuzin)</li> <li>• Sinbar® (terbacil)</li> <li>• Stinger® or Clean Slate® (clorpyralid)</li> <li>• Tiller® (fenoxaprop-p-ethyl + 2,4-D + MCPA)</li> <li>• Trooper® or Tordon® (picloram)</li> <li>• Touchdown® (sulfosate)</li> <li>• 2,4-D</li> </ul>
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Refer to “**FOOD/FEED CROP - SPECIFIC INFORMATION**” for more details. Read and follow the applicable Restrictions and Limitations and Directions for Use on all product involved in tank mixing. The most restrictive labeling applies to tank mixes.

Physical incompatibility, reduced weed control, or crop injury may result from mixing this product with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers. Rotam North America, Inc. does not advise using tank mixes other than those listed on Rotam North America, Inc. labeling. Consult with local agricultural authorities for information when using tank mixes other than Rotam North America, Inc. tank mixes.

## 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 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 specified 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 must not have 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

If an inductor is used, rinse it thoroughly after each component has been added. Maintain constant agitation during application.

1. **Water\*** - Begin by agitating a thoroughly clean sprayer tank half full of clean water.
2. **Agitation** - Maintain constant agitation throughout mixing and application.
3. **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.
4. **Water-dispersible products** - Such as dry flowables, wettable powders, suspension concentrates, or suspensions.
5. **Water-soluble products** - Such as Topeka Plus herbicide.
6. **Emulsifiable concentrates** - Such as oil concentrate when applicable.
7. **Water-soluble additives** - Such as liquid fertilizers (28-0-0, 32-0-0) when applicable.
8. **Remaining quantity of water.**

\*If sprayable fluid fertilizer is used as the carrier, dilute this product with a minimum of 5 parts water to 1 part this product. Then add 0.25 to .05% volume/volume of a non-ionic surfactant to the dilution before adding it to the sprayable fluid fertilizer to reduce the concern for compatibility problems with this mix. Always perform the Compatibility Test before mixing into the spray tank. Also, when using a sprayable fluid fertilizer as the carrier, any product contained in PVA bags must first be completely dissolved in water before adding the contents to the fertilizer mix.

## RESTRICTIONS AND LIMITATIONS

The interval between application and planting rotational crop is given below. Always exclude counting days when the ground is frozen. Planting at intervals less than specified below may result in crop injury. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

- **Planting/replanting restrictions for this product for applications of 6 pints per acre or less:** No rotational cropping restrictions apply at 120 days or more following application. For barley, oat, wheat, and other grass seedings, the interval between application and planting is 10 days per pint per acre.
- **Planting/replanting restrictions for applications of more than 6 pints and up to 8 pints of this product per acre:** Plant corn, soybean, sorghum, cotton (east of the Rocky Mountains) and all other crops grown in areas with 30" or more of annual rainfall 120 days or more after application. Plant barley, oat, wheat, and other grass seedings if the interval from application to planting is 10 days per pint per acre east of the Mississippi River and 15 days per pint per acre west of the Mississippi River. For all other crops in areas with less than 30" of annual rainfall, the interval between application and planting is 180 days or more.
- **Rainfast period:** Rainfall or irrigation occurring within 4 hours after post-emergence applications reduces the effectiveness of this product.
- **Stress:** Do not apply to crops under stress from 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 equipment. Do not contaminate irrigation ditches or water used for domestic purposes.
- Do not use this product to formulate or reformulate any other pesticide product.

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## FOOD/FEED CROP - SPECIFIC INFORMATION

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### PASTURES, RANGELAND, AND GRASS (HAY, SILAGE)

Apply this product to pasture (including pasture grown for hay), rangeland and grass grown for hay or silage. Refer to Tables 1 and 2 for rate selection based on targeted weed or brush species. Some weed species will require tank mixes for adequate control.

Rates above 4 pints of this product per acre are for spot treatments only. Uses described in this section also pertain to small grains (such as barley, corn, forage sorghum, oats, rye, Sudangrass, or wheat) grown for pasture, hay, and silage

only. Newly seeded areas, including small grains grown for pasture or hay are prone to injury if rates of this product greater than 2 pints per acre are applied.

In newly established hybrid Bermudagrass, Pangolagrass, and stargrasses (*Cynodon* spp.), use 2 to 4 pints of this product per acre to control or suppress weeds after planting vegetative propagules (stolons) of hybrid bermudagrasses. In addition to the weeds listed in Tables 1 and 2, this rate of this product will control or suppress annual sedges, broadleaf signalgrass, crabgrass, and goosegrass. Best results will be obtained if this product is applied at the germinating stage of weeds. Under favorable conditions, this is usually 7 to 10 days after planting these grasses. Reduced control will occur if weeds are allowed to reach 1" in height before application or if germination of weeds occurs 10 days after application.

Do not use on bentgrass, susceptible grass pastures (such as carpetgrass, buffalograss, or St. Augustine grass), lespedeza, wild winter peas, vetch, clover, and alfalfa pastures as injury will occur.

When perennial weeds are reaching maturity, mowing and allowing some regrowth will enhance control. Repeat applications on difficult-to-control weeds.

For pasture renovations, wait 3 weeks per quart (2 pints) of this product used per acre before interseeding or injury may occur. If grasses are grown for seed or for seed-down purposes, do not apply after grass reaches the joint stage.

### Grasses For Seed Crops

Apply 1.25 to 4.0 pints of product in up to 30 gallons of water per acre by air or ground equipment in the spring or fall to control broadleaf weeds in grass being grown for seed. Do not apply from early boot to milk stage. Spray seedling grass only after the 5-leaf stage, using 1.25 pints per acre to control small seedling weeds. After the grass is well established, higher rates of up to 4.0 pints per acre can be used to control hard-to-control annual or perennial weeds. For best results, apply when soil moisture is adequate for good growth.

### No-Till Application

Apply this product in the broadcast method with a normal boom or with direct pipes set 12" apart in 36" rows. When using this product, apply at a rate of 1.25 pints in 10 gallons of water per acre. Maintain uniform pressure and speed when applying.

### Grasses Cut For Hay or Silage

The rates of application per acre per application per site. Use 1.25 to 4.0 pints of product in sufficient water to give good coverage to one acre depending on type of weeds and stage of growth. Use only on established stands of perennial grasses. Do not use on alfalfa, bentgrass, clover, or other legumes. Do not use on newly seeded areas until grass is well established. Do not apply after the crop begins to joint when grass seed production is desired.

### Pastures, Rangeland, and Grass (Hay, Silage) - Tank Mixes

This product may be applied in tank mixes with one or more of the following herbicides:

<ul style="list-style-type: none"><li>• Purestand® or Ally®</li><li>• Amber®</li><li>• Diablo® or Banvel®</li></ul>	<ul style="list-style-type: none"><li>• Clash® or Clarity®</li><li>• Rave®</li></ul>
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### Grasses For Seed Crops - Use Restrictions

- Do not make more than 2 applications per year.
- Do not make sequential applications within 21 days of applications.
- Do not apply after the grass seed crop begins to joint.
- Do not exceed a combined total of 1.0 lb. a.i. of Dicamba per acre per application.
- Do not apply to bentgrass as injury can occur.

