

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

September 12, 2018

Jeffrey H. Birk Regulatory Manager BASF 26 Davis Drive Research Triangle Park, NC 27709

Subject: Notification per PRN 98-10 – Adding minor state related clarification statement Product Name: Pylex herbicide EPA Registration Number: 7969-327 Application Date: January 31, 2018 Decision Number: 543931

Dear Mr. Birk:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you have any questions, you may contact Julia Kerr at 703.347.0386 or via email at kerr.julia@epa.gov.

Sincerely,

dytryn

Kathryn Montague, Product Manager 23 Herbicide Branch Registration Division (7505P) Office of Pesticide Programs

#### NOTIFICATION

7969-327

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

09/12/2018



## 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-isoxazolyl)-2-methyl-4-(methylsulfonyl)	
phenyl](5-hydroxy-1-methyl-1 <i>H</i> -pyrazol-4-yl)methanone	29.7%
Other Ingredients:	70.3%
Total:	100.0%
1 gallon contains 2.8 lbs of topramezone free acid.	

EPA Reg. No. 7969-327

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, Conditions of Sale and Warranty, and state-specific crop and/or use site restrictions.

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

**Net Contents:** 

BASF Corporation 26 Davis Drive Research Triangle Park, NC 27709





FIRST AID		
lf on skin	<ul> <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>	
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 to an unconscious person.</li> </ul>	
If in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes; then continue rinsing.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
HOTLINE NUMBER		
Have the product container or lobel with you when calling a paican control conter or dector or acing for treatment		

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).

## **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)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, natural rubber (includes natural rubber blends and laminates)  $\geq$  14 mils, polyethylene, polyvinyl chloride (PVC)  $\geq$  14 mils, or viton  $\geq$  14 mils
- 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**

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 washwater 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 backsiphoning 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. This labeling must be in the possession of the user at time of herbicide application.

**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.

Observe all precautions, restrictions, and limitations in this label and the labels of products used in combination with **Pylex™ herbicide**. The use of **Pylex** not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

Unless otherwise directed in supplemental labeling, all applicable directions, restrictions, precautions, and **Conditions of Sale and Warranty** are to be followed.

## 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 such as barrier laminate, butyl rubber  $\ge 14$  mils, nitrile rubber  $\ge 14$  mils, neoprene rubber  $\ge 14$  mils, natural rubber (includes natural rubber blends and laminates)  $\ge 14$  mils, polyethylene, polyvinyl chloride (PVC)  $\ge 14$  mils, or viton  $\ge 14$  mils

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.

## 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  $\leq$  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 spill of this product, call:

<ul> <li>CHEMTREC</li> </ul>	1-800-424-9300
<ul> <li>BASF Corporation</li> </ul>	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 take if 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**

**Pylex™ herbicide** may be applied as a postemergence broadcast or spot spray to residential 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

**Pylex** is a broad-spectrum systemic postemergence herbicide for control or suppression of broadleaf and grass weeds in select turfgrass species:

- Bentgrass, creeping\*
- Bermudagrass\*\*
- Bluegrass, Kentucky
- Centipedegrass
- Fescue, fine
- Fescue, tall
- Paspalum, seashore\*\*
- Ryegrass, perennial
- \* Creeping bentgrass is marginally tolerant to **Pylex** at a rate of 0.25 fl oz/A. Test on a small area before large-scale use.
- \*\* Bermudagrass and seashore paspalum are marginally tolerant and some turf injury can be expected. See **Special Weed Control** section.
- <sup>†</sup>Not for use in California.

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

#### **Mode of Action**

**Pylex** is absorbed by leaves, roots, and shoots and is translocated to the growing points of susceptible weeds. **Pylex** 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 growthstage use directions
- 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 **Pylex** to actively growing weeds as a postemergence broadcast or spot spray in labeled turfgrass 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 **Pylex** 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.

**Creeping Bentgrass.** Creeping bentgrass is marginally tolerant to **Pylex** at a rate of 0.25 fl oz/A. Test on a small area before large-scale use. Environmental and growing conditions may affect bentgrass tolerance. Weed control will be reduced as a result of a lower use rate for labeled weeds.

## **Spot Applications**

Postemergence spot applications of **Pylex<sup>™</sup> herbicide** 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 **Pylex** per 1000 square feet of treated area. Spray coverage should be uniform and complete. See **Table 1** for spot spray mix amounts.

## **Mowing Information**

To maximize weed control and minimize potential turfgrass injury, **DO NOT** mow 2 days before through 2 days after applying **Pylex**.

## **Irrigation and Rainfall**

If soil moisture is not sufficient before **Pylex** 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, **Pylex** may be tank mixed with herbicides including **Pendulum<sup>®</sup> 3.3 EC herbicide**, **Pendulum<sup>®</sup> AquaCap™ herbicide**, or **Tower<sup>®</sup> 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/ Sodding/Sprigging

**Pylex** can be used for weed control during the establishment of tolerant turfgrass species; see **Product Information** section. Creeping bentgrass may show bleaching symptoms and growth suppression with higher **Pylex** application rates.

