

7969-327

12/4/2012

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U S ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
Ariel Rios Building
1200 Pennsylvania Ave , NW
Washington, D C 20460

EPA Reg Number
7969-327

Date of Issuance
DEC - 4 2012

NOTICE OF PESTICIDE
x Registration
Reregistration
(under FIFRA, as amended)

Term of Issuance Conditional

Name of Pesticide Product
Topramezone 2 8 SC
Turfgrass Herbicide

Name and Address of Registrant (include ZIP Code)

BASF Corporation
26 Davis Drive
Research Triangle Park, NC 27709

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

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

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(B) provided that you

- 1 Submit and/or cite all data required for registration review/reregistration of your product when the Agency requires all registrants of similar products to submit data
2 Make the following label revision
a a Revise "EPA REG NO 7969-xxx" to "EPA REG NO 7969-327 " Assure that the establishment number and net contents are also added to the final printed label
3 Submit immunotoxicity study (OPPTS 870 7800) by April 1, 2013
4 Submit one (1) copy of the revised final printed label for the record

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec 6(e) Your release for shipment of the product constitutes acceptance of these conditions A stamped copy of the label is enclosed for your records

If you have any questions regarding this notice, please contact Emily Hartman of my staff at 703-347-0189 or hartman emily@epa gov

Signature of Approving Official
Kathryn V Montague
Project Manager 23
Herbicide Branch
Registration Division (7505P)

Date
DEC - 4 2012

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Group 27 Herbicide

# Topramezone 2.8 SC

turfgrass herbicide

For postemergence control of broadleaf and grass weeds in select turfgrass species on golf courses, sod farms and residential turfgrass

**Active Ingredient:**

topramezone, [3-(4,5-dihydro-1,6-isoxazolyl)-2-methyl-4-(methylsulfonyl)phenyl](5-hydroxy-1-methyl-1H-pyrazol-4-yl)methanone

29.7%

**Other Ingredients**

70.3%

**Total**

100.0%

1 gallon contains 2.8 pounds of topramezone free acid

EPA Reg. No. 7969-xxx

EPA Est. No.

**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 the label, find someone to explain it to you in detail.)

See inside for **First Aid, Precautionary Statements, Directions For Use, and Conditions of Sale and Warranty.**

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

**Net Contents:**

**ACCEPTED**  
DEC - 4 2012  
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 7969-327

BASF Corporation  
26 Davis Drive  
Research Triangle Park, NC 27709

**BASF**  
The Chemical Company

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<b>FIRST AID</b>	
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes</li> <li>• Call a poison control center or doctor for treatment advice</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <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>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes</li> <li>• Remove contact lenses if present after first 5 minutes then continue rinsing eyes</li> <li>• Call a poison control center or doctor for treatment advice</li> </ul>
<b>HOTLINE NUMBER</b>	
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment            You may also contact BASF Corporation for emergency medical treatment information at 1 800 832 HELP (4357)</p>	

### Precautionary Statements

#### Hazards to Humans and Domestic Animals

**CAUTION** Harmful if absorbed through skin Harmful if swallowed Causes moderate eye irritation Avoid contact with skin eyes or clothing Wear long sleeved shirt and long pants socks shoes and gloves Wear protective eyewear

#### Personal Protective Equipment (PPE)

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

#### Applicators and other handlers must wear

- Long-sleeved shirt and long pants
- Chemical resistant gloves **Category A**
- Shoes plus socks
- Goggles face shield or safety glasses

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 exist use detergent and hot water Keep and wash PPE separately from other laundry

### USER SAFETY RECOMMENDATIONS

#### Users should

- Wash thoroughly with soap and water after handling and before eating drinking chewing gum using tobacco or using the toilet
- Remove and wash contaminated clothing before reuse

### Engineering Controls Statement

When handlers use closed systems enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170 240(d)(4-6)] the handler PPE requirements may be reduced or modified as specified in the WPS

### Environmental Hazards

**DO NOT** apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark **DO NOT** contaminate water when disposing of equipment washwaters or rinsate **DO NOT** apply this product through any type of irrigation system

This product is toxic to aquatic and terrestrial plants Minimize exposure to nontarget plants **DO NOT** apply when weather conditions favor drift from target areas

