

Sale, use, and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

Not for use in the states of Hawaii or Alaska or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands).

SIMAZINE GROUP 5 HERBICIDE



# Herbicide

For weed control in certain crops

*Active Ingredient:*  
Simazine: 2-chloro-4,6-bis(ethylamino)-s-triazine . . . . . 41.9%  
*Other Ingredients:* . . . . . 58.1%  
*Total:* . . . . . 100.0%  
Princep Liquid is a suspension concentrate that contains 4 lb active ingredient per gallon.

## KEEP OUT OF REACH OF CHILDREN. CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-526  
EPA Est. 39578-TX-1SET  
EPA Est. 100-LA-001GBL  
EPA Est. 70989-MO-001OMS  
(Superscript is the first three letters of batch code on container)

SCP 526B-L57T 1222

2.5 gallons

Net Contents



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

## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals CAUTION

Harmful if absorbed through the skin. Causes moderate eye irritation. Harmful if swallowed or inhaled. Avoid breathing vapors or spray mist. Avoid contact with skin, eyes, or clothing.

### Personal Protective Equipment (PPE)

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

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, polyvinyl chloride (PVC) ≥14 mils, or Viton™ ≥14 mils
- Shoes plus socks

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

### Engineering Controls

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) (4-5)), the handler PPE requirements may be reduced or modified as specified in the WPS.

continued...

## PRECAUTIONARY STATEMENTS (continued)

### User Safety Recommendations

#### Users should:

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

### Environmental Hazards

Simazine can travel (seep or leach) through soil and can enter groundwater which may be used as drinking water. Simazine has been found in groundwater. Users are advised not to apply simazine to sand and loamy sand soils where the water table (groundwater) is close to the surface and where these soils are very permeable; i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of groundwater.

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater.

Product must not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. Product must not be applied within 66 feet of points where agricultural field (nurseries, Christmas tree plantings, and turf grasses for sod farms) surface water runoff enters perennial or intermittent streams and rivers or within 200 feet of natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 foot buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.

Product must not be mixed or loaded, or used within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 ft of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide to the mixing/loading sites.

Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

One of the following restrictions must be used in applying simazine to tile-outletted terraced fields containing standpipes:

- Do not apply within 66 feet of standpipes in tile-outletted terraced fields.
- Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2-3 inches in the entire field.

- Apply this product to the entire tile-outletted terraced field under a no-till practice only when a high crop residue management practice is practiced. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

### NON-TARGET ORGANISM ADVISORY STATEMENT

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, 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. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and, (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT PERMITTED BY APPLICABLE LAW, 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.

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.

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Simazine Watershed Information Center (SWIC) to determine whether the use of this product is prohibited in your watershed. SWIC can be accessed through [www.simazine-watershed.info](http://www.simazine-watershed.info) or 1-888-365-2874. If the SWIC indicates that use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact Syngenta Crop Protection, LLC for a refund.

### Endangered Species

It is a federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <http://www.epa.gov/espp/>, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

### 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.

**For Christmas trees, do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours. For all other crops and use patterns, do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.** Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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 made of any waterproof material
- Shoes plus socks

### 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 or allow others (including children or pets) to enter treated areas until sprays have dried.**

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR WEED CONTROL, AND/OR ILLEGAL RESIDUES.**

### USE RESTRICTIONS

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Not for use in the states of Hawaii or Alaska or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands).

Do not apply this product through any type of irrigation system.

For use on warm season turf grass **only** (e.g., Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysiagrass).

All shelterbelt and forestry uses, except "Christmas Tree Plantings", are prohibited.

This product is not for use in formulating end-use products for aquatic use.

Applications made by mechanically pressurized handguns are restricted to spot treatment only for the following uses

- Nursery/Ornamentals

## PRODUCT INFORMATION

### Aerial application is prohibited.

When tank mixing or sequentially applying simazine or products containing simazine, the total pounds of simazine applied must not exceed the specific maximum rate per calendar year as noted in the use directions.

Apply Princep Liquid herbicide before weeds emerge or after removal of weed growth. Princep Liquid controls a wide variety of annual broadleaf and grass weeds when used at selective rates in agricultural crops.

Where a range of application rates is given, use the low rate on coarse-textured soil and soil lower in organic matter; use the high rate on fine-textured soil and soil higher in organic matter.