**Pylex Use During Tolerant Turfgrass Establishment.** When establishing new turfgrass from seed, **Pylex** can be applied anytime before or after seeding with the exception of a 28-day period after seeding. **DO NOT** apply **Pylex** for a period of 28 days after seeding tolerant turfgrass.

Days After Seeding		
Apply	DO NOT Apply	Apply
Da	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. **Pylex** 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 **Pylex** 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.

#### **Tank Mixing Information**

Read and follow the applicable restrictions and limitations and directions for use on all products involved in tank mixing. Always follow the most restrictive label use directions.

Physical incompatibility, reduced weed control, or turfgrass injury may result from mixing **Pylex** 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, restrictions, and limitations before tank mixing with **Pylex**. Follow those that are most restrictive.

## **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.
- Products in PVA bags Cut an opening in the watersoluble PVA bag just large enough to use a teaspoon for measuring purposes. Use the opened water-soluble PVA bag first when preparing spray solution. Boroncontaining 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 **Pylex**, 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 **Pylex™ herbicide** before dispensing from container. For containers 5 gallons or less, shake well before use. For containers greater than 5 gallons, recirculate before use.

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 **Pylex**, or suspo-emulsions)
- 5. Water-soluble products
- 6. Emulsifiable concentrates (including COC or MSO)
- Water-soluble additives (including chelated iron or soluble nitrogen fertilizer when applicable; not all chelated iron or sprayable nitrogen fertilizers are compatible with Pylex) 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.

## Spot Spray

Apply 0.023 to 0.034 fl oz (0.7 to 1.0 mL) **Pylex**/1000 sq ft of treated area as follows in **Table 1** for spot spray mixture amounts.

Spray Mix	Pylex in Mix			COC or MSO	Area	
Volume	0.023 fl oz per 1000 sq ft¹	0.030 fl oz per 1000 sq ft²	0.034 fl oz per 1000 sq ft³	0.046 fl oz per 1000 sq ft⁴	in Mix	Covered
(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 ozs of product per acre

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

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

\*Tbls = Tablespoons

## **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**

### **Broadcast Spray**

Apply 1.0 to 1.5 fl ozs/A 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. 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 **Pvlex™ herbicide**. Because a small amount of **Pvlex** is required for spot applications, use the following directions to ensure proper mixing. Measure Pylex required for specific spray volume according to Table 1. DO NOT add directly to the spray tank. Pre-mix in a small, sealable container (e.g. 8 to 16 fl ozs) 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 2**). For best results, apply on a spray-to-wet basis. Follow-up applications may be made if necessary (see **Table 2**). Use a spray colorant or indicator in the spray tank for more efficient spot applications.

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

#### 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.

#### **Turfgrass Tank Mixes**

Read and follow the applicable restrictions and limitations and directions for use on all products involved in tank mixing. Always follow the most restrictive label use directions. To control additional broadleaf weed species, a tank mix with 2,4-D; triclopyr; or other broadleaf herbicide may be used. To increase control of grass weeds, a tank mix with **Drive® XLR8 herbicide** may be used. For extended residual control, apply **Pylex** with **Pendulum® 3.3 EC herbicide**, **Pendulum® AquaCap™ herbicide**, or **Tower® herbicide**.

The transitory whitening (bleaching) intensity of susceptible weed species from **Pylex** can be reduced with tank mix

mixtures of **Drive XLR8** or triclopyr. Consult labels for turfgrass tolerance when tank mixing.

Physical incompatibility, reduced weed control, or turfgrass injury may result from mixing **Pylex** 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, restrictions, and limitations before tank mixing with **Pylex**. Follow those that are most restrictive.

#### **Restrictions and Limitations**

- **DO NOT** apply more than 2.0 fl ozs of **Pylex** per acre (0.046 fl oz per 1000 sq ft) per application.
- **DO NOT** apply more than 4.0 fl ozs **Pylex** (0.089 lb ai) per acre (0.092 fl oz per 1000 sq ft) per year.
- **DO NOT** apply more than three times per season.
- **DO NOT** apply to golf course collars or greens.
- Maintain a 5-ft buffer between treated areas and bentgrass greens.
- **DO NOT** make applications of **Pylex** to drought-stressed turfgrass and/or drought-stressed weeds.
- Except for control or suppression of the following, DO NOT apply to Bahiagrass, buffalograss, carpetgrass, St. Augustinegrass, zoysiagrass, dichondra, or desirable clover.
- **DO NOT** apply more than 0.25 fl oz/A per application to creeping bentgrass. Sequential applications may be required to achieve desired level of weed control.
- 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 Pylex by air.
- **DO NOT** apply an organophosphate or carbamate insecticide within 7 days of applying **Pylex** or turfgrass injury may result.
- To reduce movement into sensitive species such as bentgrass, avoid foot and vehicle traffic until spray has dried.

