

100-729

11/27/2009

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

NOV 27 2009

Ms. Pat Dinnen
Label Group Leader, Regulatory Affairs
Syngenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300

Subject: Label Notification for Pesticide Registration Notice 2007-4
(EPA Registration Number 100-729)

Dear Ms. Dinnen,

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 dated September 4, 2009 for the product Primo[®] Liquid (EPA Registration Number 100-729). The Registration Division (RD) has conducted its review of this request for its applicability under PRN 2007-4 and finds that the label changes requested fall within the scope of PRN 2007-4. The revised label submitted with the application has been stamped "Notification" and will be placed in our records.

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

If you have any questions, please call me directly at 703-305-6249 or Steve Schaible of my staff at 703-308-9362.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda Arrington".

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

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	U.S. States Environmental Protection Agency Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other	OPP Identifier Number <hr/> Notification
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Application for Pesticide - Section I

1. Company/Product Number 100-729	2. EPA Product Manager Joanne Miller	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Primo Liquid	PM# 23	
5. Name and Address of Applicant (Include ZIP Code) Syngenta Crop Protection, Inc. P. O. Box 18300 Greensboro, NC 27419 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____	NOTIFICATION NOV 27 2009
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.	
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.	

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

Notification of label change per PR Notice 2007-4. This Notification is consistent with the guidance of PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Syngenta is amending the Storage and Disposal section of the label by Notification according to the directions stated in PR Notice 2007-4.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
*Certification must be submitted		If "Yes" Unit Packaging wgt. No. per Container	If "Yes" Unit Packaging wgt. No. per container		
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 4 oz., 1 qt., 1 gal., 10 gal., and 15 gal.		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input checked="" type="checkbox"/> Other		Pressure Sensitive	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)					
Name Pat Dinnen	Title Label Group Leader	Telephone No. (Include Area Code) 336-837-2494			
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.					6. Date Application Received (Stamped)
2. Signature <i>Pat Dinnen</i>		3. Title Regulatory Specialist			
4. Typed Name Pat Dinnen		5. Date September 4, 2009			

Certification with Respect to Label Integrity

Version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
100-729	9/4/2009	000100-00729.20090904.PRIMO-LIQ_PRN2007-4_SEP2009.pdf

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

Pat Dinnen

Signature

September 4, 2009

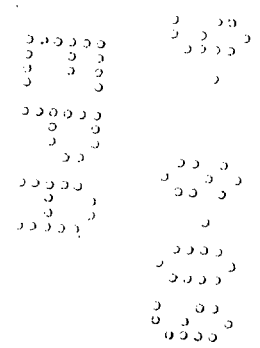
Date

Pat Dinnen

Name (typed)

Label Group Leader

Title



4/19

Syngenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419-8300
www.syngenta.com



FedEx

September 4, 2009

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202-4501

Attention: Ms. Linda Arrington

**SUBJECT: PRIMO® LIQUID
EPA REG. NO. 100-729
NOTIFICATION OF LABEL CHANGE PER PR NOTICE 2007-4**

Syngenta Crop Protection, Inc. is submitting Notification for Primo Liquid Reg. No. 100-729. Syngenta is amending the Storage and Disposal section of the label by Notification according to the directions stated in PR Notice 2007-4.

Attached are:

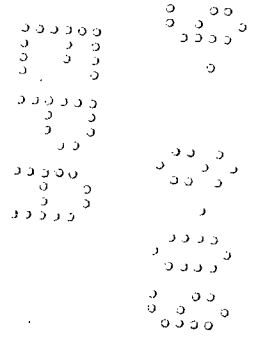
- One copy of the label with the changes clearly marked
- One unmarked copy of the label
- A CD of the unmarked copy of the label for "Electronic Comparison and Review"
- Certificate with Respect to Label Integrity Form
- Completed EPA Form 8570-1

Thank you in advance for approving this Notification. If you have any questions, please contact me at 336-632-2494.

Sincerely,

Pat Dinnen
Label Group Leader
Regulatory Affairs

Enclosures



FIRST AID	
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Do not give any liquid to the person. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for treatment advice
Contains petroleum distillate - vomiting may cause aspiration pneumonia.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBER For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call 1-800-888-8372	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING/AVISO

Causes eye irritation. Do not get in eyes. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with skin or clothing. Avoid breathing vapor or spray mist.

