

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

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

Ms. Joy Paff Amvac Chemical Corporation 4695 MacArthur Court, Suite 1250 Newport Beach, CA 92660

AUG 1 2 2011

Subject: Notifications per PR Notice 2007-4

Topramezone SC and ABN Impact Herbicide

EPA Reg. No. 5481-524

Application dated July 21, 2011; revised 8570-1 form dated August 8, 2011

Dear Ms. Paff:

The Agency is in receipt of your Applications for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 of the subject products. The Registration Division (RD) has conducted a review of these requests for their applicability under PRN 2007-4 and finds that the actions requested fall within the scope of PRN 2007-4. The labels submitted with the applications have been date-stamped "Notification" and will be placed in our records.

If you have any questions, please contact Hope Johnson at 703-305-5410.

Sincerely,

Machael Warsh
Kathryn Montague
Product Manger 23

Herbicide Branch

Registration Division (7505P)

Please read instructions on reverse before completing form.

Form Approved, OMB No. 2070-0060, Approval expires 2-28-95

<b>⊕</b> EPA		United States nental Protect ashington, DC 2	tion Agency		Registra Amendm Other		OPP Identifier Number
	Α	pplication	for Pesticio	le - Sect	tion I		
1. Company/Product Numbe	ir		2. EPA P	roduct Man	ager	3. Propo	sed Classification
	5481-524			Kathryn V. M	Montague		
4. Company/Product (Name)			PM#			X None	e Restricted
	Impact			23			
5. Name and Address of App	olicant (Include Zip C	Code)	6. Expec	dited Review	w. In accordance	with FIFE	RA Section 3(c)(3)(b)(i), my
Amvac Chemical Corporat 4695 MacArthur Court, Su Newport Beach, CA 92660	ation uite 1250		produ	ct is similar		ompositio	on and labeling to:
☐ Checi	k if this is a new add	lress	Prod	luct Name	e		
			Section - II				
Amendment - Explain b	pelow		Fin	al printed la	abels in response	to Agend	cy letter dated
Resubmission in respo	onse to Agency letter	r dated	П "М	le Too" App	lication		
Notification - Explain b				ner - Explain			
Explanation: Use additional Notification of label change requirements of EPA's regulated labeling or the Confider make any false statement to 156.10, 156.140, 156.144, and penalties under section	e per PR Notice 200 ulations at 40 CFR to ntial Statement of F to EPA. I further und 156.146, and 156.1	07-4. This notifi §§ 156.10, 156 formula for this derstand that if 156, this produ	fication is consist 6.140, 156.144, 1 s product. I under if the amended la	156.146, and restand that abel is not contact.	nd 156.156. No control it is a violation occurred to the consistent with the consistency with the consist	other char of 18 U.S. ne require	nges have been made to C. Sec. 1001 to willfully ements of 40 CFR §§
			Section - III				
1. Material This Product Wil	I Be Packaged In:						
Child-Resistant Packaging	Unit Packaging		Water Soluble F	ackaging	2. Type of	Container	
☐ Yes* ☑ No	☐ Yes ☑ No If "Yes"	No. per	☐ Yes ☑ No If "Yes"	No. per		Metal Plastic Glass	
* Certification must be submitted	Unit Packaging wt.	container	Package wt.	container		Paper Other (Spe	ecify)
3. Location of Net Contents	Information	4. Size(s) Reta	ail Container	5	. Location of La	bel Direct	ions
□ Label □	Container		30 ounces	0	On Label		
W			30 ounces		On Labeling a	ccompany	ying product
6. Manner in Which Label is	Affixed to Product	☐ Lithogra ☑ Paper gl		]	Stenciled Other		
			Section - I\	/			
1. Contact Point (Complete i	items directly below	for identification	on of individual to	be contact	ed, if necessary,	to proces	s this application.)
Name		Ti	itle			Telephon	ne No. (Include Area Code)
Jo	by Paff		Regul	atory Assista	ant		949-221-6108
I certify that the statem complete. I acknowled imprisonment or both u	ige that any knowing	igly false or mis	nd all attachmen				8. Date Application Received (Stamped)
2. Signature	y Paper	3.	. Title	Regulatory A	ssistant		
4. Typed Name	oy Paff	5.	. Date	ust 8,	2011		

# TOPRAMEZONE SC

# **HERBICIDE**

For postemergence weed control in all types of field corn, popcorn or sweet corn.