Since Princep Liquid enters weeds mainly through their roots, moisture is needed to move it into the root zone. Very dry soil conditions following application may necessitate shallow cultivation or rotary hoeing.

Princep Liquid is nonflammable.

### WEED RESISTANCE MANAGEMENT

|          |       |   |           |
|----------|-------|---|-----------|
| SIMAZINE | GROUP | 5 | HERBICIDE |
|----------|-------|---|-----------|

Simazine, the active ingredient in this product, is a Group 5 herbicide based on the mode of action classification system of the Weed Science Society of America. Any weed population may contain plants naturally resistant to Group 5 herbicides. Such resistant weed plants may not be effectively managed using Group 5 herbicides but may be effectively managed utilizing another herbicide alone or in mixtures from a different group and/or by using cultural or mechanical practices. However, an herbicide mode of action classification by itself may not adequately address specific weeds that are resistant to specific herbicides. Consult your local company representative, state cooperative extension service, professional consultants, or other qualified authorities to determine appropriate actions for treating specific resistant weeds.

### Scout and know your field

- Know weed species present in the field to be treated through scouting and field history. An understanding of weed biology is useful in designing a resistance management strategy. Ensure the weed management program will control all weeds present.
- Fields should be scouted prior to application to determine species present and growth stage. Always apply this herbicide at the full labeled rate and correct timing for the weeds present in the field.

### Utilize non-herbicidal practices to add diversity

- Use diversified management tactics such as cover crops, mechanical weed control, harvest weed seed control, and crop rotation as appropriate.

### Use good agronomic practices, start clean and stay clean

- Use good agronomic practices that enhance crop competitiveness.
- Plant into weed-free fields utilizing tillage or an effective burndown herbicide for control of emerged weeds.
- Sanitize farm equipment to avoid spreading seed or vegetative propagules prior to leaving fields.

### Difficult to control weeds

- Fields with difficult to control weeds should be planted in rotation with crops that allow the use of herbicides with an alternative mode of action or different management practices.
- Difficult to control weeds may require sequential applications, such as a broad spectrum preemergence herbicide followed by one or more postemergence herbicide applications. Utilize herbicides containing different modes of action effective on the target weeds in sequential applications.

### Do not overuse the technology

- Do not use more than two applications of this or any other herbicide with the same mode of action in a single growing season unless mixed with an herbicide with a different mode of action which provides overlapping spectrum for the difficult to control weeds.

### Scout and inspect fields following application

- Prevent an influx of weeds into the field by controlling weeds in field borders.
- Scout fields after application to verify that the treatment was effective.
- Suspected- herbicide resistant weeds may be identified by these indicators
  - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - A spreading patch of non-controlled plants of a particular weed species; and
  - Surviving plants mixed with controlled individuals of the same species.
- Report non-performance of this product to your Syngenta retailer, Syngenta representative, or call 1-866-Syngent(a) (866-796-4368). If resistance is suspected ensure weed escapes are controlled using an herbicide with an effective mode of action and/or use non-chemical means to prevent further seed production.

### Prevent weed escapes before, during, and after harvest

- Do not allow weed escapes to produce seed or vegetative structures such as tubers or stolons which contribute to spread and survival. Consider harvest weed seed management and control weeds post-harvest to prevent seed production.

### Resistant Weeds

Contact your local Syngenta representative, retailer, crop advisor, or extension agent to determine if weeds resistant to this mode of action are present in your area. If resistant biotypes have been reported, use the full labeled rate of this product, apply at the labeled timing, and tank-mix with a different mode of action product so there are multiple effective modes of application for each suspected resistant weed.

## APPLICATION PROCEDURES

**Ground Boom Applications:** Use conventional ground sprayers equipped with nozzles that provide accurate and uniform application. Be certain that nozzles are uniformly spaced and are the same size. Calibrate sprayer before use and recalibrate at the start of each season and when changing carriers. Unless otherwise specified, use a minimum of 20 gal of spray mixture per acre.