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 G on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or viton
- Shoes plus socks
- Protective eyewear

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/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements

When handlers use closed systems or enclosed cabs 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.

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.

Environmental Hazards

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water. Do not apply when weather conditions favor drift from treated areas.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, Inc. or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

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

In no event shall SYNGENTA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Primo Liquid must be used only in accordance with the directions of use on this label or in supplemental labeling accepted by the U.S. Environmental Protection Agency.

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 treated areas without footwear until sprays have dried. The restricted entry interval (REI) is 0 days.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard 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 treated areas without footwear until sprays have dried.

Observe all precautions and limitations on this label and on the labels of each product used in tank mixture with this product.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN UNEVEN GROWTH REDUCTION OR SEVERELY STUNTED TURF.

STORAGE AND DISPOSAL

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

Pesticide Storage

Do not store below 0°F. If crystals do form, store above 70°F, shaking periodically until crystals are dissolved.

Pesticide Disposal

Pesticide wastes are toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, they must be disposed of according to federal, state, or local procedures. Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Container Disposal: Handling [less than 5 gallons]

Plastic Containers: ~~Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying; Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use and 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, by incineration, or, if alternatives allowed by State and local authorities, by burning. If burned, stay out of smoke.~~

FOR BULK AND MINIBULK CONTAINERS:

Container Disposal and Precautions Handling [greater than 5 gallons]

~~Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.~~ When this container is empty,

~~replace the cap or cover and seal all openings that have been opened during use and return the container to the point of purchase or to a designated location named at time of purchase of this product. The container must only be refilled with this pesticide product. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Prior to refilling, inspect carefully for damage, such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking, or obsolete, contact Syngenta Crop Protection, Inc. at 1-800-888-8372. If not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with state and local regulations.~~

CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER.

GENERAL INFORMATION

Primo Liquid for turf growth management reduces the frequency of mowing and the amount of grass clippings by reducing the growth of warm- and cool-season turfgrasses. Other benefits, such as increased turf density, increased color, and increased turf quality, are frequently observed after Primo Liquid applications.

Primo Liquid can be applied to well-maintained, quality turfgrass areas, such as residential and commercial lawns, golf courses, sod farms, sports fields, cemeteries, and similar areas. Primo Liquid is useful in the management of difficult-to-mow areas and can be used to minimize the need for edging turfgrass along sidewalks, curbs, parking lots, driveways, flower beds, fences and around posts, storage sheds, and trees.

Primo Liquid reaches the growing point by foliar uptake and is rainfast from rainfall or irrigation after one hour. Watering-in is not necessary for activation.

NOTICE TO USER: Plant tolerances to Primo Liquid have been found to be acceptable for the grasses listed on this label. Due to the large number of species and cultivars of grasses, it is impossible to test every one for tolerance to Primo Liquid. Neither the manufacturer nor the seller has determined whether or not Primo Liquid can be used safely on grasses not specified on this label. The professional user should determine if Primo Liquid can be used safely prior to commercial use. Before using Primo Liquid for grasses not listed in the application table, test Primo Liquid on a small scale first. Apply the lower recommended rate for the turf setting (lawn, fairway, etc.) and evaluate for phytotoxicity and growth inhibition prior to widespread use.

APPLICATION INFORMATION

Environmental conditions, management, and cultural practices that affect turf growth and vigor will influence the response of the turf to Primo Liquid applications. Fertility level, moisture availability, plant vigor, height, and frequency of mowing, etc. have been shown to influence the activity of Primo Liquid.

The rates presented in the Application Rate Table provide approximately 50% growth inhibition over a 4-week period with little or no discoloration of turf growing under favorable conditions.

Excessive turf growth, which may occur under high fertilization program or during spring flushes, may require higher rates of Primo Liquid. Under these conditions, Primo Liquid rates may have to be increased up to 50% to provide an adequate length of control.

For extended growth suppression up to 8 weeks, where temporary discoloration can be tolerated, a maximum of twice the recommended Primo Liquid rate from the Application Rate Table may be applied.

Primo Liquid use rates may need to be reduced up to 50% for turfgrass grown under conditions of low fertility, compaction, or other factors which stress the turf.

Multiple applications can be made each growing season, but do not exceed a total of 7.0 fl. oz./1,000 sq. ft. (305 fl. oz./A; 21.4 pts./A) per year.