Active Ingredient:	
Topramezone [3-(4,5-dihydro-3-isoxazolyl)-2-methyl-4-	
(methylsulfonyl) phenyl] (5-hydroxy-1-methyl-1 <i>H</i> -pyrazol-4-yl) methanone	29.7%
Inert Ingredients:	70.3%
Total:	100.0%
(1 gallon contains 2.8 pounds of TOPRAMEZONE free acid)	NOTIFICATION
EPA Registration Number <u>5481-524</u>	AUG 1 2 2011
EPA Est. Number:	

# KEEP OUT OF REACH OF CHILDREN. **CAUTION! /PRECAUCION!**

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

	FIRST AID
If in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have a person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
If on skin or clothing	<ul> <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>
	HOT LINE NUMBER
	rainer or label with you when calling a poison control center or doctor, or going for treatment. NG EMERGENCIES, PHONE 24 HOURS A DAY:
Transportation: CHEN Other: AMVAC	MTREC

See back panel for additional Precautionary Statements. **Net contents:** 

Los Angeles, CA. 90023

# **Precautionary Statements**

#### **Hazards to Humans and Domestic Animals**

**CAUTION.** Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Harmful if swallowed or absorbed through the skin. Wash thoroughly with soap and water after handling.

# **Personal Protective Equipment (PPE)**

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

# Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves Category A
- · Shoes plus socks

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

# **User Safety Recommendations**

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **Environmental Controls Statement**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### **Environmental Hazards**

DO NOT apply directly to water, or areas where surface water is present, or to inter-tidal areas below the mean high water mark. DO NOT contaminate water when disposing of equipment wash water. DO NOT apply this product through any type of irrigation system.

Product must be used in a manner which will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsate.

#### **Directions For Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

# **Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- · Coveralls
- · Chemical resistant gloves Category A
- · Shoes plus socks

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

#### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store product in original container only. Store product in a cool, dry place. Do not store this product under wet conditions. If this product has been stored where freezing temperatures have occurred, agitate or mix contents of container well before use. Avoid cross-contamination with other pesticides.

**Pesticide Disposal:** Wastes resulting from the use of 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 state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Triple rinse (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 ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank and 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 if available or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned stay out of smoke. Do not reuse container.

#### In Case of Emergency

In case of large-scale spillage regarding this product, call:

CHEMTREC 1-800-424-9300

AMVAC 1-323-264-3910

In case of medical emergency regarding this product, call:

- · Your local doctor for immediate treatment.
- Your local poison control center (hospital).
- AMVAC 1-323-264-3910

#### I. Information

**TOPRAMEZONE SC** is a systemic postemergence herbicide for control or growth suppression of emerged broadleaf and grass weeds in field corn (grown for grain, silage or seed), popcorn (grown for ear, kernel or seed) and sweet corn (grown for ear, kernel or seed). This product may be used on conventional and herbicide resistant/tolerant corn hybrids. AMVAC has not tested all inbred lines for tolerance to **TOPRAMEZONE SC**. Before using **TOPRAMEZONE SC** refer to seed company recommendations for use on inbred lines of field corn, popcorn and sweet corn.

When applied as directed at the postemergence broadcast rate of 0.75 fluid ounce per acre, **TOPRAMEZONE SC** will control or suppress the broadleaf weeds listed in Table 1 and the grass weeds listed in Table 2.