Product must be used in a manner that 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

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### 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

### NONAGRICULTURAL USE REQUIREMENTS

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

**DO NOT** enter or allow people or pets to enter the treated area until sprays have dried

**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

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

### 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

(continued)

### STORAGE AND DISPOSAL (continued)

#### 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 the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance

#### Container Handling

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

#### Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows

Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container 1/4 full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal Drain for 10 seconds after the flow begins to drip Repeat this procedure two more times

#### Triple rinse containers too large to shake (capacity > 5 gallons) as follows

Empty the remaining contents into application equipment or a mix tank Fill the container 1/4 full with water Replace and tighten closures Tip container on its side and roll it back and forth ensuring at least one complete revolution for 30 seconds Stand the container on its end and tip it back and forth several times Turn the container over onto its other end and tip it back and forth several times Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal Repeat this procedure two more times

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

## In Case of Emergency

In case of large scale spillage regarding this product call

- CHEMTREC 1 800 424 9300
- BASF Corporation 1 800-832 HELP (4357)

In case of medical emergency regarding this product call

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1 800 832-HELP (4357)

### Steps to be taken in case material is released or spilled

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

## Product Information

**Topramezone 2 8 SC turfgrass herbicide** may be applied postemergence to residential (spot spray only) and nonresidential turfgrass including

- Airports
- Athletic fields
- Cemeteries
- Golf courses
- Grounds or lawns around residential and commercial establishments
- Houses of worship
- Military and other institutions
- Single/Multifamily dwellings
- Parks
- Picnic grounds
- Roadsides
- Schools
- Sod farms

**Topramezone 2 8 SC** is a broad-spectrum systemic postemergence herbicide for control or suppression of broadleaf and grass weeds in select turfgrass species

- Bluegrass Kentucky
- Centipede grass
- Fescue fine
- Fescue tall
- Ryegrass perennial

When applied as directed **Topramezone 2 8 SC** will control or suppress the broadleaf and grass weeds listed in **Table 1** Applications of **Topramezone 2 8 SC** must include spray additives for acceptable weed control See **Spray Mix Additives** for details

## Mode of Action

**Topramezone 2 8 SC** is absorbed by leaves roots and shoots and is translocated to the growing points of susceptible weeds **Topramezone 2 8 SC** controls weeds by inhibiting carotenoid biosynthesis [HPPD inhibitor (**Group 27**)] Soon after application treated weeds turn white because of chlorophyll loss and growth stops Affected weeds then become necrotic and are controlled

## Resistance Management

While weed resistance to HPPD inhibiting herbicides is relatively infrequent populations of resistant biotypes are known to exist Resistance management practices include

- Following labeled application rate and weed growth stage recommendations
- Avoid multiple repeat applications of herbicides with the same mode of action
- Using tank mixes and sequential applications with other effective herbicides possessing different modes of action

## Use Information

Apply **Topramezone 2 8 SC** to actively growing weeds as a postemergence broadcast or spot spray in labeled turf grass species at the specified rate and growth stage in **Table 1** and **Table 2** **DO NOT** exceed the labeled application rate or fail to comply with use specifications in

### Restrictions and Limitations

For best results weeds should be actively growing and not under stress from lack of water excessive water low fertility mowing shock excessive hot or cold temperatures or injury from other herbicide applications

To achieve consistent weed control a crop oil concentrate (COC) or methylated seed oil (MSO) adjuvant is required See **Table 1** and **Table 2** for rates

### Turfgrass Tolerance

Apply **Topramezone 2 8 SC** during favorable growing conditions for optimum turfgrass tolerance and weed control Turfgrass under environmental stress is more likely to show injury such as transient bleaching from herbicide applications These symptoms are temporary and turfgrass vigor is not affected

### Spot Applications

Postemergence spot applications of **Topramezone 2 8 SC** may be made to susceptible weeds in tolerant turfgrass species Apply 0.023 to 0.034 fl oz (0.7 to 1.0 ml) of **Topramezone 2 8 SC** per 1000 square feet of treated area Spray coverage should be uniform and complete See **Table 2** for spot spray mix amounts