Mowing

Generally, Primo Liquid provides more suppression when turfgrasses are mowed at lower mowing heights than higher mowing heights. Application rates have been selected for typical mowing heights. The application rate may need to be adjusted depending on actual mowing conditions. It is suggested that Primo Liquid not be applied less than 4 hours before or 4 hours after mowing to minimize any potential injury.

Application Timing

Apply Primo Liquid to actively growing turf. Reduce Primo Liquid rates on turf going into dormancy due to high or low temperatures or lack of moisture.

Repeat applications of Primo Liquid may be made as soon as the turf resumes growth or more suppression is desired.

Equipment

Apply Primo Liquid with a sprayer capable of accurate and uniform applications. Clean spray equipment thoroughly before use. Primo Liquid may be applied in backpack sprayers, hand sprayers, boom sprayers, and by spraygun application devices. Rinse sprayer with clean water after use and dispose of rinsate in an approved manner.

Mixing Instructions

Primo Liquid should be applied in sufficient carrier (e.g., 0.50-4.0 gals. of water per 1,000 sq. ft.) to provide uniform and thorough coverage.

Prepare no more mixture than is necessary for the immediate operation. Agitate thoroughly before and during application. Primo Liquid may be tank-mixed with many commonly used pesticides and liquid fertilizers.

If using Primo Liquid in a tank mixture, observe all directions for use, sites, use rate dilution ratios, precautions, and limitations which appear on the tank-mix product label. No label dosage rate should be exceeded and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product which prohibits such mixing.

Backpack and Hand Sprayers (0.50-4.0 gals. capacity)

Primo Liquid Alone: Add $1/2$ - $2/3$ of the required water to the mix tank. Add the appropriate amount of Primo Liquid, close, and vigorously shake the unit before application.

Boom and Hand Gun Sprayers

Primo Liquid Alone: Add $1/2$ - $2/3$ of the required amount of water to the spray tank. Then, while agitating, add Primo Liquid. Continue agitation while adding the remainder of the water. Maintain agitation until all of the mixture has been applied.

Primo Liquid + Tank Mixtures

If Primo Liquid is tank-mixed with other products, use the following sequence:

1. Always check the compatibility of the tank mix, using a jar test with proportionate amounts of Primo Liquid, other chemicals to be used, and water, before mixing in the spray tank.
2. Provide sufficient agitation during filling and application to keep the tank mix uniformly suspended.
3. Fill tank at least $1/2$ full with clean water.
4. Add gel formulations to the spray tank first. Allow the packet to completely dissolve and the product to completely disperse into the mix water.

5. Next, add wettable powders to the tank, allowing them to completely suspend in the tank before proceeding. This process can be hastened by premixing the product in water before adding to the tank.
6. Add flowables or suspensions next.
7. Add Primo Liquid and other emulsifiable concentrates last.
8. Do not leave tank-mix combinations in the spray tank for prolonged periods without agitation. Mix and apply them the same day.
9. Primo Liquid should not be mixed with any product which prohibits such mixing. No label application rate should be exceeded and the most restrictive label precautions and limitations should be followed. Refer to the tank-mix product label(s) for further information.

Dyes

A water-soluble dye to mark the sprayed area can be used to ensure uniform application, and to avoid skips and overlaps. Refer to the instructions which accompany the dye for proper concentrations and mixing procedures.

Application Near and Around Monuments and Hardscape Materials

Primo Liquid, at normal dilution rates, will not stain brass, bronze, concrete, marble, granite, or other types of stone. Before using Primo Liquid around other types of stone, test on a small scale basis first.

POA ANNUA CONVERSION/RENOVATION

Primo Liquid can be applied to existing turf infested with stands of *Poa annua* as part of an overseeding/renovation program. Such an application allows better germination and seedling growth of more desirable turf. Primo Liquid, in conjunction with the use of appropriate cultural practices that help to ensure the vigor and growth of new seedlings, will also result in fewer clippings and thus, less maintenance traffic on new seedlings. Since Primo Liquid is foliarly absorbed, seed germination is not affected. Apply Primo Liquid 1-5 days before seeding; and before verticutting, scalping, spiking, or other similar operations.