For best performance it is recommended that **TOPRAMEZONE SC** be tank mixed with 0.25 to 1.5 pounds active ingredient of atrazine herbicide per acre. Use lower rates of atrazine to provide added burndown of emerged weeds and higher rates for added soil residual control. Also **TOPRAMEZONE SC** applications must include spray additives (See section III and IV of this label for details).

Table 1. Broadleaf Weed List, Including ALS, Glyphosate and Triazine-Resistant Biotypes (Apply at the postemergence broadcast rate of 0.75 fluid ounce per acre.)

Annual Broadleaf Weeds	Maximum Size		
	(Inches) <sup>2</sup>		
Amaranth, Palmer	6		
Amaranth, Powell	6		
Burcucumber	6		
Carpetweed	6		
Chickweed, Common	4		
Cocklebur, Common	8		
Dandelion	$6^3$		
Galinsoga, Hairy	6		
Henbit	4		
Horseweed (Marestail)	6		
Jimsonweed	6		
Kochia	6		
Lambsquarters, Common	6		
Mallow, Common	3		
Mallow, Venice	$3^3$		
Morningglory sp.	63		
Mustard sp.	6 ((((())))		
Nightshade, Black	6		
Nightshade, Eastern Black	6 000000 000		
Nightshade, Hairy	6		
Pigweed, Prostrate	6 00000 0000		
Pigweed, Redroot	6 ((())		
Pigweed, Smooth	6		
Pigweed, Tumble	4		
Prickly Lettuce	4		
Pusley, Florida	3		
Ragweed, Common	6		

Ragweed, Giant	8	
Shepardspurse	4	
Sida, Prickly	3	
Smartweed, Ladysthumb	3	
Smartweed, Pennsylvania	3	
Sunflower, Volunteer	8	
Sunflower, Wild (common)	8	
Thistle, Canada	6	
Thistle, Russian	4	
Velvetleaf	8	
Waterhemp, Common	6	
Waterhemp, Tall	6	

ALS (acetolactate synthase) resistant weeds include those weeds resistant to the sulfonylurea (e.g., **Spirit** and **Exceed**), imidazolinone (e.g., **Lightning**), or sulfonamide (e.g., **Python**) family of herbicides.

Table 2. Annual Grass Weed List, Including ALS -Resistant Biotypes (Apply at the postemergence broadcast rate of 0.75 fluid ounce per acre.)

Annual Grass Weeds	Maximum Leaf Stage <sup>2</sup>	Maximum Size (Inches) <sup>2</sup>
Barnyardgrass	4	4
Crabgrass, Large	4	3
Crabgrass, Smooth	4	3
Cupgrass, Woolly	33	$3^3$
Foxtail, Giant	4	4
Foxtail, Green	3	3
Foxtail, Yellow	33	$3^3$
Goosegrass	4	3
Johnsongrass, Seedling	33	$4^3$
Millet, Wild-Proso	3	3
Panicum, Fall	33	$3^3$
Panicum, Texas	33	$3^3$
Shattercane	33	$4^3$
Signalgrass, Broadleaf	33	33 000 0

ALS-resistant weeds include those weeds resistant to the sulfonylurea (e.g., Accent and Option) family of herbicides.

#### **Mode of Action**

TOPRAMEZONE SC is absorbed by leaves, roots, and shoots and translocated to the growing points of sensitive weeds to provide control of emerged weeds. TOPRAMEZONE SC controls weeds by inhibiting carotenoid biosynthesis (HPPD inhibitor). Temperatures and moisture conditions for active plant growth are important for

For best performance spray before weeds exceed the maximum stem height or vine length listed in this table.

Growth suppression.

For best performance spray before grasses exceed the maximum leaf stage and/or height listed in this table.

Growth suppression.

optimum TOPRAMEZONE SC activity. TOPRAMEZONE SC applications to weeds during periods of stress conditions such as cold temperatures and/or drought, may result in reduced performance.