### Grasses Cut for Hay or Silage - Use Restrictions

- Do not cut forage for hay within 7 days of application.
- When using this product there is a 7-day pre-grazing interval for lactating dairy animals.
- When using this product there is a 3-day pre-slaughter interval for meat animals.
- Do not apply after the crop begins to joint when grass seed production is desired.
- Do not exceed a combined total of 1.0 lb. a.i. of Dicamba per acre per application.
- Grazing and Feeding Non-Lactating Animals: Do not permit meat animals being finished for slaughter to graze treated fields within 30 days of slaughter. There is no waiting period between treatment and grazing for non-lactating animals.
- Grazing and Feeding Lactating Animals: Do not graze lactating dairy animals within 7 days of treatment.
- Dry Hay and Silage: Do not harvest treated grasses for dry hay or silage within 7 days of treatment.

### Pastures, Rangeland, and Grass (Hay, Silage) - Use Restrictions

- Do not cut forage for hay within 7 days of application

### Post-Emergence:

- For susceptible annual and biennial broadleaf weeds: Use 2.75 pints per acre per application.
- For moderately susceptible biennial and perennial broadleaf weeds: Use 2.75 to 5.5 pints per acre per application.
- For difficult to control weeds and woody plants: Use 5.5 pints per acre per application.
- Spot treatment: Use 5.5 pints per acre.
- Maximum of two applications per year.
- Maximum of 11 pints per acre per year.
- Minimum of 30 days between applications.
- If grass is to be cut for hay, Agricultural Use Requirements for the Worker Protection Standard are applicable.

# SORGHUM

## Sorghum - Rates and Timings

Apply 1 pint of this product per acre to sorghum in the 3- to 5-leaf stage (4" to 8" tall). For best performance, apply this product when weeds are less than 3" tall.

Applications of this product 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. Sorghum growing under conditions of stress such as high moisture, low fertility, and abnormal temperature may be more sensitive to applications of this product.

Do not use surfactants or oils with post-emergence applications of this product on sorghum crops.

Do not use this product if the potential for sorghum injury is not acceptable.

If sorghum is grown for pasture, hay, or silage, refer to "PASTURES, RANGELAND, AND GRASS (HAY, SILAGE)" in the "FOOD/FEED CROP - SPECIFIC INFORMATION" section information for livestock grazing and feeding restrictions.

Do not apply this product to sorghum grown for seed production.

Make no more than one post-emergence application per growing season.

## Sorghum - Tank Mixes

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use.

Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

This product may be applied in tank mixes with one or more of the following herbicides:

<ul style="list-style-type: none"><li>• Atrazine</li><li>• Basagran®</li><li>• Maestro® 2EC or Buctril®</li><li>• Laddok® S-12</li></ul>	<ul style="list-style-type: none"><li>• Paramount®</li><li>• Peak®</li><li>• Permit®</li></ul>
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## Sorghum - Use Precautions

- The pre-harvest interval (PHI) is 30 days.

## Sorghum - Use Restrictions

- Do not permit meat or dairy animals to consume treated crop as fodder or forage for 30 days following application.

## Post-Emergence (Acid, Salts, and Amines):

- Limited to 1 application per crop cycle.
- Maximum of 2.75 pints per acre per application.

# SUGARCANE

Apply this product any time after the weeds emerge and are actively growing but prior to the close-in stage of sugarcane. When possible, direct the spray beneath the sugarcane canopy in order to minimize the likelihood of crop injury. The use of directed sprays will also aid in maximizing spray coverage of weed foliage. Application rates and timing are given below. Use the higher level of listed rate ranges when treating dense vegetative growth.

## Sugarcane - Rates

For control of listed annual broadleaf weeds, apply 2 pints of this product per treated acre.

For suppression of listed perennial weeds, apply 1 to 5.5 pints of this product per treated acre. Do not exceed 11 pints of this product per treated acre during a growing season.

## Sugarcane - Tank Mixes

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use.

Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

This product may be applied in tank mixes with one or more of the following herbicides:

<ul style="list-style-type: none"><li>• Asulox®</li><li>• Atrazine</li><li>• Evik®</li></ul>	<ul style="list-style-type: none"><li>• Lexone®</li><li>• Sencor®</li><li>• Sinbar®</li></ul>
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## Sugarcane - Use Precautions

- The pre-harvest interval (PHI) is 87 days.

## Sugarcane - Use Restrictions

- Do not harvest cane prior to crop maturity.
- Do not apply more than 11 pints per acre per crop cycle.

## Pre-Emergence:

- Limited to one application per crop cycle.
- Maximum of 5.5 pints per acre per application.

## Post-Emergence:

- Limited to one application per crop cycle.
- Maximum of 5.5 pints per acre per application.

## WHEAT

### (Fall and Spring - Seeded)

If small grains are grown for pasture or hay only, refer to “**PASTURES, RANGELAND, AND GRASS (HAY, SILAGE)**”. Do not graze or harvest for livestock feed prior to crop maturity. Do not use this product in wheat underseeded with legumes.

**Early Season Applications:** Apply 0.5 to 1 pint of this product per acre to wheat unless using one of the wheat specific programs below. Early season applications to spring-seeded wheat must be made after tillering and before wheat reaches the 6-leaf stage.

Early season applications to fall-seeded wheat must be made after tillering and prior to the jointing stage. Take care in staging early developing wheat varieties such as TAM 107, Madison, or Wakefield to be certain that the application occurs prior to the jointing stage.

**Specific Use Programs For Fall-Seeded Wheat Only:** Apply up to 1.4 pints of this product per acre on fall-seeded wheat after the wheat begins to tiller for suppression of perennial weeds, such as field bindweed. Make applications in the fall following a frost but before a killing freeze. Periods of extended stress such as cold and wet weather enhance the possibility of crop injury. When making fall applications, do not use if the potential for crop injury is not acceptable.

**Pre-Harvest Applications:** Use this product to control weeds that may interfere with harvest of wheat. Apply up to 1.4 pints of Topeka Plus per acre as a broadcast or spot treatment to annual broadleaf weeds when wheat is in the hard dough stage and the green color is gone from the nodes (joints) of the stem. Best results are obtained if application is made when weeds are actively growing but before weeds canopy. A waiting interval of 7 days is required before harvest. Do not use pre-harvest-treated wheat for seed unless a germination test is performed on the seed with an acceptable result of 95% germination or better. For control of additional broadleaf weeds or grasses, tank mix this product with other herbicides such as Purestand®, Ally or Credit® or Roundup® Ultra that are registered for pre-harvest use in wheat.

Pre-harvest use of this product is not registered for use in California.

#### Wheat - Use Precautions

- The pre-harvest interval (PHI) is 14 days.
- Limited to 4.9 pints per acre per crop cycle.

#### Pre-Emergence:

- Limited to one post-emergence application per crop cycle.
- Maximum of 3.5 pints per acre per application.

#### Pre-Harvest:

- Limited to one pre-harvest application per crop cycle.
- Maximum of 1.4 pints per acre per application.