Temporary initial discoloration is possible with aggressive application rates of Primo Liquid to turf with *Poa annua*. Primo Liquid applications the following spring should use the upper end rate for the turf type and setting listed in the Application Rate Table. Actual conversion success will also depend on growing conditions, fertilization, rainfall, and other agronomic and environmental conditions.

BERMUDAGRASS OVERSEEDING

An application of Primo Liquid to bermudagrass will enhance the establishment of cool-season turfgrasses. Primo Liquid, in conjunction with the use of cultural practices that help ensure new seedling vigor and growth, will also result in fewer clippings and less maintenance traffic on new seedlings. Primo Liquid is foliarly absorbed, so germination and seedling growth is not affected.

Apply Primo Liquid before verticutting, scalping, spiking, or other similar operations to the bermudagrass. Apply Primo Liquid 1-5 days before seeding.

Temporary initial discoloration is possible with aggressive application rates of Primo Liquid. Use normal seeding rates for your area and turf setting (lawn, fairway, etc.). Actual overseeding success will also depend on growing conditions, fertilization, rainfall, and other agronomic and environmental conditions. For maintenance application, see the Application Rate Table.

APPLICATION WITH TURF MARKING PAINT

Primo Liquid can extend the duration of marking visibility when applied before or with marking agents. Mix Primo Liquid with water first when combining with latex-based marking agents. Refer to the marking agents product label for further instructions.

Apply Primo Liquid at 1 oz./gal. of marking paint mix to treat approximately 1,000 sq. ft. of line surface area. Refer to the **Primo Liquid + Tank Mixtures** section of this label for additional instructions.

Notes: (1) Do not apply to bare ground since Primo Liquid is foliarly absorbed. (2) Areas treated with Primo Liquid should continue to receive regular maintenance practices, including irrigation; fertilization; and weed, disease, and insect control when necessary, and as recommended for quality turf. Since some herbicides can injure turf, tank mixes with Primo Liquid should be tested on a small scale before widespread use. (3) Primo Liquid may cause temporary yellowing. This usually disappears about one week after application. To minimize yellowing and to enhance the green color of turf, apply readily available nitrogen at 0.20-0.50 lb. of actual nitrogen per 1,000 sq. ft. If desirable, a recommended rate of an iron source can also be used. (4) Full growth regulation by Primo Liquid begins at about 3-5 days after application.

Table 1. Recommended Primo Liquid Application Rates^{1,2}

Turf Type	Residential and Commercial Turf ³		Golf Course Fairways (Cut at 0.50 inch or less)		Golf Course Greens		Edging/Banding ⁴	
	fl. oz./ 1,000 sq. ft.	fl. oz./A	fl. oz./ 1,000 sq. ft.	fl. oz./A	fl. oz./ 1,000 sq. ft.	fl. oz./A	fl. oz./ 1,000 sq. ft.	fl. oz./A
Cool-Season								
Bentgrass	0.75	33	0.25	11	0.125	6	1.0	44
Fescue, Red	0.75	33					1.0	44
Fescue, Tall (Ky-31)	1.0	44					1.0	44
Fescue, Tall (Turf Types)	0.75	33					1.0	44
Kentucky Bluegrass	0.60	26	0.25	11			0.75	33
Mixture (Bentgrass/ <i>Poa annua</i>)			0.25 ⁵	11	0.15 ⁵	7		
Mixture (K. Bluegrass/ Fescue/Ryegrass)	0.75	33						
Mixture (K. Bluegrass/ Ryegrass/ <i>Poa annua</i>)			0.50 ⁵	22				
Ryegrass, Annual	1.0	44					1.0	44
Ryegrass, Perennial	1.0	44	0.50	22			1.0	44
Warm-Season								
Bahiagrass	1.0	44					1-2	44-88
Bermudagrass⁶								
Bermudagrass, Common	0.75	33	0.25	11			1-2	44-88
Bermudagrass, Other Hybrids	0.25	11	0.20	9			0.50-0.75	22-33

/Continued ...