#### Herbicide Resistance

No resistance to **TOPRAMEZONE SC** or cross-resistance to other HPPD inhibitor herbicides is known to exist. Repeated applications of a single mode of action in a weed management plan increases the probability of selecting for naturally occurring biotypes\* with less susceptibility to herbicides using that mode of action. Therefore, **TOPRAMEZONE SC** should be tank mixed with a herbicide having a different mode of action and/or be used in a rotation with herbicides having a different mode of action. Other HPPD inhibitor herbicides include **Balance**® (isoxaflutole) and **Callisto**® (mesotrione).

\*A weed biotype is a naturally occurring individual within a given species that has a slightly different, but distinct genetic makeup from other plants.

**Crop Tolerance** 

**TOPRAMEZONE SC** should be applied during favorable growing conditions for optimum crop tolerance and weed control. Crops under environmental stress are more likely to show injury from any herbicide application. Rarely, plants under these conditions treated with **TOPRAMEZONE SC** may show some transient bleaching of the portion of the leaves intercepting the spray application. These symptoms are temporary and occur infrequently; crop growth is not affected.

#### Cultivation

Avoid disturbing (e.g., cultivation) treated areas for at least 7 days following an application of **TOPRAMEZONE SC** to allow best herbicide uptake, translocation, and weed control.

#### **Insecticide Information**

TOPRAMEZONE SC may be used sequentially or in combination with soil or foliar applied insecticides registered for use in corn.

Cleaning Spray Equipment

To avoid injury to sensitive crops, drain and clean application equipment thoroughly using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions and then triple rinse the equipment before and after applying this product.

# **II. Application Instructions**

**TOPRAMEZONE SC** is effective for postemergence control of annual weeds in conservation or conventional-tillage production systems.

Do not apply **TOPRAMEZONE SC** within 30 feet of native plant community.

The applicator is responsible for any loss or damage that results from spraying **TOPRAMEZONE SC** in a manner other than recommended in this label. In addition, applicator must follow all applicable state and local regulations and ordinances in regards to spraying.

#### **TOPRAMEZONE SC Application Rate and Timing:**

- Do not exceed a total of 0.75 fluid ounce per treated acre per growing season.
- TOPRAMEZONE SC can be applied postemergence up to 45 days prior to corn harvest.
- Apply TOPRAMEZONE SC as a postemergence treatment to corn when weeds are actively growing.
- For optimal weed control apply TOPRAMEZONE SC before weeds exceed labeled height.
- TOPRAMEZONE SC should be applied a minimum of one hour before rainfall or overhead irrigation.

#### COVERAGE

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

**TOPRAMEZONE SC** applications should be made with drop nozzles if the crop canopy prevents adequate weed coverage.

**Ground Application Methods and Equipment** 

Uniformly apply with properly calibrated ground equipment in 10 or more gallons of water per acre. Use higher water volumes treating larger weeds and/or high density weed infestation. Flat-fan nozzle tips are recommended for postemergence applications. A spray pressure of 20 to 40 psi is recommended.

# **Spray Drift**

Do not apply when weather conditions may cause drift to adjacent crops and vegetation; injury may result if this occurs. To avoid spray drift from treated areas, do not make applications when wind speeds exceed 10 mph or during periods of temperature inversions.

Use of larger droplet sizes will reduce spray drift. Agriculturally approved drift-reducing additives may also be used.

# **Aerial Application Methods and Equipment**

Uniformly apply with properly calibrated aerial equipment in 3 or more gallons of water per acre. Adequate spray volume must be used to provide accurate and uniform distribution of spray particles over the treated area and to avoid drift of spray particles to non-target areas.

To avoid injury to sensitive crops from drift, aerial applicators must adhere to the following SPECIAL AERIAL USE DIRECTIONS AND PRECAUTIONS.