**Table 5. WHEAT TANK MIXES**

Tank Mix Partner
Aim™
Purestand® or Ally®
Amber®
Maestro® Advanced or Bronate®
Maestro® 2EC or Buctril®
Canvas®
Cutback® or Curtail®
Dakota® <sup>1</sup>
Victory® or Express®
Finesse®
Glean®
Treaty® Extra or Harmony® Extra
Karmex® <sup>2</sup>
2,4-D amine <sup>3</sup>
Metribuzin <sup>2</sup> (Sencor®, Lexone®)
Peak®
Clean Slate® or Stinger®
Tiller® <sup>1</sup>

<sup>1</sup>Do not use this product as a tank mix treatment with Dakota or Tiller on Durum wheat. Do not tank mix with Tiller if wild oat is the target weed.

<sup>2</sup>Tank mixes with Karmex and metribuzin are for use in fall-seeded wheat only.

<sup>3</sup>This product contains 0.36 pound a.e. of 2,4-D per pint. When tank mixing with 2,4-D, do not exceed a combined total of 1.0 pound a.e. per acre of 2,4-D and do not exceed 0.5 pound a.e. of 2,4-D unless injury to wheat is acceptable.

**PREPLANT APPLICATION DIRECTIONS FOR BROADLEAF CONTROL IN  
CROPLAND ROTATED TO WHEAT  
(POST-HARVEST / FALLOW / STUBBLE / SET-ASIDE)**

**Weeds Controlled**

This product, when applied at the specified rates, will control the ANNUAL and BIENNIAL weeds and suppress the PERENNIAL weeds listed below:

<b>ANNUALS</b>		
Buckwheat, Wild	Mustards	Salsify, Western
Cockle, Cow	Nightshade, Black	Smartweed, Pennsylvania
Cocklebur, Common	Pigweed, Redroot (Carelessweed)	Sowthistle, Annual
Knotweed	Purslane, Common	Sunflower
Kochia	Ragweed, Common	Tansymustard
Lambsquarters, Common	Sage, Lanceleaf	Thistle, Russian
Mallow, Common	Nightshade, Black	Velvetleaf
<b>BIENNIALS</b>		
Carrot, Wild	Star Thistle, Yellow	Thistle, Musk
Ragwort, Tansy	Thistle, Bull	Thistle, Plumeless
<b>PERENNIALS</b>		
Bindweed, Field	Dock, Curly	Thistle, Canada

**Rates and Timing**

Make applications to fallow land, wheat stubble or land to be rotated to wheat. Make application to emerged and actively growing weeds. Use the higher rate within the specified rate range when treating dense vegetative growth. Avoid disturbing treated areas for 7 days following application.

Wheat injury will occur if the interval between application and planting is less than 10 days for each pint per acre of this product is used. Exclude days when ground is frozen.

<b>Weed Type &amp; Stage</b>	<b>Broadcast Rate Per Treated Acre Amount</b>
<b>ANNUAL</b>	
Small, actively growing (less than 4 inches)	1.0 to 1.5 pints
Established weed growth (greater than 4 inches)	1.5 to 3.0 pints
<b>BIENNIAL</b>	
Rosette diameter	
(3 inches or less)	1.5 to 2.0 pints
(3 inches or more)	2.0 to 4.0 pints
Greater than 4 inches, tillering	4.0 pints
Bolted or flowering	
<b>PERENNIAL</b>	
Suppression or top growth control	2.0 to 4.0 pints
Seasonal Control	4.0 to 5.5 pints

Add 0.5% v/v of an agriculturally approved surfactant to this product when used alone or in a tank mix. The addition of a surfactant will enhance spray coverage and the herbicide's penetration of weed foliage. Retreat 30 days after initial treatment; however, do not exceed a total of 8 pints of this product per treated acre per year.

**Cropland Rotated to Wheat (Post-Harvest / Fallow / Stubble / Set-Aside) - Use Restrictions**

- Plant only labeled crops within 29 days following application.
- Limited to 2 applications per year.
- Maximum of 2.0 lbs. 2,4-D a.e. per acre per application.
- Minimum of 30 days between applications.

**Tank Mix Treatments**

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank mix this product with one or more of the following herbicides for control of grasses or additional broadleaf weeds. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, weeds controlled, geographic or other restrictions. Add 0.5% v/v of an agriculturally approved surfactant to all tank mixes.

<b>Herbicide</b>
Atrazine
Chlorsulfuron
Glyphosate
Metribuzin
Paraquat

<b>CORN (PREPLANT and PRE-EMERGENCE ONLY)</b> (Field, Popcorn, Seed)		
	<b>Amount of Topeka Plus per Acre</b>	<b>Directions</b>
<b>Preplant</b>	1.25 to 2.5 pints	To control actively growing emerged broadleaf weed seedlings or existing cover crops prior to planting corn, apply 7 to 14 days* before planting. Make preplant applications with no-tillage, conventional tillage or reduced tillage practices.
<b>Corn (Preplant) - Restrictions</b>		
<ul style="list-style-type: none"> <li>• Do not use more than 2.0 pints of this product per acre if the soil organic matter is less than 2%.</li> <li>• Limited to one preplant application per crop cycle.</li> <li>• See <b>Corn (Preplant and Pre-Emergence) - Restrictions</b> for additional restrictions.</li> </ul>		
<b>Pre-Emergence</b>	2.0 to 2.5 pints	Apply 3 to 5 days* after planting but before corn emerges.  Make pre-emergence applications with no-tillage, conventional tillage or reduced tillage practices.
<b>Corn (Pre-Emergence) - Restrictions</b>		
<ul style="list-style-type: none"> <li>• Do not use this product if corn seeds are less than 1.5" below the soil surface.</li> <li>• Do not use this product if the soil organic matter is less than 2%.</li> <li>• Limited to one pre-emergence application per crop cycle.</li> <li>• See <b>Corn (Preplant and Pre-Emergence) - Restrictions</b> for additional restrictions.</li> </ul>		
<b>Corn (Preplant and Pre-Emergence) - Restrictions</b>		
<ul style="list-style-type: none"> <li>• Do not use more than 2.5 pints per acre per application.</li> <li>• Do not use on light, sandy soil (sand, sandy loam, and loamy sand), or where soil moisture is inadequate for normal weed growth.</li> <li>• Do not apply this product to popcorn or seed corn without first verifying the selectivity of this product on the variety with your local seed corn company (supplier).</li> <li>• Do not use this product on sweet corn.</li> <li>• Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D and dicamba preplant use.</li> <li>• Limited to one preplant or one pre-emergence application per crop cycle. <ul style="list-style-type: none"> <li>◇ If applying a spring preplant treatment following application of a fall post-harvest application to the previous crop, then the combination of both treatments must not exceed 5 pints of this product. <ul style="list-style-type: none"> <li>• Limited to 2 applications per year.</li> <li>• A minimum of 30 days* is required between applications.</li> </ul> </li> </ul> </li> </ul>		
<b>Notes</b>		
<ul style="list-style-type: none"> <li>• Refer to Table 1 to determine use rates for specific targeted weed species, but do not exceed specified rate for corn preplant and pre-emergence.</li> <li>• Use the higher rate within the specified rate range for less susceptible weeds, larger weeds or cover crops such as alfalfa.</li> <li>• For applications applied 30 or more days* before planting, follow the Directions and Precautions for <b>"POST-HARVEST, FALLOW, CROP STUBBLE, SET-ASIDE"</b> in the <b>"NON-FOOD/FEED USE - SPECIFIC INFORMATION"</b> section.</li> <li>• Best results occur when product is mixed with additives or tank mixed with additional herbicides, see the <b>"ADDITIVES"</b> and <b>"TANK MIXING INFORMATION"</b> sections.</li> <li>• For best control of legume sod (e.g., alfalfa or clover), apply this product after 4 to 6 inches of legume regrowth has occurred.</li> <li>• Certain tillage equipment (e.g., drags, harrows) which concentrates treated soil over seed furrow may increase the risk of crop injury.</li> <li>• Harvest or graze corn for feed once the crop has reached the ensilage (milk) stage or later in maturity.</li> </ul>		
*Minimum waiting interval excludes days when ground is frozen.		