**NOTE** Application to residential turfgrass and athletic fields is limited to spot spray only Refer to **Special Use Directions for Residential Turfgrass and Athletic Fields** section of this label for details

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## Mowing Information

To maximize weed control and minimize potential turfgrass injury **DO NOT** mow 2 days before through 2 days after applying **Topramezone 2 8 SC turfgrass herbicide**

## Irrigation and Rainfall

If soil moisture is not sufficient prior to

**Topramezone 2 8 SC** application irrigation may improve weed control For best results **DO NOT** water or irrigate for 24 hours after application

## Extended Residual Grass Control

To extend residual control of annual grass weeds

**Topramezone 2 8 SC** may be tank mixed with herbicides including **Pendulum® 3 3 EC herbicide Pendulum® AquaCap™ herbicide PRE-M® 3 3 EC turf herbicide PRE-M® AquaCap™ herbicide** or **Tower® herbicide**

Consult the respective tank mix labels for additional weeds controlled and follow the information in the **Mixing Order** section of this label

## Seeding/Overseeding/ New Seeding/Renovation

**Topramezone 2 8 SC** can be used for weed control during turf establishment

### Topramezone 2 8 SC Use During Tolerant Turfgrass Establishment

When establishing new turfgrass from seed **Topramezone 2 8 SC** can be applied anytime before or after seeding with the exception of a 28 day period after seeding **DO NOT** apply **Topramezone 2 8 SC** for a period of 28 days after seeding tolerant turfgrass

Days After Seeding		
Apply	<b>DO NOT Apply</b>	Apply
Day 1		Day 28

## Spray Mix Additives

Crop oil concentrate or methylated seed oil are the preferred adjuvants for postemergence applications. See **Table 1** and **Table 2** for adjuvant rates

**Topramezone 2 8 SC** use with nonionic surfactants (NIS) or blends is not recommended because it may not provide satisfactory weed control

Crop oil concentrate or methylated seed oil used as an adjuvant with **Topramezone 2 8 SC** must meet all the following criteria

- Nonphytotoxic
- Provide good mixing quality in the jar test
- Successful in local experience

The exact composition of suitable products will vary however any COC or MSO used should contain emulsifiers to provide good mixing quality

When an adjuvant (or a specific adjuvant product such as a drift control agent) is to be used with this product the use of a Chemical Producers and Distributors Association

(CPDA) certified adjuvant is recommended Consult your local BASF representative or distributor for instructions for your area

## Compatibility Test for Mix Components

Add components in the following sequence using 2 teaspoons for each pound or 1 teaspoon for each pint of labeled rate per acre

- 1 **Water** For 20 gallons per acre spray volume use 3 3 cups (800 ml) of water For other spray volumes adjust rates accordingly Use only water from the intended source at the source temperature
- 2 **Products in PVA bags** Cut an opening in the water soluble PVA bag just large enough to use a teaspoon for measuring purposes Use the opened water soluble PVA bag first when preparing spray solution Boron-containing fertilizers may be incompatible with PVA material Include PVA material if a boron fertilizer is intended to be used Cap the jar and invert 10 cycles
- 3 **Water-dispersible products** (dry flowables wettable powders suspension concentrates including **Topramezone 2 8 SC** or suspo emulsions) - Cap the jar and invert 10 cycles
- 4 **Water-soluble products** Cap the jar and invert 10 cycles
- 5 **Emulsifiable concentrates** (including COC or MSO) Cap the jar and invert 10 cycles
- 6 **Water-soluble additives** Cap the jar and invert 10 cycles

Let the solution stand for 15 minutes and evaluate the solution for uniformity and stability The spray solution should not have free oil on the surface or thick (clabbered) texture For water dispersible granule (WG) or wettable powder (WP) products a fine precipitate that is easily resuspended is normal large nondispersible particles (> 300 microns) that precipitate on standing are a sign of tank mix incompatibility **DO NOT** use any spray solution that could clog spray nozzles

## Mixing Order

Thoroughly mix **Topramezone 2 8 SC** before dispensing from container

Maintain constant agitation throughout mixing and application

- 1 **Water** - Begin by agitating a thoroughly clean sprayer tank 3/4 full of clean water
- 2 **Inductor** If an inductor is used rinse it thoroughly after each component has been added
- 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** (dry flowables wettable powders suspension concentrates including **Topramezone 2 8 SC** or suspo-emulsions)
- 5 **Water-soluble products**
- 6 **Emulsifiable concentrates** (including COC or MSO)