- Nozzle height above ground must be a maximum of 10 feet.
- Nozzles must be pointed towards the rear of the aircraft. The downward angle of the nozzle should not be greater than 20 degrees.
- To minimize wing-tip vortex roll, nozzles or spray boom must not be located any closer to end of wing or rotor than three-fourths the distance from the center of the aircraft.
- Use a maximum spray pressure of 40 psi.
- A buffer zone must be established between the area to be sprayed and sensitive crops.
- DO NOT spray when wind velocity is greater than 5 mph or during periods of temperature inversions. Coarse sprays (larger droplets) are less likely to drift.

# III. Additives

Postemergence applications of **TOPRAMEZONE SC** require the addition of an adjuvant and a nitrogen fertilizer source to achieve optimum weed control.

I. ADJUVANTS: Unless specific recommendations are given in Section VII. Crop Use Directions -Tank Mixes, always use either a methylated seed oil (MSO) or a crop oil concentrate (COC), which contains at least 14% emulsifiers and 80% oil, with TOPRAMEZONE SC. For best performance across a wide range of environmental conditions, including when weeds are under moisture and/or temperature stress, use of an MSO adjuvant is recommended. Apply these oil based adjuvant concentrates at the rates of 1.0 to 1.5 gallons per 100 gallons of water (1.0% to 1.5% v/v). Use the higher rate when making an application during periods of hot dry weather.

#### AND

II. NITROGEN FERTILIZER SOURCE: Recommended nitrogen based fertilizers include urea ammonium nitrate (UAN; 28-34%) or ammonium phosphate (10-34-0) at 1.25 to 2.5 gallons per hundred gallons of water (1.25% to 2.5% v/v). Instead of a liquid fertilizer, spray grade ammonium sulfate (AMS) at 8.5 to 17 pounds per 100 gallons of water (or an equivalent liquid AMS product) may be used. Use the higher rate when making application during periods of hot dry weather.

Agriculturally approved drift-reducing additives may be used in applications with TOPRAMEZONE SC.

# IV. Mixing Order

Liquid fertilizer as a carrier for postemergence applications of **TOPRAMEZONE SC** herbicide is not recommended. Use only water as a carrier.

#### WATER:

- 1. Fill the spray tank ½ to ¾ full with clean water.
- 2. Add the required amount of TOPRAMEZONE SC to the spray tank while agitating.
- 3. After the **TOPRAMEZONE SC** has visibly dispersed, add spray additives and fill the remainder of the tank with water.

## TANK-MIX PREPARATION:

When tank-mixing TOPRAMEZONE SC with recommended herbicides, add the other herbicides and other components in the following order, while agitating:

- 1. Fill spray tank ½ to ¾ full with clean water.
- 2. Add soluble packet products and thoroughly mix.
- 3. Add TOPRAMEZONE SC and thoroughly mix.
- 4. Add WP (wettable powder), DG (dispersible granule), DF (dry flowable), or LF (liquid flowable) formulations.
- 5. Add EC (emulsifiable concentrate) products.
- 6. Add spray adjuvants to the spray tank.
- 7. While agitating, fill the remainder of the tank with water.

# V. Tank Mix Information

**TOPRAMEZONE SC** is recommended to be used sequentially or tank mixed with other herbicides as part of a complete weed control program. Tank mix recommendations are for use only in states where the sequential or tank mix product and application site is registered. Refer to section VII. Crop Use Directions for more details and for specific tank mix restrictions. Read and follow the applicable Restrictions and Limitations and Directions for Use on all products included in any tank mix. The most restrictive labeling applies to tank mixes.

#### VI. Restrictions and Limitations

- No more than 0.75 fluid ounce per acre (0.0164 lbs ai/acre) of **TOPRAMEZONE SC** may be applied during the growing season.
- In the event of a crop loss due to weather, any corn type can be replanted following an application of **TOPRAMEZONE SC** herbicide. If **TOPRAMEZONE SC** was tank-mixed with other herbicides, the label restrictions for these herbicides must also be followed.
- DO NOT apply **TOPRAMEZONE SC** within 45 days of corn harvest (fresh market sweet corn, silage, fodder, or grain).
- DO NOT graze or feed treated corn forage, silage, fodder, or grain for at least 45 days after an application of **TOPRAMEZONE SC**.