<b>SOYBEAN* (PREPLANT ONLY)</b>			
	<b>Amount of Topeka Plus per Acre</b>	<b>Minimum Waiting Interval Before Planting Soybeans</b>	<b>Directions</b>
<b>Preplant</b>	1.0 to 1.25 pints	15 Days**	Apply before planting soybeans to control actively growing emerged broadleaf weed seedlings.
	1.25 to 2.5 pints	30 Days**	Apply to control actively growing emerged broadleaf weeds.
<b>Soybean Restrictions</b> <ul style="list-style-type: none"> <li>For use only preplant to soybeans.</li> <li>Following application, a minimum accumulation of 1" rainfall or overhead Irrigation followed by the specified minimum waiting Interval is required before planting soybeans.</li> <li>Do not apply more than 2.5 pints of this product per acre per growing season under these directions for preplant application to soybeans.</li> <li>Make only one application of this product per growing season under these directions for preplant application to soybeans.</li> <li>Do not apply this product prior to planting soybeans if you are not prepared to accept the results of soybean Injury including possible loss of stand and yield.</li> <li>Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D and dicamba preplant use.</li> <li>Do not mow or cultivate weeds prior to treating with this product as poor control will occur.</li> <li>Do not apply this product pre-plant to soybean in fields having a coarse-textured soil where the organic matter is less than 1%.</li> <li>Do not feed/graze livestock on treated cover crops. Do not cut treated cover crops for hay or feed.</li> <li>The minimum waiting intervals must be observed prior to planting soybean or crop Injury may occur.</li> <li><b>Do not make preplant applications of this product to soybean in geographic areas with average annual rainfall less than 25".</b></li> </ul> <p>*Not currently registered for use in California.</p>			
<b>Notes</b> <ul style="list-style-type: none"> <li>Refer to Table 1 to determine use rates for specific targeted weed species, but do not exceed rate stated for soybeans preplant.</li> <li>For applications applied 60 or more days* before planting soybeans, follow the Directions and Precautions for "POST-HARVEST, FALLOW, CROP STUBBLE, SET-ASIDE" in the "NON-FOOD/FEED USE - SPECIFIC INFORMATION" section.</li> <li>Best results will be obtained when product is mixed with additives or tank mixed with additional herbicides, see the "ADDITIVES" and "TANK MIXING INFORMATION" sections.</li> </ul> <p>*Minimum waiting Interval excludes days when ground is frozen.</p>			

<b>COTTON* (PREPLANT ONLY)</b>			
	<b>Amount of Topeka Plus per Acre</b>	<b>Minimum Waiting Interval Before Planting Soybeans</b>	<b>Directions</b>
<b>Preplant</b>	2.0 pints	30 Days**	Apply to control actively growing emerged broadleaf weeds prior to planting cotton. For best performance, apply when weeds are in the 2 to 4-leaf stage and rosettes are less than 2" across.
<b>Cotton Restrictions</b> <ul style="list-style-type: none"> <li>For use only preplant to cotton.</li> <li>Following application, a minimum accumulation of 1" rainfall or overhead Irrigation followed by the specified minimum waiting Interval is required before planting cotton.</li> <li>Do not apply more than 2.0 pints of this product per application per acre in one season prior to planting cotton.</li> <li>Do not apply more than 2 applications per year.</li> <li>Do not apply this product prior to planting cotton if you are not prepared to accept the results of cotton Injury including possible loss of stand and yield.</li> <li>Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D and dicamba preplant use.</li> <li>Mowing or cultivating weeds prior to treatment with this product results in poor weed control.</li> <li>Do not apply this product pre-plant to cotton in fields having a coarse-textured soil where the organic matter is less than 1%.</li> <li>Do not feed treated hay, forage, or fodder.</li> <li>Do not feed/graze livestock on treated cover crops.</li> <li>Do not cut treated crop for feed, hay, forage, fodder, or graze treated cotton to livestock.</li> <li>The minimum waiting intervals must be observed prior to planting cotton or crop to avoid plant injury.</li> <li><b>Do not make preplant applications of this product to soybean in geographic areas with average annual rainfall less than 25".</b></li> </ul> <p>*Not currently registered for use in California.</p>			



## COTTON\* (PREPLANT ONLY) *Cont.*

### Notes

- Refer to Table 1 to determine use rates for specific targeted weed species, but do not exceed rate stated for cotton preplant.
- For applications applied 75 or more days<sup>9</sup> before planting cotton, follow the Directions and Precautions for "POST-HARVEST, FALLOW, CROP STUBBLE, SET-ASIDE" in the "NON-FOOD/FEED USE - SPECIFIC INFORMATION" section.
- Best results will be obtained when product is mixed with additives or tank mixed with additional herbicides, see the "ADDITIVES" and "TANK MIXING INFORMATION" sections.

<sup>9</sup>Minimum waiting Interval excludes days when ground is frozen.

### BETWEEN CROP APPLICATIONS, CONSERVATION RESERVE PROGRAMS, GENERAL FARMSTEAD AND FALLOW SYSTEMS

These uses are considered Food/Feed Crops when harvested, grazed or foraged. Consult the "ADDITIVES" section for adjuvant restrictions and "NON-FOOD/FEED USE" for specific use directions.

## NON-FOOD/FEED USE

### (Land not Harvested, Grazed or Foraged) - SPECIFIC INFORMATION

### BETWEEN CROP APPLICATIONS

**PREPLANT DIRECTIONS (POST-HARVEST, FALLOW, CROP STUBBLE, SET-ASIDE) FOR BROADLEAF WEED CONTROL:** Apply this product either postharvest in the fall, spring, or summer during the fallow period or to crop stubble/set-aside acres.

Apply this product as a broadcast or spot treatment to emerged and actively growing weeds after crop harvest (postharvest) and before a killing frost or in the fallow cropland or crop stubble the following spring or summer.

For Crop Rotational Restrictions, see the "RESTRICTIONS AND LIMITATIONS" section for the specified interval between application and planting to prevent crop injury.

### Rates and Timings

Apply 0.5 to 5.5 pints of this product per acre. Refer to Table 1 to determine use rates for specific targeted weed species. Do not exceed a total of 5.5 pints of this product per treated acre during a growing season. For best performance, apply this product when annual weeds are less than 6" tall, when biennial weeds are in the rosette stage and to perennial weed regrowth in late summer or fall following a mowing or tillage treatment. The most effective control of upright perennial broadleaf weeds such as Canada thistle and Jerusalem artichoke occurs if this product is applied when the majority of weeds have at least 4" to 6" of regrowth or for weeds such as field bindweed and hedge bindweed that are in or beyond the full bloom stage.