- 7 **Water-soluble additives** (including chelated iron or soluble nitrogen fertilizer when applicable not all chelated iron or sprayable nitrogen fertilizers are compatible with **Topramezone 2 8 SC turfgrass herbicide**) - Always perform a compatibility test to ensure proper mixing See **Compatibility Test for Mix Components** section of label for directions
- 8 Remaining quantity of water

Maintain constant agitation during application

### Cleaning Spray Equipment

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

### Application Instructions

Apply with properly calibrated ground equipment in sufficient water per acre to provide uniform spray distribution (at least 30 gallons of water per acre or at least 0.75 gallon per 1000 sq ft) Use low pressure sprayers delivering between 20 and 40 psi Maintain continuous agitation during spraying with good mechanical or bypass agitation Nozzle screens must be no finer than 50 mesh (100 mesh is finer than 50 mesh)

Check sprayer routinely to determine proper calibration Flat fan flood or cone nozzles may be used Arrange nozzles for uniform coverage of turfgrass and weeds Adjust boom height nozzle selection and pressure to provide uniform coverage and minimize spray drift Prevent overlaps that will increase rates above those labeled for use Avoid application when winds may cause drift

### Spray Drift Management

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

Use only medium or coarser spray nozzles according to ASAE (S572) definition of standard nozzles

For ground-boom applications **DO NOT** apply with a nozzle height greater than 2 feet above the target site

**DO NOT** apply at wind speeds greater than 10 mph

When applying at wind speeds less than 3 mph the applicator must determine if conditions of temperature inversion exist or stable atmospheric conditions exist at or below nozzle height **DO NOT** make applications into areas of temperature inversion or stable atmospheric conditions

### Restrictions and Limitations

- **DO NOT** apply more than 2.0 fl ozs of **Topramezone 2 8 SC** per acre (0.046 fl oz per 1000 sq ft) per application
- **DO NOT** apply more than 4.0 fl ozs **Topramezone 2 8 SC** (0.089 lb ai) per acre (0.092 fl oz per 1000 sq ft) per year
- **DO NOT** apply to golf course collars or greens
- Maintain a 5 ft buffer between treated areas and bent grass greens
- **DO NOT** make applications of **Topramezone 2 8 SC** to drought stressed turfgrass and/or drought stressed weeds
- **Except for control or suppression of the following DO NOT** apply to Bahiagrass Bermudagrass buffalograss carpetgrass creeping bentgrass St. Augustinegrass seashore paspalum zoysiagrass dichondra or desirable clover
- Direct spray drift or runoff will injure nontolerant turfgrass and ornamentals **DO NOT** apply during conditions favoring drift from the target area **DO NOT** apply within ornamental beds or to areas where runoff into those areas is likely to occur
- **DO NOT** apply to exposed feeder roots of trees or ornamentals or within the dripline of trees and other ornamental species
- **DO NOT** use clippings as mulch around flowers ornamentals trees or in vegetable gardens
- **DO NOT** apply through any type of irrigation system
- **DO NOT** use to formulate or reformulate any other pesticide product that is not registered by EPA
- **DO NOT** apply **Topramezone 2 8 SC** by air
- **DO NOT** apply an organophosphate or carbamate insecticide within 7 days of applying **Topramezone 2 8 SC** or turfgrass injury may result
- To reduce movement into sensitive species such as bentgrass avoid foot and vehicle traffic until spray has dried

### Turfgrass Tank Mixes

Read and follow the applicable restrictions and limitations and directions for use on all products involved in tank mixing The most restrictive label applies to any tank mix To control additional broadleaf weed species a tank mix with **Onetime® herbicide** 2.4 D triclopyr or other broadleaf herbicide may be used To increase control of grass weeds a tank mix with **Drive® XLR8 herbicide** or **Onetime** may be used For extended residual control apply **Topramezone 2 8 SC** with **Pendulum® 3 3 EC herbicide** **Pendulum® AquaCap™ herbicide** **PRE-M® 3 3 EC turf herbicide** **PRE-M® AquaCap™ herbicide** or **Tower® herbicide**

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The transitory whitening (bleaching) intensity of susceptible weed species from **Topramezone 2.8 SC turfgrass herbicide** can be reduced with tank mix mixtures of **Drive® XLR8 herbicide** **Onetime® herbicide** or tri-clopyr. Consult labels for turfgrass tolerance when tank mixing.