ROTATIONAL CROPS GUIDELINE: The following rotational crops may be planted after applying TOPRAMEZONE SC herbicide at the recommended rate in corn. Planting earlier than the recommended interval

may result in crop injury. Avoid over applications by minimizing overlaps of spray swaths and by switching off spray boom when turning (end rows).

Minimum Time From Application to Planting	Crops	
Anytime	All types of field corn, sweet corn and popcorn.	
Three months	Cereal crops (wheat, barley, oats, and rye) and grass crops grown for seed production.	
Nine months	Alfalfa, canola, cotton, flax, peanut, pea, potato, sorghum, soybean and sunflower.	
Eighteen months	All other crops not listed in categories above.	

# VII. Crop Use Directions

# Corn

(Field, Pop, Seed, and Sweet)

TOPRAMEZONE SC can be applied postemergence on all corn types including conventional, Clearfield, Roundup Ready, and LibertyLink hybrids. In addition, TOPRAMEZONE SC may be used on inbred lines used in field corn, popcorn and sweet corn seed production. Refer to seed company recommendations before use on inbred lines.

**TOPRAMEZONE SC** may be used in tank mixtures or sequential applications with other herbicides registered for use in corn. If **TOPRAMEZONE SC** is tank mixed with other herbicides, the label restrictions for the most restrictive of the tank mix products should be followed.

#### **Tank Mixes**

Recommended tank mixes for postemergence applications of TOPRAMEZONE SC when used at 0.75 fluid ounces per acre include:

ounces per acre include:		
2,4-D <sup>1</sup>	Distinct <sup>®1</sup>	Permit <sup>®</sup>
Aim <sup>®</sup>	Dual II Magnum®	Prowl® H20
Atrazine	G-Max Lite <sup>TM</sup>	Require <sup>TM</sup> Q (mp)
Basagran <sup>®</sup>	Guardsman Max®	Resolve <sup>TM</sup> Q (mp)
Bicep II Magnum®	Harness®	Resource®
Bicep Lite II Magnum®	Harness <sup>®</sup> Xtra	Status <sup>®</sup>
Buctril <sup>®</sup>	Hornet <sup>®</sup>	Stinger®
Cadet <sup>TM</sup>	Keystone <sup>®</sup>	Surpass®
Cinch <sup>®</sup>	Keystone® LA	TopNotch <sup>®</sup>
Clarity <sup>®1</sup>	Laddok <sup>®</sup>	Tough®
Degree TM®	Marksman <sup>®1</sup>	
Degree Xtra®	Outlook <sup>®</sup>	

Recommended tank mixes for postemergence applications of TOPRAMEZONE SC when used at 0.5 to 0.75 fluid ounces per acre include<sup>2</sup>:

Accent® Accent® Q
Glyphosate brands
Ignite® 280³
Liberty®

Lightning<sup>®</sup>
Option<sup>®</sup>
Roundup<sup>®</sup> brands
Steadfast<sup>®</sup>
Steadfast<sup>®</sup> O

Stout<sup>TM</sup>
Touchdown® brands

Use of methylated seed oil (MSO) or crop oil concentrate (COC) in tank mixes of **TOPRAMEZONE SC** plus 2,4-D, Clarity, Distinct, or Marksman may result in crop injury if applied during periods of cold, wet weather or hot and/or humid weather. Under these environmental conditions the use of a nonionic surfactant in place of an oil based adjuvant is recommended.

TOPRAMEZONE SC may be applied at a reduced rate of 0.5 to 0.75 fluid ounce per acre to provide additional control of emerged broadleaf weeds when used in tank mixes with listed postemergence herbicides. For corn up to 12 inches tall atrazine may be added to these mixes. If weed species are tolerant or resistant to the tank mix partner product use the higher rate of TOPRAMEZONE SC. For best performance on targeted broadleaf weeds, do not exceed the maximum labeled weed height found in Table 1 under Information.