Avoid disturbing treated areas following application. Treatments will not kill weeds that develop from seed or underground plant parts such as rhizomes or bulbets, after the effective period for this product. For seedling control, a follow-up program or other cultural practices must be instituted.

Post-Harvest, Fallow, Crop Stubble, Set-Aside, and Preplant - Use Precautions

Follow specific restrictions and precautions in "RESTRICTIONS AND LIMITATIONS" and "FOOD/FEED CROP - SPECIFIC INFORMATION" for replant intervals.

- Plant only labeled crops within 29 days following application, unless otherwise specified by label restrictions.
- Limited to 2 applications per year.
- Maximum of 5.5 pints per acre per application.
- Minimum of 30 days between applications.

### Between Crop - Tank Mixes

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

In tank mixes with one or more of the following herbicides, apply 0.5 to 2 pints of this product per acre for control of annual weeds, or 2 to 8 pints of this product per acre for control of biennial and perennial weeds:

<ul style="list-style-type: none"><li>• Aim™</li><li>• Purestand® or Ally®</li><li>• Amber®</li><li>• Atrazine</li><li>• Bladex®</li><li>• Cutback® or Curtail®</li></ul>	<ul style="list-style-type: none"><li>• Cyclone®</li><li>• Distinct®</li><li>• Fallowmaster®</li><li>• Finesse®</li><li>• Glyphosate</li><li>• Gramoxone® Extra</li></ul>	<ul style="list-style-type: none"><li>• Kerb®</li><li>• Landmaster® BW</li><li>• Paramount®</li><li>• Sencor®</li><li>• Trooper® 22K or Tordon® 22K</li><li>• Touchdown®</li><li>• 2,4-D</li></ul>
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### CONSERVATION RESERVE PROGRAMS AND GENERAL FARMSTEAD

Apply this product for Conservation Reserve Programs, general farmstead (non-cropland only), weed and brush control, or use in State Recognized Noxious Weed areas (non-cropland areas).

Refer to Tables 1 and 2 for rate selection based on targeted weed or brush species. Some weed species will require tank mixes for adequate control.

Rates above 4 pints of this product per acre are for spot treatments only. Make retreatments as needed; however, do not exceed a total of 5.5 pints of this product per treated acre during a growing season.

#### **Conservation Reserve Programs and General Farmstead - Use Precautions**

- The pre-harvest interval (PHI) is 7 days (cut forage for hay).
- Application to woody plants is limited to one per year.

#### **Post-Emergence**

- Limited to 2 applications per year.
- Maximum of 5.5 pints per acre per application.
- Minimum of 30 days between applications.
- If grass is to be cut for hay, Agricultural Use Requirements for the Worker Protection Standard are applicable.

For program lands, such as Conservation Reserve Program, consult program rules to determine whether grass or hay may be used. The more restrictive requirements of the program rules or this label must be followed.

## **FARMSTEAD AND FENCEROW TREATMENT APPLICATION INSTRUCTIONS**

Apply this product using water or oil and water emulsions in spot application to control undesirable vegetation using handgun or similar types of application equipment. In addition to weed species listed in Tables 1 and 2, use these treatments to control or suppress woody plant species listed in Table 6.

To prepare oil and water emulsions, mix in the order and proportions indicated below.

The solution should remain milky colored without an oily layer on top when under agitation. If an oily layer forms, increase the amount of emulsifier or change to a more effective emulsifier.

Do not exceed 40 gallons of spray solution per treated acre per application. Forty gallons of spray solution contains 1.0 pound acid equivalent of dicamba and 2.87 pounds acid equivalent of 2,4-D. Spray plants to wet. Do not allow this spray mix to contact desirable vegetation.

To control brush, briars, and weeds along fencerows surrounding pasture and ranch lands, and fallow fields, use a tank mix of 2.5% of Topeka Plus, 87.5% water, 10% diesel oil, and sufficient emulsifier (to mix the diesel and emulsifier). The diesel oil in this tank mix will damage or kill desirable grasses and must not be used in pastures or where damage to desirable species cannot be tolerated.

1. Water: Begin by agitating a thoroughly clean sprayer tank with the desired quantity of clean water. Maintain constant agitation during complete mixing procedure.
2. Emulsifier: Add 0.5% volume to volume.
3. Topeka Plus: Add 2.5 gallons per 100 gallons of total intended solution.
4. Diesel Oil: Add 10 gallons per 100 gallons of total intended solution.

Maintain constant agitation during application. Under good agitation, the spray solution will appear milky white with no oil layer on top. If an oil layer forms, increase the amount of emulsifier or change to a more effective emulsifier.

#### **For Spraying Foliar Applications:**

1. Spray when leaves have reached full size but have not hardened due to drought or maturity.
2. Spray individual plants to wet with handgun.
3. For larger stems (up to 3" in diameter) and hard to control species, direct spray stream to base of stems to wet the stem at soil surface in addition to wetting the foliage.
4. Do not apply under drip line of desirable trees or adjacent to desirable vegetation.

#### **For Dormant Basal Applications:**

1. Increase diesel oil content to 15% or 15 gallons of diesel oil per 100 gallons of total solution.
2. Spray in late winter and early spring before plants break dormancy.
3. Spray the bottom 24" of the target stem to wet on all sides.
4. For larger stems (up to 3" in diameter) and hard to kill species direct the spray solution to the base of target stems to wet the soil at the stem/soil junction in addition to wetting the stem.
5. Do not apply under drip line of desirable trees or adjacent to desirable vegetation.

#### **For Cut Surface Treatments:**

Apply this product in an undiluted state as a cut surface treatment to control unwanted trees and prevent sprouts of cut trees.

- Frill or Girdle Treatments: Make a continuous cut or a series of overlapping cuts using an axe to girdle tree trunk. Spray or paint the cut surface with this product.
- Stump Treatments: Spray or paint freshly cut surface with this product. The cambium layer (the area adjacent to the bark) must be thoroughly wet. Treat stumps within 6 hours after cutting.

Table 6. The following list of trees and vines can be controlled on farmsteads and fencerows as foliar, basal, or cut surface treatments:

Alder	Dogwood	Kudzu	Rose, McCartney
Ash	Elm	Locust, Black	Rose, Multiflora Sagebrush,
Aspen	Grape	Maple	Fringe Sassafras
Basswood	Greenbrier	Mesquite	Spruce
Beech	Hawthorn (Thorn-apple)	Oak	Sumac
Blackberry	Hemlock	Oak, Poison	Sweetgum
Blackgum	Hickory	Olive, Russian	Sycamore
Cedar	Honeylocust	Persimmon, Eastern	Tarbrush
Cherry	Honeysuckle	Pine	Willow
Chinquapin	Hornbeam	Plum, Sand (Wild Plum)	Witch Hazel
Cottonwood	Huckleberry	Poplar	Yaupon
Creosote Bush	Huisache	Rabbitbrush	Yucca
Dewberry	Ivy, Poison	Red Cedar, Eastern	

### NON-CROP APPLICATIONS

#### RIGHTS-OF-WAY (RAILROAD, ROADSIDES, UTILITY, PIPELINE), NON-SELECTIVE FOREST BRUSH CONTROL, INDUSTRIAL SITES, NON-IRRIGATION DITCH BANKS, AND OTHER NON-CROP AREAS.