#### Table 2. Postemergence Weed Control\* in Turfgrass

Weed Species	Application Rate	Additive Rate	
Annual Grass Weeds Controll	ed <sup>1</sup>	1	
Barnyardgrass Crabgrass, large <sup>4</sup> Crabgrass, smooth <sup>4</sup> Crabgrass, southern***. <sup>4</sup> Cupgrass, woolly*** Foxtail, giant Foxtail, green Foxtail, yellow*** Goosegrass Johnsongrass, seedling*** Millet, wild proso*** Panicum, fall*** Paspalum, slender*** Shattercane*** Signalgrass, broadleaf*** Stiltgrass, Japanese*** Velvetgrass, common***	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)	
Perennial Grass Weeds Contr	olled/Suppressed		
Bermudagrass, common <sup>2,4</sup> Dallisgrass <sup>***,4</sup> Nimblewill <sup>***</sup> Zoysiagrass <sup>***,4</sup>	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 before 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.	COC or MSO 0.5 to 1% v/v (2 to 4 qts/100 gallons of spray)	

(continued)

Table 2. Postemergence Weed Contro	ol* in Turfgrass (continued)
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Weed Species	Application Rate	Additive Rate
Broadleaf Weeds Controlled <sup>3</sup>		
Amaranth, Palmer*** 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.*** Nightshade, black*** Nightshade, black*** Nightshade, black*** Nightshade, hairy*** Oxalis (Yellow wood sorrel)*** Pigweed, redroot Pigweed, smooth*** Pigweed, tumble*** Prickly lettuce*** Ragweed, common*** Ragweed, giant*** Shepherd's-purse*** Sida, prickly*** Smartweed, ladysthumb*** Smartweed, Pennsylvania*** Speedwell ( <i>Veronica</i> spp.)*** Sunflower, wild (common)*** Thistle, Canada*** Thistle, Russian***	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 **Pylex™ herbicide** may not provide complete control. A sequential application of an additional 1.0 to 1.5 fl ozs/A of **Pylex** 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.

\*\*\* Not for use in California

<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 2,4-D; triclopyr; or other broadleaf herbicide may be used.

<sup>4</sup>See **Special Weed Control** section

#### **Special Weed Control**

Control of goosegrass in Bermudagrass and seashore paspalum (Not for use on seashore paspalum in California): Apply a single application of Pylex<sup>™</sup> herbicide at 0.5 fl oz/A to 0.75 fl oz/A with MSO to actively growing goosegrass. Bleaching/discoloration can be expected to the desired turfgrass for 2 to 4 weeks. Apply as a spot spray or area spray to goosegrass infested areas at any growth stage. Large broadcast sprays may be objectionable due to significant bleaching for a prolonged period of time. A sequential application in Bermudagrass and seashore paspalum may result in significant turfgrass damage.

Selective control of Bermudagrass in cool-season turfgrass: Pylex can be used in combination with triclopyr ester (1 lb ai/A) to improve Bermudagrass control over Pylex applied alone. Make three applications of Pylex at 1.3 fl ozs/A with MSO and triclopyr at three week intervals or make two applications of Pylex at 1.5 fl ozs/A with MSO and triclopyr followed three weeks later by Pylex at 1 fl oz/A with MSO and triclopyr. Begin applications in late summer when Bermudagrass is approximately 9 to 12 weeks from first killing frost. DO NOT apply more than 4 fl ozs Pylex per acre per year. Delay seeding of desirable turfgrass species for 3 weeks after last application. The combination outlined above may require multiple years of applications to completely control Bermudagrass in coolseason turfgrass.

Non-selective control of Bermudagrass: Pylex can be used in combination with glyphosate to improve Bermudagrass control over glyphosate applied alone. Apply **Pylex** at 2 fl ozs/A with MSO in a tank mix with glyphosate (use labeled rate for Bermudagrass) to control Bermudagrass. If necessary, a second application may be made to control remaining Bermudagrass. **DO NOT** apply more than 4 fl ozs **Pylex** per acre per year. Seeding of cool-season species (fescues, ryegrass, Kentucky bluegrass) can be performed immediately after application. Delay seeding bentgrass for 2 weeks. Warm season species (Bermudagrass and seashore paspalum) can be seeded, sprigged or sodded two weeks after application.

**Control of zoysiagrass:** Make three applications of **Pylex** in late summer on a three week interval, prior to the onset of zoysiagrass dormancy.

Improved and more consistent control of crabgrass: Apply **Pylex** at 0.75 fl oz/A tank mixed with 32 fl ozs/A of **Drive® XLR8**. A sequential application may be required.

**Improved dallisgrass control:** Add 32 fl ozs/A of triclopyr ester and make two applications three weeks apart.

#### **Conditions of Sale and Warranty**

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