<sup>3</sup> When tank mixed with these products use spray additives as recommended on these partners product labels.

# Sequential Herbicide Combinations and Uses

In addition to the control of many emerged broadleaf weeds, TOPRAMEZONE SC controls or suppresses growth of several emerged grass weed species. To target a broader spectrum of grasses TOPRAMEZONE SC should be used as a sequential postemergence treatment following a preemergence grass herbicide such as Outlook<sup>®</sup>, Prowl<sup>®</sup>, Guardsman Max<sup>®</sup>, Dual II Magnum<sup>®</sup>, Harness<sup>®</sup>, or Surpass<sup>®</sup>. TOPRAMEZONE SC may also be used in sequential programs with registered burn-down herbicides.

When TOPRAMEZONE SC is used in sequential applications following other products containing HPPD inhibitors such as isoxaflutole (e.g. Balance<sup>®</sup> Pro, Balance<sup>®</sup> Flexx, Epic<sup>®</sup>, Radius<sup>™</sup>) or mesotrione (e.g. Callisto<sup>®</sup>, Lexar<sup>®</sup>, Lumax<sup>®</sup>), use of a tank mix partner with a different mode of action is recommended to reduce risk of selection for HPPD resistant biotypes.

Pests listed in this label:		
Common Name	Scientific Name	
Amaranth, Palmer	Amaranthus palmeri	
Amaranth, Powell	Amaranthus powellii	
Barnyardgrass	Echinochloa crus-galli	
Burcucumber	Sicyos angulatus	
Carpetweed	Mollugo verticillata	
Chickweed, Common	Stellaria media	
Crabgrass, Large	Digitaria sanguinalis	
Crabgrass, Smooth	Digitaria ischaemum	
Cocklebur, Common	Xanthium strumarium	
Cupgrass, Woolly	Eriochloa villosa	
Dandelion	Taraxacum officinale	
Foxtail, Giant	Setaria faberi	
Foxtail, Green	Setaria viridis	

Foxtail, Yellow Setaria glauca Galinsoga ciliata Galinsoga, Hairy Goosegrass Eleusine indica Henbit Lamium amplexicaule Horseweed (Marestail) Conyza Canadensis **Jimsonweed** Datura stramonium **Johnsongrass** Sorghum halepense Kochia scoparia Kochia

Lambsquarters, Common

Mallow, Common

Mallow, Venice

Millet, Wild-Proso

Morningglory

Mustard

Chenopodium album

Malva neglecta

Hibiscus trionum

Panicum miliaceum

Ipomoea sp.

Brassica sp.

Nightshade, Black
Nightshade, Eastern Black
Nightshade, Hairy
Panicum, Fall
Solanum nigrum
Solanum ptycanthum
Solanum sarrachoides
Panicum dichotomiflorum

Panicum, Texas Panicun texanum Pigweed, Prostrate Amaranthus blitoides Pigweed, Redroot Amaranthus retroflexus Pigweed, Smooth Amaranthus hybridus Pigweed, Tumble Amaranthus album Prickly Lettuce Lactuca serriola Pusley, Florida Richardia scabra Ragweed, Common Ambrosia artemisiifolia Ragweed, Giant Ambrosia trifida Shattercane Sorghum bicolor Sida, Prickly Sida spinosa

Signalgrass, Broadleaf
Smartweed, Pennsylvania
Smartweed, Ladysthumb
Sunflower, Volunteer
Sunflower, Wild (common)
Thistle Canada

Brachiaria platyphylla
Polygonum pensylvanicum
Polygonum persicaria
Helianthus sp.
Helianthus annuus
Cirsium arvense

Thistle, Canada
Thistle, Russian
Velvetleaf
Waterhemp, Common
Waterhemp, Tall

Helianthus annuus
Cirsium arvense
Salsola iberica
Abutilon theophrasti
Amaranthus rudis
Amaranthus tuberculatus

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