Physical incompatibility, reduced weed control or turfgrass injury may result from mixing **Topramezone 2.8 SC** with other pesticides (fungicides herbicides insecticides or miticides) additives or fertilizers. Before tank mixing a jar test is required to ensure compatibility of herbicides or other pesticides and/or additives. Refer to manufacturer's labels for specific use directions precautions and limitations before tank mixing with **Topramezone 2.8 SC**. Follow those that are most restrictive.



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**Table 1 Postemergence Weed Control\* in Turfgrass**

Weed Species	Broadcast Application Rate	Additive Rate
<b>Annual Grass Weeds Controlled</b>		
Barnyardgrass Crabgrass large Crabgrass smooth Crabgrass southern Cupgrass woolly Foxtail giant Foxtail green Foxtail yellow Goosegrass Johnsongrass seedling Millet wild proso Panicum fall Shattercane Signalgrass broadleaf Stiltgrass Japanese	1.0 to 1.5** fl ozs/A or 0.023 to 0.034 fl oz/1000 sq ft (0.7 to 1.0 ml)	COC or MSO 0.5 to 1% volume/volume (v/v) (2 to 4 qts/100 gallons of spray)
<b>Perennial Grass Weeds Controlled/Suppressed</b>		
Bentgrass creeping <sup>2</sup> Bermudagrass common <sup>2</sup> Dallisgrass Nimblewill	<p style="text-align: center;"><b>Option A</b></p> 3 applications at 1.0 to 1.33 fl ozs/A or 0.023 to 0.030 fl oz/1000 sq ft (0.7 to 0.9 ml) applied on a 3 to 4 week spray interval  Initiate first application mid-to late summer or approximately 9 weeks to 12 weeks prior to fall reseeding period for cool season grasses. Reseeding will aid in the percent conversion of ground cover back to the desired cool-season grass species  <p style="text-align: center;"><b>Option B</b></p> 2 applications at 1.5** fl ozs/A or 0.034 fl oz/1000 sq ft (1.0 ml) applied on a 3 to 4 week spray interval  Initiate first application late summer or approximately 6 weeks to 8 weeks prior to fall reseeding period for cool-season grasses	COC or MSO 0.5 to 1% v/v (2 to 4 qts/100 gallons of spray)

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**Table 1 Postemergence Weed Control\* in Turfgrass** (continued)

Weed Species	Broadcast Application Rate	Additive Rate
<b>Broadleaf Weeds Controlled<sup>1</sup></b>		
Amaranth Palmer Amaranth Powell Burcucumber Carpetweed Chickweed common Clover large hop Clover white Cocklebur common Dandelion common Galinsoga hairy Ground ivy Horseweed (Marestail) Jimsonweed Kochia Lambsquarters common Mallow common Mallow Venice Morningglory spp Mustard spp Nightshade black Nightshade Eastern black Nightshade hairy Oxalis (Yellow wood sorrel) Pigweed prostrate Pigweed redroot Pigweed smooth Pigweed tumble Prickly lettuce Ragweed common Ragweed giant Shepherd's purse Sida prickly Smartweed ladythumb Smartweed Pennsylvania Speedwell ( <i>Veronica</i> spp) Sunflower wild (common) Thistle Canada Thistle Russian Velvetleaf Waterhemp	1.0 to 1.5** fl ozs/A or 0.023 to 0.034 fl oz/1000 sq ft (0.7 to 1.0 ml)	COC or MSO 0.5 to 1% v/v (2 to 4 qts/100 gallons of spray)

\* Under certain conditions a single application of **Topramezone 2.8 SC turfgrass herbicide** may not provide complete control. A sequential application of an additional 1.0 to 1.5 fl ozs/A of **Topramezone 2.8 SC** 2 to 3 weeks after initial treatment may be necessary.