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Table 1. Recommended Primo Liquid Application Rates^{1,2}

Turf Type	Residential and Commercial Turf ³		Golf Course Fairways (Cut at 0.50 inch or less)		Golf Course Greens		Edging/Banding ⁴	
	fl. oz./ 1,000 sq. ft.	fl. oz./A	fl. oz./ 1,000 sq. ft.	fl. oz./A	fl. oz./ 1,000 sq. ft.	fl. oz./A	fl. oz./ 1,000 sq. ft.	fl. oz./A
Cool-Season								
Bentgrass	0.75	33	0.25	11	0.125	6	1.0	44
Fescue, Red	0.75	33					1.0	44
Fescue, Tall (Ky-31)	1.0	44					1.0	44
Fescue, Tall (Turf Types)	0.75	33					1.0	44
Kentucky Bluegrass	0.60	26	0.25	11			0.75	33
Mixture (Bentgrass/ <i>Poa annua</i>)			0.25 ⁵	11	0.15 ⁵	7		
Mixture (K. Bluegrass/ Fescue/Ryegrass)	0.75	33						
Mixture (K. Bluegrass/ Ryegrass/ <i>Poa annua</i>)			0.50 ⁵	22				
Ryegrass, Annual	1.0	44					1.0	44
Ryegrass, Perennial	1.0	44	0.50	22			1.0	44
Warm-Season								
Bahiagrass	1.0	44					1-2	44-88
Bermudagrass⁵								
Bermudagrass, Common	0.75	33	0.25	11			1-2	44-88
Bermudagrass, Other Hybrids	0.25	11	0.20	9			0.50-0.75	22-33

/Continued ...

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Table 1. Recommended Primo Liquid Application Rates^{1,2} (Continued)

Turf Type	Residential and Commercial Turf ³		Golf Course Fairways (Cut at 0.50 inch or less)		Golf Course Greens		Edging/Banding ⁴	
	fl. oz./ 1,000 sq. ft.	fl. oz./A	fl. oz./ 1,000 sq. ft.	fl. oz./A	fl. oz./ 1,000 sq. ft.	fl. oz./A	fl. oz./ 1,000 sq. ft.	fl. oz./A
Bermudagrass, Tifdwarf	0.20	9	0.20	9	0.062	3	0.50-0.75	22-33
Bermudagrass, Tifgreen (328)	0.25	11	0.20	9	0.125	6	0.75	33
Bermudagrass, Tifway (419)	0.38	16	0.25	11			0.75	33
Buffalograss	1.0	44					1.0	44
Carpetgrass	0.25-0.4	11-18					0.50	22
Centipedegrass	0.50	22					1.0	44
Kikuyugrass	0.30-0.50	13-22	0.30	13			1.0	44
St. Augustinegrass	0.25-0.38	11-16					1-2	44-88
St. Augustinegrass, Texas Common	0.25	11					0.50	22
Zoysiagrass	0.25	11	0.125	6			0.75	33

¹These rates should provide 50% suppression of turf growth under good growing conditions for 4 weeks with minimal yellowing.

²Seedheads: At rates equal to or higher than the rates below, Primo Liquid provides seedhead suppression of hybrid bermudagrass, and partial seedhead suppression of annual bluegrass, bahiagrass, buffalograss, carpetgrass, common bermudagrass, Kentucky bluegrass, and tall fescue. Primo Liquid must be applied prior to seedhead formation.

³Including, but not limited to home lawns, parks, recreation areas, golf course roughs, cemeteries, business sites, sports fields, and sod farms.

⁴Primo Liquid can be applied along the perimeter of lawns, sidewalks, curbs, parking lots, driveways, posts, storage buildings, pet pens, fences, or other areas. Primo Liquid can be used around trees, shrubs, flower beds, and other border plants or similar areas with no injury. Apply Primo Liquid in an 8 to 12-inch band with a single nozzle sprayer. Use the higher concentration to reduce the growth of the turfgrass into adjacent areas.

⁵Where yellowing of *Poa annua* is a concern, use half this rate and apply more frequently. For *Poa annua* conversion/renovation, where temporary discoloration can be tolerated, twice this rate may be applied.

⁶Bermudagrass overseeding preparation: 0.50 oz./1,000 sq. ft.

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*Precautions: (1) Do **not** apply Primo Liquid through any type of irrigation system. (2) Do not graze areas or feed clippings to livestock.*

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Syngenta Crop Protection, Inc.

Greensboro, North Carolina 27409

www.syngenta-us.com

- (1 Quart)
- (4 Ounce)
- (15 Gallon)
- (1 Gallon Bottle)
- (1 Gallon Drain Back Jug)
- (10 Gallon Link Pak)

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