##### Species Controlled

When used as directed, this product will control or suppress many herbaceous broadleaf weeds (annual, biennial, and perennial) as well as many unwanted woody plant and vine species. Species controlled include:

ANNUALS				
Buckwheat, Wild	Cocklebur	Lambsquarters	Purslane	
Carpetweed	Daisy, English	Morningglory	Ragweed	
Chickweed	Henbit	Mustard	Smartweed	
Clover	Knawel	Pigweed	Velvetleaf	
BIENNIALS				
Ragwort, Tansy		Thistle, Musk		
PERENNIALS				
Bindweed, Field	Dog Fennel	Ragweed, Perennial	Thistle, Canada	
Carrot, Wild (Queen Anne's Lace)	Knapweed, Russian	Sorrel, Sheep	Toadflax, Dalmatian	
Dock, Curly	Milkweed	Spurge, Leafy		
WOODY BRUSH AND VINES				
Alder	Cucumber tree	Locust	Red Cedar, Eastern*	Snowberry
Ash	Dogwood*	Maple	Redvine	Spruce
Aspen	Elderberry	Oak	Rose, Multiflora*	Sumac
Basswood	Elm	Olive, Russian	Sagebrush	Sycamore
Beech	Gum	Persimmon	Sassafras	Trumpetcreeper
Birch	Hawthorn*	Pine	Schinus (Florida Holly, Peppertree, Christmas-berry)	Waxmyrtle
Blackberry*	Hemlock	Plum, Wild*		
Cherry	Honeysuckle	Poplar		
Creeper, Virginia	Ivy, Poison	Puncturevine	Willow Witch Hazel Yaupon*	
Creosote Bush*	Kudzu	Raspberry	Serviceberry	

\*Suppression

##### Rates

Regardless of the species to be controlled, spray volumes must be high enough to allow for good spray coverage. Make applications when weeds and brush are actively growing. The addition of surfactants can increase control. Biennials are best controlled when treated in the rosette stage. Regrowth occurs on resistant species. Do not exceed 5.5 quarts per treated acre during the growing season of this product per treated acre. To control additional weed species, tank mix this product with any of the products listed on this label.

## Restrictions

### Pre-Emergence (Annual and Perennial Weeds)

- Limited to 2 applications per year.
- Maximum of 5.5 pints (2.0 lbs. a.e. 2,4-D) per acre per application.
- Minimum of 30 days between applications.

### Post-Emergence (Woody)

- Limited to 1 application per year.
- Maximum of 11 pints (4.0 lbs. a.e. 2,4-D) per year.
- Applications to non-cropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes.

## Herbaceous Broadleaf Weed Control

Apply 1 to 2.75 pints of this product in 20 to 100 gallons of water per treated acre, (3/4 to 2 ounces per 1,000 square feet). When using low-volume application equipment, 3 to 20 gallons of water per acre is acceptable. Use 1 to 2 pints (3/4 to 1.5 ounces) of this product for annuals, 1.5 to 2.75 pints (1.1 to 2 ounces) for biennials and easy-to-kill perennials, and 2.75 pints for established perennials. Do not apply more than 5.5 pints of product per treated acre.

## Brush and Vine Control

**High Volume Foliar Spot Applications:** Mix 2.75 to 5.5 pints of this product in enough water to make 100 gallons of spray mix. When using low-volume application equipment, 3 to 20 gallons of water per acre is acceptable. Spray volume applied will depend on the size and density of the brush to be treated, but do not apply more than 5.5 quarts of product per treated acre. Direct the spray to treat all foliage, stems, and root collars to wet.

**Broadcast Applications with Ground Equipment:** Apply 2.75 to 5.5 pints of this product in 20 to 100 gallons of water per treated acre. When using low-volume application equipment, 3 to 20 gallons of water per acre is acceptable. Spray volume applied will depend on the size and density of the brush to be treated, but do not apply more than 5.5 pints of product per treated acre. Spray all foliage, stems and root collars to wet.

## Aerial Applications

Make aerial applications to control either herbaceous or woody plants. Apply 1 to 2.75 pints of this product (for herbaceous weeds) or 2.75 to 5.5 pints of this product (for woody brush and vines) in 5 to 40 gallons of water per treated acre. Coverage is important, therefore increase spray volume when treating dense stands of brush or weeds. Do not apply more than 5.5 pints of product per treated acre.

## Tank Mix Treatments

READ AND FOLLOW THE LABEL OF EACH TANK MIX PRODUCT USED FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, AND OTHER RESTRICTIONS. For broader spectrum control, tank mix this product with one or more of the following herbicides for non-cropland uses (e.g., railroad, highway, pipeline, etc.) including forest management, pastures and rangeland applications, if permitted by product labeling (e.g., 2,4-D). Add water to the spray tank prior to the addition of the tank mix products. Do not premix concentrates.

HERBICIDE
Amitol*
Asulam (Asulox®)
Atratal
Bromacil (Hyvar®)
Clorflurecol (Maintain®)
Chlorsulfuron (Chlorsulf E-Pro)
Dalapon
Dicamba (Diablo®)****
Diquat
Diuron (Karmex®)
Fenac (Fenatrolv®)
Fosamine ammonium (Krenite®)
Glyphosate (Razor®)
Hexazinone (Velpar®)
Imazapyr** (Polaris®)
Limit®**
Maleic hydrazide (Royal Slo-Gro®)
Mefluidide (Embarc®)
Metsulfuron Methyl (Patriot®)¹
MSMA
Paraquat*
Picloram* (Trooper®)

### HERBICIDE *Cont.*

Simazine\* (Princep®)

Sulfometuron methyl (Oust®)

Tebuthiuron (Spike®)

Triclopyr (Tahoe®)

2,4-D

2,4-DP

Due to variations that may occur in formulated products and specific use ingredients (e.g., water supplies) perform a "COMPATIBILITY TEST" as described below prior to actual tank mixing.

\*Restricted use pesticides limited to certified applicators.

\*\*Limit does not have a common name.

\*\*\*\*Do not exceed a total of 2 pounds a.i. dicamba per treated acre per year. (This product contains 1 pound. a.i. dicamba per gallon.)

\*\*\*\*\*Use of extremely hard water (500 ppm) causes this product to form a precipitate when used in a tank mix with this product. For Post-Emergence (woody) Treatment: Do not exceed 4 pounds total 2,4-D acid equivalent per acre per application per site.

<sup>1</sup>Using this product and Patriot to reduce the development and spread of resistant biotypes and problem weeds such as Kochia and Russian thistle: Some commonly resistant weeds typically require multiple spray applications to obtain adequate control. To reduce the number of applications required, utilize a mixture of Patriot and this product.

**NOTE:** Use all intended tank mix combinations only in specified areas on the same broadleaf weed species found on both labels. For application methods and other use specifications, use the most restricted limitations from labeling of both products.