\*\*Use rate may be increased up to 2.0 fl ozs/A (0.046 fl oz/1000 sq ft) in Kentucky bluegrass only.

<sup>1</sup>To improve control of annual grass weeds, make applications before the fourth tiller growth stage. Use the 1.0 fl oz/A rate for annual grass weeds up to the second tiller growth stage. For annual grass weeds in the 2 to 4 tiller stage, apply 1.5 fl ozs/A.

<sup>2</sup>Control of these species requires a tank mix with triclopyr ester at 32 fl ozs/A (1 lb ae/A).

<sup>3</sup>To improve control of broadleaf weeds, make applications at early growth stages. To increase broadleaf weed species control spectrum, a tank mix with **Onetime® herbicide**, 2,4-D, triclopyr, or other broadleaf herbicide may be used.

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## Special Use Directions for Residential Turfgrass and Athletic Fields

**Topramezone 2.8 SC turfgrass herbicide** may be used in residential turfgrass areas and athletic fields on Kentucky bluegrass centipedegrass fine fescue tall fescue and perennial ryegrass to control weeds listed in **Table 1**. However applications **must be** limited to **spot applications** according to the following instructions:

Apply 0.023 to 0.034 fl oz (0.7 to 1.0 ml) **Topramezone 2.8 SC**/1000 sq ft of treated area as follows in **Table 2** for spot spray mixture amounts:

**Table 2 Spot Spraying with Topramezone 2.8 SC at 1 gallon/1000 sq ft Spray Volume**

Spray Mix Volume	Topramezone 2.8 SC in Mix				COC or MSO in Mix	Area Covered
	0.023 fl oz per 1000 sq ft <sup>1</sup>	0.030 fl oz per 1000 sq ft <sup>2</sup>	0.034 fl oz per 1000 sq ft <sup>3</sup>	0.046 fl oz per 1000 sq ft <sup>4</sup>		
(gallons)	(ml)	(ml)	(ml)	(ml)	(ml)	(sq ft)
1	0.7	0.9	1.0	1.4	30 (2 Tbls*)	1000
2	1.4	1.8	2.0	2.8	60 (4 Tbls*)	2000
3	2.1	2.7	3.0	4.2	90 (6 Tbls*)	3000
4	2.8	3.6	4.0	5.6	120 (8 Tbls*)	4000

<sup>1</sup> Equivalent to 1.0 fl oz of product per acre

<sup>2</sup> Equivalent to 1.33 fl oz of product per acre

<sup>3</sup> Equivalent to 1.5 fl oz of product per acre

<sup>4</sup> Equivalent to 2.0 fl oz of product per acre for use in Kentucky bluegrass only

\*Tbls = Tablespoons

### Mixing Instructions for Backpack and Pump-up Type Sprayers

Begin with a clean spray tank. Fill the spray tank 1/2 full with clean water. Add the required amount of **Topramezone 2.8 SC**. Because a small amount of **Topramezone 2.8 SC** is required for spot applications, use the following directions to ensure proper mixing. Measure **Topramezone 2.8 SC** required for specific spray volume according to **Table 2**. **DO NOT** add directly to the spray tank. Pre-mix in a small sealable container (e.g. 8 to 16 fl oz) filled 1/2 to 3/4 with water. Add contents to the spray tank. Cap sprayer and agitate to ensure mixing. Uncap sprayer and add appropriate amount of COC or MSO. Cap sprayer and agitate again. Uncap sprayer and finish filling tank to desired level. During application, periodically agitate the mixture to ensure mixing. If the mixture is allowed to settle for any period of time, thorough agitation is essential before spraying is resumed.

Apply spray mixture directly on sporadically occurring susceptible turfgrass weeds (see **Table 1**). For best results, apply on a spray-to-wet basis. Follow-up applications may be made if necessary (see **Table 1**). Use a spray colorant or indicator in the spray tank for more efficient spot applications.

**DO NOT** apply more than 4.0 fl oz **Topramezone 2.8 SC** (0.089 lb ai) per acre (0.092 fl oz per 1000 sq ft) per year.

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**Conditions of Sale and Warranty**

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