Use a pump with capacity to: (1) maintain 35-40 psi at nozzles, (2) provide sufficient agitation in tank to keep mixture in suspension, and (3) to provide a minimum of 20% bypass at all times. Use centrifugal pumps which provide propeller shear action for dispersing and mixing this product. The pump should provide a minimum of 10 gal/minute/100 gal tank size circulated through a correctly positioned sparger tube or jets.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on the suction side of the pump should be **16-mesh or coarser**. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

For band applications, calculate amount to be applied per acre as follows:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \frac{\text{broadcast rate}}{\text{per acre}} = \frac{\text{amount needed}}{\text{per acre of field}}$$

### MANDATORY SPRAY DRIFT MANAGEMENT

#### Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572)
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.
- User must maintain a 15 foot (4.6 meter) in-field downwind buffer (in the direction in which the wind is blowing) from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments

### SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

### Controlling Droplet Size – Ground Boom

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce spray drift.

### BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

### TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

### TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

## WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

## Handheld Technology Applications

Take precautions to minimize spray drift.

## MIXING PROCEDURES

**All Uses:** (1) Be sure sprayer is clean and not contaminated with any other materials, or crop injury or sprayer clogging may result. (2) Fill tank 1/4 full with clean water, nitrogen solution, or complete fluid fertilizer. (3) Start agitation. (4) Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. (5) If any dry herbicides are being tank mixed, add them to the tank and allow them to become thoroughly suspended. (6) Then pour Princep Liquid directly from jug into tank. (7) Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action. (8) Add other liquid tank mix herbicide(s) after this product is thoroughly suspended. (9) Finish filling tank. Maintain agitation to avoid separation of materials. (10) Empty tank as completely as possible before refilling to prevent buildup of emulsifiable concentrate residue from possible tank mix herbicides. (11) If an emulsifiable concentrate film starts to build up in tank, drain it and clean with strong detergent solution or solvent. (12) Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent.

**Compatibility test:** To determine the tank mix compatibility of Princep Liquid with liquid fertilizer, crop oil, spreaders, or other recommended pesticides, use this test method. Nitrogen solutions or complete fluid fertilizers may replace all or part of the water in the spray in corn. Since liquid fertilizers can vary, even within the same analysis, check compatibility each time before use. Be especially careful when using **complete** suspension or fluid fertilizers, as serious compatibility problems are more apt to occur. Commercial application equipment may improve compatibility in some instances. Check compatibility using this procedure:

1. Add 1 pt of fertilizer to each of 2 one-qt glass jars with tight lids.
2. To **one** of the jars, add 1/4 tsp of a compatibility agent approved for this use (1/4 tsp is equivalent to 2 pt/100 gal spray). Cap and shake until mixed. Examples of compatibility agents include Compex® and Unite®.
3. To **both** jars, add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. After each addition, cap and shake until thoroughly mixed. The appropriate amount of herbicides for this test follows (assuming a spray volume of 25 gal/A):

**Dry herbicides:** For each pound per acre, add 1.5 teaspoons to each jar. Fluff up wettable powder products before measuring.

**Liquid herbicides:** For each pint per acre, add 0.5 teaspoon to each jar.

For a spray volume other than 25 gal/A, change the teaspoons added to each jar as follows:

$$\frac{25 \text{ gal} \times \text{no. teaspoons given above}}{\text{desired gal spray volume per acre}} = \text{teaspoons to add to each jar}$$

4. After adding all ingredients, put lids on and tighten. Shake jars vigorously one minute. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, grease, gels, medium to heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the 2 jars. If either mixture separates, but can be remixed readily, the mixture can probably be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following

methods of improving compatibility: (A) slurry the dry herbicide(s) in water before addition, or (B) add 1/2 of the compatibility agent to the fertilizer and the other 1/2 to the emulsifiable concentrate or flowable herbicide before addition to the mixture. If still incompatible, do not use the materials mixed in the same spray tank.

## WEEDS CONTROLLED

Princep Liquid applied as directed in this label will control or partially control the weeds listed in **Table 1**. Optimal weed control can be obtained if Princep Liquid is applied according to all label use directions.

Princep Liquid will not control emerged weeds so applications must be made to a weed-free soil surface or in tank mixture with products that provide postemergence control of weeds present at the time of application.

Dry weather following application of Princep Liquid may reduce residual weed control effectiveness.

Refer to the crop sections on this label for specific rates and use directions.