### COMPATIBILITY TEST

Before mixing in the spray tank, perform a compatibility test by mixing all components in a small container in proportionate quantities (see following table).

#### AMOUNT OF HERBICIDE TO ADD TO ONE PINT OF SPRAY CARRIER (ASSUMING VOLUME IS 25 GALLONS PER ACRE)

Herbicide Formulations	Rate Per Acre	Level Teaspoons
Dry	1 pound	1 - 1/2
Liquid	1 pint	1/2

If herbicide(s) do not ball-up or form flakes, sludge, gels, oily films or layers, or other precipitates, then the tested components are compatible. Usually incompatibility in any of the above described forms will occur within 5 minutes after mixing. If components are incompatible use of a compatibility agent. Rerun the above "COMPATIBILITY TEST" with a suitable compatibility agent (1/4 teaspoon is equivalent to 2 pints per 100 gallons of spray solution).

### PROCEDURE FOR CLEANING SPRAY EQUIPMENT

Follow the steps listed below for thorough cleaning of spray equipment following applications of this product or tank mixes of this product plus 2,4-D Amine.

1. Hose down thoroughly the inside as well as outside surfaces of equipment while filling the spray tank half full of water. Flush by operating sprayer until the system is purged of the rinse water.
2. Fill tank with water while adding 1 quart of household ammonia or 1/4 pint of Neutral-Clean™ for every 25 gallons of water. Operate the pump to circulate the ammonia solution through the sprayer system for 15 to 20 minutes and discharge a small amount of the ammonia solution through the boom and nozzles. Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Remove the nozzles and screens and flush the system with two full tanks of water.

Follow the steps listed below to thoroughly clean spray equipment used to apply this product as a tank mix with wettable powders (WP), emulsifiable concentrates (EC), or other types of water-dispersible formulations. Tank mixing this product with water-dispersible formulations, requires the use of a water/detergent rinse.

5. Complete step 1.
6. Fill tank with water while adding 2 pounds of detergent for every 40 gallons of water. Operate the pump to circulate the detergent solution through the boom and nozzles. Let the solution stand for several hours, preferably overnight.
7. Flush the detergent solution out of the spray tank through the boom.
8. Repeat step 1, and follow with steps 2, 3, and 4.

<b>WEEDS LISTED IN THIS LABEL</b>			
<b>ANNUALS</b>		<b>BIENNIALS AND PERENNIALS</b>	
<b>Common Name</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Scientific Name</b>
Amaranthus, Palmer	<i>Amaranthus palmeri</i>	Bindweed, Field	<i>Convolvulus arvensis</i>
Beebalm, Spotted	<i>Monarda punctate</i>	Bittercress	<i>Cardamine</i> spp.
Broomweed, Common	<i>Gutierrezia dracunculoides</i>	Buckeye	<i>Aesculus</i> spp.
Buckwheat, Wild	<i>Polygonum convulvulus</i>	Bull Nettle	<i>Cnidoscopus stimulosus</i>
Buffalobur	<i>Solanum rostratum</i>	Carrot, Wild	<i>Caucus carota</i>
Burdock	<i>Arctium</i> spp.	Chicory	<i>Cichorium intybus</i>
Buttercup, Corn	<i>Ranunculus arvensis</i>	Clover, Hop	<i>Trifolium aureum</i>
Carpetweed	<i>Mollugo verticillata</i>	Dandelion	<i>Taraxacum officinale</i>
Chickweed, Common	<i>Stellaria media</i>	Dock, Curly	<i>Rumex crispus</i>
Cockle, Corn	<i>Agrostemma githago</i>	Elderberry	<i>Sambucus canadensis</i>
Cockle, Cow	<i>Vaccaria hispanica</i>	Goldenrod, Missouri	<i>Solidago missouriensis</i>
Cocklebur, Common	<i>Xanthium strumarium</i>	Goldenweed, Common	<i>Isocoma coronopifolia</i>
Coreopsis, Plains	<i>Coreopsis tinctoria</i>	Groundsel	<i>Senecio vulgaris</i>
Croton, Woolly	<i>Croton capitatus</i>	Honeysuckle, Hairy	<i>Lonicera</i>
Daisy, English	<i>Bellis perennis</i>	Horsenettle	<i>Solanum carolinense</i>
Devil's Claw	<i>Proboscidea louisianica</i>	Ivy, Poison	<i>Rhus radicans</i>
Dog Fennel (Cypressweed)	<i>Eupatorium capillifolium</i>	Knapweed, Black	<i>Centaurea nigra</i>
Evening Primrose, Cutleaf	<i>Oenothera laciniata</i>	, Russian	<i>Centaurea repens</i>
Flax	<i>Linum catharticum</i>	, Spotted	<i>Centaurea maculosus</i>
Fleabane, Annual	<i>Erigeron annuus</i>	Marshelder	<i>Ina annua</i>
Flixweed	<i>Descurainia sophia</i>	Mesquite	<i>Prosopis juliflora</i>
Henbit	<i>Lamium amplexicaule</i>	Milkweed, Antelope Horn	<i>Asclepius</i>
Knawel	<i>Scleranthus annuus</i>	Nightshade, Silverleaf	<i>Solanum elaeagnifolium</i>
Knotweed, Prostrate	<i>Polygonum aviculare</i>	, Black	<i>Solanum nigrum</i>
Kochia	<i>Kochia scoparia</i>	Persimmon, Eastern	<i>Diospyros virginiana</i>
Lambsquarters, Common	<i>Chenopodium album</i>	Rabbitbrush	<i>Chrysothamnus pulchellus</i>
Lettuce, Prickly	<i>Lactuca serriola</i>	Ragwort, Tansy	<i>Senecio jacobaea</i>
Mallow, Common	<i>Malva neglecta</i>	Redvine	<i>Brunnichia ovata</i>
Marestail (Horseweed)	<i>Conyza canadensis</i>	Sagebrush, Fringed	<i>Artemisia frigida</i>
Mayweed	<i>Anthemis cotula</i>	Smartweed, Swamp	<i>Polygonum coccineum</i>
Morningglory, Ivyleaf	<i>Ipomoea hederacea</i>	Sorrel, Red (Sheep Sorrel)	<i>Rumex acetosella</i>
, Tall	<i>Ipomoea purpurea</i>	Sowthistle, Perennial	<i>Sonchus arvensis</i>
Mustard, Annual	<i>Brassica</i> spp.	Spurge, Leafy	<i>Euphorbia esula</i>
, Tansy	<i>Descurainia pinnata</i>	Star Thistle, Yellow	<i>Centaurea solstitialis</i>
Pennycress, Field	<i>Thlaspi arvense</i>	Tallow Tree, Chinese	<i>Sapium sebiferum</i>
Pepperweed, Virginia	<i>Lepidium virginicum</i>	Thistle, Bull	<i>Cirsium vulgare</i>
Pigweed, Prostrate	<i>Amaranthus blitoides</i>	, Canada	<i>Cirsium arvense</i>
, Redroot	<i>Amaranthus retroflexus</i>	, Musk	<i>Carduus nutans</i>
, Smooth	<i>Amaranthus hybridus</i>	, Plumless	<i>Carduus acanthoides</i>
, Tumble	<i>Amaranthus albus</i>	Toadflax, Dalmatian	<i>Linaria dalmatica</i>
Poorjoe	<i>Diodia teres</i>	Vetch	<i>Vicia</i> spp.