**Table 1. Annual Weeds Controlled**

| ANNUAL GRASSES            | BROADLEAF WEEDS               |                            |
|---------------------------|-------------------------------|----------------------------|
| Barnyardgrass             | Alyssum                       | Mustard, wild              |
| Bluegrass, annual         | Burclover                     | Nightshade species, annual |
| Brome, downy (cheatgrass) | Carelessweed                  | Paintbrush, Flora's        |
| Crabgrass species         | Carpetweed                    | Pepperweed                 |
| Fescue, rattail           | Chickweed, common             | Pepperweed, yellow flower  |
| Foxtail species           | Fiddleneck                    | Pigweed species            |
| Goosegrass                | Filaree                       | Pineappleweed              |
| Hairgrass, silver         | Fireweed                      | Purslane, common           |
| Junglerice                | Fivehook, bassia              | Pusley, Florida            |
| Oats, wild                | Groundsel                     | Ragweed, species           |
| Fall panicum              | Henbit                        | Redmaids                   |
| Ryegrass, annual          | Knawel (German moss)          | Shepherdspurse             |
| Signalgrass species       | Lambsquarters, common         | Smartweed species, annual  |
| Witchgrass                | Lettuce, prickly              | Spanishneedles             |
|                           | Morningglory, species, annual | Speedwell                  |
|                           | Mustard, tansy                | Thistle, Russian           |

## CROP USE DIRECTIONS

### NURSERIES AND CHRISTMAS TREE PLANTINGS

#### Nurseries (see list below)

Apply 2–3 qt Princep Liquid per acre in fall or spring. Refer to **Table 1** for a list of weeds controlled or suppressed. Refer to **Table 3** for a list of nursery species that can be treated with Princep Liquid. To avoid crop injury, do not apply for at least one year after transplanting.

#### Restrictions for use in Nurseries:

1. Do not apply more than 3 qt Princep Liquid/A (3 lb ai/A) per calendar year.
2. Do not apply more than once per calendar year.
3. Applications made by mechanically pressurized handguns are restricted to spot treatment only.

## Christmas Tree Plantings

Remove or control weed growth before Princep Liquid application. Apply 2–4 qt Princep Liquid per acre after transplanting. Use at the same rate for annual maintenance applications.

For quackgrass control, apply 4 qt/A Princep Liquid in the fall or apply a split application of 2 qt/A Princep Liquid in the fall plus 2 qt/A Princep Liquid in early spring, after quackgrass begins growth.

Refer to **Table 1** for a list of weeds controlled or suppressed. Refer to **Table 3** for Christmas tree species that can be treated with Princep Liquid.

### Restrictions for use in Christmas Trees

1. Do not apply more than 4 qt Princep Liquid/A (4 lb ai/A) per calendar year.
2. Do not apply more than twice per calendar year.
3. Applications made by mechanically pressurized handguns are restricted to spot treatment only.

### Precautions to avoid tree injury:

1. Do not use Princep Liquid on seedbeds or cuttingbeds.
2. In California, Oregon, and Washington, do not apply to Christmas trees sooner than one year after transplanting. In other areas, do not apply to Christmas trees transplants less than 2 years of age.
3. Do not use until soil is firmly settled around roots.

**Table 3. Trees and Shrubs That Can be Treated With Princep Liquid**

| CONIFERS                              |                          |
|---------------------------------------|--------------------------|
| Arborvitae                            | Red spruce               |
| Austrian pine                         | White spruce             |
| Bishop pine                           | Balsam fir               |
| Knobcone pine                         | Douglas fir              |
| Lodgepole pine (shore pine)           | Fraser fir               |
| Monterey pine                         | White fir                |
| Mugho pine                            | Hemlock                  |
| Red pine (Norway pine)                | Juniper                  |
| Scotch pine                           | Red cedar                |
| White pine                            | White cedar              |
| Blue spruce                           | Yew ( <i>Taxus</i> spp.) |
| Norway spruce                         |                          |
| DECIDUOUS TREES AND WOODY ORNAMENTALS |                          |
| American elm                          | Oregon grape             |
| Siberian elm                          | ( <i>Mahonia</i> spp.)   |
| Barberry                              | <i>Pieris</i> spp.       |
| Boxelder                              | Red oak                  |
| Bush honeysuckle                      | Russian olive            |
| Caragana                              | Oleander                 |
| Cotoneaster                           | Palm                     |
| Dogwood                               | Bottle brush             |
| Eucalyptus                            | Carob                    |
| Holly ( <i>Ilex</i> spp.)             |                          |
| Honey locust                          |                          |

**Pennant Magnum® Tank Mix:** Princep Liquid may be tank mixed with Pennant Magnum Herbicide to control weeds in containerized, field, and liner\* grown ornamentals. See the Pennant Magnum label for ornamental species, weeds controlled with this tank mixture, and for other information.

\*Plants transplanted normally in rows in a nursery or similar area for further growth prior to transplanting to final growing place.

**Princep Liquid Plus Surflan® or other solo oryzalin brands on Christmas Trees:** Use this tank mix for additional preemergence control of weeds listed on the Surflan label or other solo oryzalin brand labels that are registered for use on Christmas trees. Refer to Surflan or other solo oryzalin brand labels for use rates, precautions and restrictions. Use on field grown conifer species listed on the labels for each herbicide plus grand fir, alpine fir, Engelmann spruce, black spruce, Colorado blue spruce, Coulter pine, giant redwood, and Veitchi fir.

Apply in sufficient water per acre to uniformly treat the area. Follow otop sprays with sprinkler irrigation to move the herbicide from leaf surfaces to the soil. Remove weed growth before application. Mix weed residues, prunings, or trash into the soil, or remove them before treatment. Soil should be in good tilth and free of clods at time of application. Shallow cultivation (1–2 inches) after treatment will not reduce weed control. Observe all precautions and restrictions on the Princep Liquid and Surflan label or other solo oryzalin brand label.

**Note:** Length of weed control may be reduced when continuous wet soil conditions follow herbicide application.

**Precautions:** To avoid plant injury, (1) Do not use on seedbeds or on unrooted cuttings. (2) Do not use in greenhouses or other enclosed areas.

## TURFGRASS

Apply Princep Liquid to turfgrass grown on sod farms, fairways, lawns, and other similar areas for broad spectrum preemergent control of the broadleaf and grassy weeds listed in **Table 1**.

For use on warm season turf grass **only** (e.g., Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysiagrass).

### TURFGRASSES FOR SOD (FL ONLY)

**St. Augustinegrass, Bermudagrass, Centipedegrass, and Zoysiagrass**

Apply 2–4 qt/A of Princep Liquid, according to soil texture as indicated below. This product must be watered in immediately after application if applied at a rate greater than 2 lb ai/A (2 qt/A of Princep Liquid).

|              |      |          |                                       |
|--------------|------|----------|---------------------------------------|
| Muck or peat | 4 qt | Old beds | within 2 days after lifting of sod    |
|              |      | New beds | 3–4 days after sprigging or plugging  |
| Sandy soil   | 2 qt | Old beds | within 2 days after lifting of sod    |
|              |      | New beds | 7–10 days after sprigging or plugging |

If weeds regrow, apply an additional 2 qt/A of Princep Liquid on muck or peat, or 1 qt/A of Princep Liquid on sandy soil.

### Use Precautions:

- To avoid turf injury, use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases.
- Application to newly sprigged turfgrass may result in temporary slowing of growth.

### Use Restrictions:

- Do not apply within 30 days prior to cutting or lifting.
- Do not apply in combination with surfactants or other spray additives.
- Do not exceed 4 qt of Princep Liquid per acre (4 lb ai/A) per application.
- Do not make more than 2 applications per year.
- Do not exceed 6 qt Princep Liquid per acre (6 lb ai/A) per calendar year.
- Do not graze or feed turf clippings to animals.

### TURFGRASSES FOR SOD (IN STATES EXCEPT FL)

**St. Augustinegrass, Bermudagrass, Centipedegrass, and Zoysiagrass**

Apply 1–2 qt/A of Princep Liquid.

Do not apply to established beds within 2 days after lifting of sod. Do not apply to new beds before 7–10 days after sprigging or plugging.

Do not apply more than 2 lb ai/A (2 qt of Princep Liquid) per application and not more than two applications per calendar year. Do not exceed 3 qt/A Princep Liquid (3 lb ai/A) per calendar year.

### Use Precautions:

- On newly sprigged turfgrass, hybrid bermudagrass, nondormant bermudagrass, or nondormant zoysiagrass, temporary slowing of growth and yellowing may occur following application.