## WEEDS LISTED IN THIS LABEL Cont.

ANNUALS		BIENNIALS AND PERENNIALS	
Purslane, Common	<i>Portulaca oleracea</i>	Yankeeweed	<i>Eupatorium compositifolium</i>
Ragweed, Common	<i>Ambrosia artemisiifolia</i>		
, Lance-Leaf	<i>Ambrosia bidentata</i>		
, Western	<i>Ambrosia psilostachya</i>		
Sage, Lanceleaf	<i>Salvia reflexa</i>		
Salsify, Western	<i>Tragopogon dubius</i>		
Sedge	<i>Cyperus compresses</i>		
Shepherd's Purse	<i>Capsella bursa-pastoris</i>		
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>		
Sneezeweed, Bitter	<i>Helenium amarum</i>		
Sowthistle, Annual	<i>Sonchus oleraceus</i>		
Sunflower, Common (Wild)	<i>Helianthus annuus</i>		
Thistle, Russian	<i>Salsola iberica</i>		
Velvetleaf	<i>Abutilon theophrasti</i>		
Waterhemp, Common	<i>Amaranthus rudis</i>		

## WEEDS LISTED IN THIS LABEL

### WOODY BRUSH AND VINES

Common Name	Scientific Name	Common Name	Scientific Name
Alder	<i>Alnus</i> spp.	Mesquite	<i>Prosopis</i> spp.
Ash	<i>Fraxinus</i> spp.	Oak	<i>Quercus</i> spp.
Aspen	<i>Populus</i> spp.	Oak, Poison	<i>Toxicodendron diversilobum</i>
Basswood	<i>Tilia</i> spp.	Olive, Russian	<i>Elaeagnus angustifolia</i>
Beech	<i>Fagus</i> spp.	Persimmon	<i>Diospyros</i> spp.
Birch	<i>Betula</i> spp.	Pine	<i>Pinus</i> spp.
Blackberry	<i>Rubus</i> spp.	Plum, Sand (Wild Plum)	<i>Prunus</i> spp.
Blackgum	<i>Nyssa</i> spp.	Poplar	<i>Populus</i> spp.
Cedar	<i>Juniperus</i> spp.	Puncturevine	<i>Tribulus terrestris</i>
Cherry	<i>Prunus</i> spp.	Rabbitbrush	<i>Chrysothamnus</i> spp.
Chinquapin	<i>Chrysolepis</i> spp.		<i>Ericameria</i> spp.
Cottonwood,	<i>Populus</i> spp.	Raspberry	<i>Rubus</i> spp.
Creeper, Virginia	<i>Parthenocissus quinquefolia</i>	Red Cedar, Eastern	<i>Juniperus virginiana</i>
Creosote bush	<i>Larrea tridentate</i>	Redvine	<i>Brunnichia ovate</i>
Cucumber tree	<i>Magnolia acuminata</i>	Rose, MaCartney	<i>Rosa bracteata</i>
Dewberry	<i>Rubus</i> spp.	Rose, Multiflora	<i>Rosa multiflora</i>
Dogwood	<i>Cornus</i> spp.	Sagebrush	<i>Artemisia</i> spp.
Elderberry	<i>Sambucus</i> spp.	Sassafras	<i>Sassafras albidum</i>
Elm	<i>Ulmus</i> spp.	Schinus, Florida Holly	<i>Schinus terebinthifolius</i>
Grape	<i>Vitis</i> spp.	, Brazil Peppertree	<i>Schinus terebinthifolius</i>
Greenbrier	<i>Smilax</i> spp.	, Christmas-berry	<i>Schinus terebinthifolius</i>
Gum	<i>Nyssa</i> spp.	Serviceberry	<i>Amelanchier</i> spp.
Hawthorn (Thorn-apple)	<i>Crataegus</i> spp.	Snowberry	<i>Symphoricarpos</i> spp.
Hemlock	<i>Cicuta</i> spp.	Spruce	<i>Picea</i> spp.
Hickory	<i>Carya</i> spp.	Sumac	<i>Rhus</i> spp.
Honeylocust	<i>Gleditsia triacanthos</i>	Sweetgum	<i>Liquidambar styraciflua</i>
Honeysuckle	<i>Lonicera</i> spp.	Sycamore	<i>Acer</i> spp.
Hornbeam	<i>Acalypha</i> spp.	Tarbrush	<i>Flourensia cernua</i>
Huckleberry	<i>Vaccinium</i> spp.	Trumpetreeper	<i>Campsis radicans</i>
Huisache	<i>Acacia</i> spp.	Waxmyrtle	<i>Morella cerifera</i>
Ivy, Poison	<i>Toxicodendron</i> spp.	Willow	<i>Salix</i> spp.

## WEEDS LISTED IN THIS LABEL *Cont.*

### WOODY BRUSH AND VINES

Common Name	Scientific Name	Common Name	Scientific Name
Kudzu	<i>Pueraria</i> spp.	Witch Hazel	<i>Hamamelis virginiana</i>
Locust	<i>Robinia</i> spp.	Yaupon	<i>Ilex vomitoria</i>
Maple	<i>Acer</i> spp.	Yucca	<i>Yucca</i> spp.

### FOOD/FEED CROP USES

This product is approved for use on the following:

\*Conservation Reserve Program Land  
\*Fallow Systems (Between Crop Applications)  
Grain Sorghum  
Grass (Hay or Silage)  
Corn (Preplant and Pre-emergence)  
Soybean (Preplant)  
Cotton (Preplant)  
Pastures  
Rangeland  
Sugarcane  
Wheat

\*These crops are considered Food/Feed crops only when harvested, grazed or foraged. Otherwise, they are considered as Non-Food/Feed uses.

Use of this product in certain portions of California, Oregon and Washington is subject to the January 22, 2004 Order for Injunction Relief in Washington Toxics Coalition, et al. v. EPA, C01-0132C (W.D.WA). For further information, please refer to EPA website: <http://www.epa.gov/espp>.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Do not store below 32°F or above 100°F. Store in original container in a well-ventilated area separately from fertilizer, feed, and foodstuffs. Avoid cross-contamination with other pesticides.

**PESTICIDE DISPOSAL:** 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.

#### CONTAINER HANDLING:

**NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container disposal [handling] instructions below that apply to your container type / size.

**[Nonrefillable Containers 5 Gallons or Less:]** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

**[Nonrefillable containers larger than 5 gallons:]** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse 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 a 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 containers larger than 5 gallons:]** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.



## **CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. 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 manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of this product, which are beyond the control of NORTH AMERICA, INC. or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ROTAM NORTH AMERICA, INC. and Seller harmless for any claims relating to such factors.

ROTAM NORTH AMERICA, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent consistent with applicable law, this warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ROTAM NORTH AMERICA, INC. and Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ROTAM NORTH AMERICA, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, in no event shall ROTAM NORTH AMERICA, INC. or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ROTAM NORTH AMERICA, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ROTAM NORTH AMERICA, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.

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