### Use Restrictions:

- Use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases.
- **Do not** use north of NC (except in the VA Coastal Plains) or on soils with a pH above 7.8.
- **Do not** use on muck or alkaline soils.
- **Do not** apply over the rooting area of trees or ornamentals not listed on this label.
- **Do not** seed or overseed with desirable turfgrass within 4 months before or 6 months after treatment.
- **Do not** apply this product to newly seeded grasses until they have overwintered and have a well-developed rhizome system.
- **Do not** exceed 2 qt/A of Princep Liquid within 12 months of seeding grasses.

Note: Do not graze or feed turf clippings to animals or illegal residues may result.

### TURFGRASS FOR FAIRWAYS, LAWNS, AND SIMILAR AREAS

#### Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysiagrass

For control of winter annual weeds, apply Princep Liquid after September 1 (after October 1 for annual bluegrass) before emergence of weeds. Fall applications of Princep Liquid will control annual bluegrass, burclover, lawn burweed, common and mouseear chickweed, corn speedwell, henbit, hop clover, spurweed, and parsley-piert. Princep Liquid will also control these weeds soon after emergence. For control of summer annual weeds listed in **Table 1** apply Princep Liquid in late winter before the weeds emerge. Apply in a minimum of 15 gal of water per acre.

Irrigate with 1/2 inch of water if rainfall does not occur within 10 days after preemergence treatment.

For non-residential sites, where annual bluegrass is the major weed, use 1 qt of Princep Liquid per acre (22 ml or 0.75 fl oz per 1,000 sq ft) tank-mixed with another herbicide for *Poa annua* control or repeat application of 1 qt Princep Liquid 4 to 6 weeks later. Use 1–2 qt/A of Princep Liquid (22–44 ml or 0.75–1.5 fl oz per 1,000 sq ft) for control of other weeds. However, do not exceed 1 qt/A of Princep Liquid per treatment on newly sprigged turfgrass or on hybrid bermudagrass.

For control of summer annuals which emerge after the initial application, apply an additional 1 qt/A of Princep Liquid at least 30 days after the initial application, but not after June 1. However, do not make more than 2 applications per calendar year.

For residential turf on lawns, institutional turf, parks or recreation fields, do not exceed 1.6 qt per acre of Princep Liquid (1.2 fl oz per 1000 sq ft) per application (equivalent to 1.6 lb ai/A). Irrigate with 1/2 in of water immediately following application to remove product from turf foliage.

### Use Precautions:

- Application to newly sprigged turfgrass, hybrid bermudagrass, nondormant bermudagrass, or nondormant zoysia grass, may result in temporary slowing of growth and yellowing.
- To avoid turf injury, use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases.

### Use Restrictions:

- **Do not** use on golf greens.
- **Do not** use north of NC (except in the VA Coastal Plains) or on soils with a pH above 7.8.
- **Do not** use on muck or alkaline soils.
- **Do not** apply over the rooting area of trees or ornamentals not listed on this label.

- **Do not** seed or overseed with desirable turfgrass within 4 months before or 6 months after treatment.
- **Do not** apply this product to newly seeded grasses until they have overwintered and have a well-developed rhizome system.
- **Do not** exceed 2 qt/A of Princep Liquid within 12 months of seeding grasses.
- **Do not** exceed 2 qt/A of Princep Liquid (2 lb ai/A) per application.
- **Do not** exceed 3 qt/A Princep Liquid (3 lb ai/A) per calendar year.
- **Do not** make more than 2 applications per year.
- **Do not** graze or feed turf clippings to animals.

**Tank-Mix Partner Table**

| Product Name | EPA Registration Number | Active Ingredient(s) |
|--------------|-------------------------|----------------------|
| AAtrex       | Various brands          | atrazine             |
| Gramoxone    | 100-1431, 100-1652      | paraquat             |
| Rely         | 7969-448                | glufosinate          |
| Solicam      | 61842-41                | norflurazon          |
| Surflan      | Various brands          | oryzalin             |

### STORAGE AND DISPOSAL

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

#### Pesticide Storage

Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

#### Pesticide Disposal

Pesticide wastes may be toxic. Improper disposal of unused pesticide, spray mixture, or rinse water is a violation of federal law. If these wastes cannot be used according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance in proper disposal methods.

#### Container Handling (less than or equal to 5 gallons)

**Non-refillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

#### Container Handling (greater than 5 gallons)

**Non-refillable container.** Do not reuse or refill this container. 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 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

continued...

## **STORAGE AND DISPOSAL (*continued*)**

### **Container Handling (greater than 5 gallons)**

**Refillable container.** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

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

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